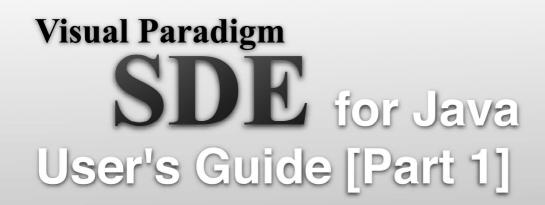
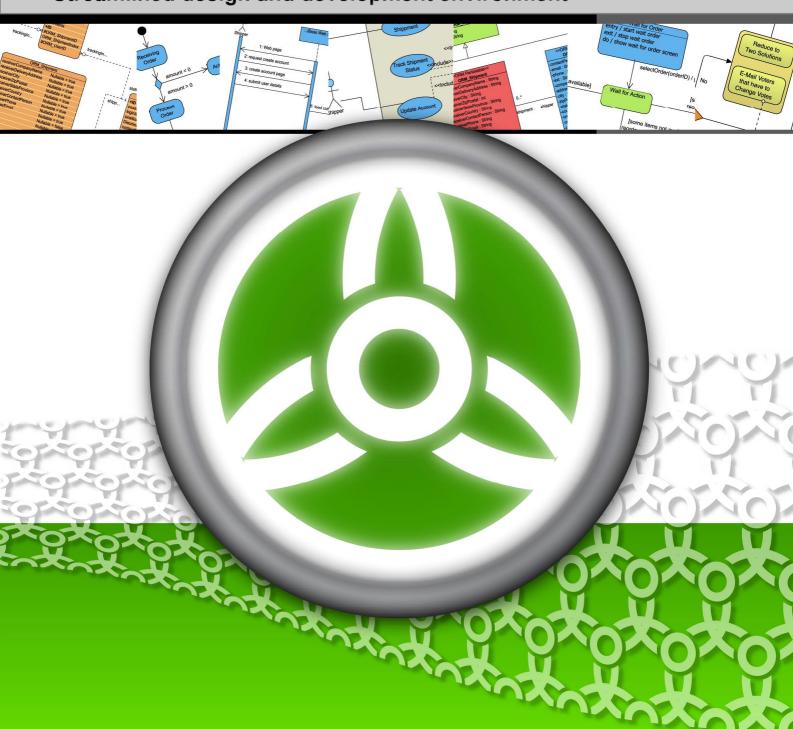


Build Quality Applications Faster, Better and Cheaper



Streamlined design and development environment



Smart Development Environment 4.0 User's Guide

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SDE User's Guide (Part 1)

Part 1 – Working with Smart Development Environment

Part 1 - Working with Smart Development Environment

Welcome to Smart Development Environment, a powerful visual UML plug-in for your IDE. SDE, short for Smart Development Environment, is an award winning UML modeling plugin seamlessly integrated with most of the leading IDEs in the market such as Microsoft Visual Studio .NET, Eclipse, Borland JBuilder, NetBeans/Sun ONE, IntelliJ IDEA, Oracle JDeveloper, and BEA WebLogic Workshop.

This part explains in detail how to use SDE to perform UML modeling and code-model round-trip engineering with your IDE, such that you can develop your application in a faster better and cheaper way.

In this part:

- Getting Started with SDE fo Java
- Working with Diagrams
- Style and Formatting
- Visual Modeling
- Automatic Diagrams Layout
- Generating Documentation
- Export and Import
- User Interface Designer
- Instant Reverse
- Instant Generator
- Java Round Trip Engineering
- State Machine Diagram Code Generation
- Team Collaboration with VPTS
- Team Collaboration with CVS
- Team Collaboration with Subversion



Chapter 1 - Getting Started with SDE for Eclipse

Aside from a collection of menus, tool-bars and windows that make up the development workspace, one special feature is our Resource-centric interface, which lets the user access modeling tools easily without referring back and forth from the workspace to various toolbars. Incorporating shortcuts such as mouse gestures into our modeling tools allow our users to draw as with a pen and paper, executing complicated modifications with just a click and drag, creating a completely visual environment.

This chapter will describe how to get started with Smart Development Environment for Eclipse. You will learn following techniques in this chapter:

- How to Launch Smart Development Environment for Eclipse?
- What is Workspace?
- Importing License Key
- Working with Floating License Server
- Basic Environment
- Dockable User Interface
- Browse your work by trees and tables
- Basic diagram editing functionalities

Launching SDE for Eclipse

SDE for Eclipse can run in different operating systems.

Windows

To launch SDE for Eclipse in Windows: Select start > All Programs > Visual Paradigm > SDE for Eclipse.

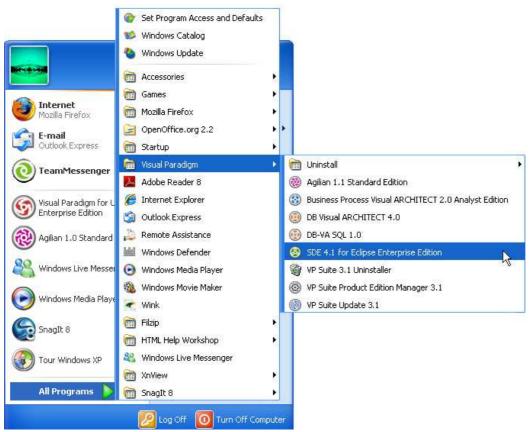


Figure 1.1 - Launch SDE for Eclipse in Windows

Linux

To launch SDE for Eclipse in Linux: Select **SDE_for_Eclipse** icon on the desktop.



Figure 1.3 - Launch SDE for Eclipse in Linux

Managing License Key and Edition

All VP products need a license key to activate. A License key of a higher edition can be used on a lower edition. For example, you can run Standard Edition of SDE for Eclipse with Professional Edition of SDE for Eclipse key.

SDE for Eclipse also provides a 30-days evaluation key for trial. After the evaluation key expires, you can choose to purchase the full license from our website or resellers, or un-install the program.

The license key for Community Edition will not expire. However, Community Edition cannot be used for commercial purposes.

Importing a Single Seat License Key

A Visual Paradigm's Single Seat (developer based) license allows a licensee to install the software on more than one machine, such as desktop and notebook, which belong to the licensee only. As the license is developer based, the software must be used by the licensee only, without running more for than one instance concurrently.

To import a single seat License Key:

1. You should first open the License Key Manager. There are two ways of opening License Key Manager:

- If there are no valid license keys imported, the License Key Manager will show up for importing license key.
- Select from the main menu Modeling > Key Manager...

Modeling	Run	Window	Help	
🛞 Sta	rt SDE	-EC		
App	olicatio	n Options.		
Aut	o Syna	hronizatio:	n	
Rep	oort			•
Pro	ject Pu	ıblisher		
Cor	nfigure	otypes Requirem Scheduling	ent Enumera g	tions
OR EJE)
🐴 Ins	tant Re	everse		
Ins	tant Ge	enerator		+
Sta	te Mac	hine Code		• •
Теа	amwork	¢.		•
ୟି Sha	ape Edi	tor		
💿 DB-	VA SQ	L		
Кеγ	/ Mana	ger		3

Figure 1.7 - Select Key Manager

👄 Smart Development Environment Ente	erprise E	dition for Eclipse	e License Key Manager (4.1)		×
License Keys					
			Show: 📃 🗄	xpired Keys 📃 <u>A</u> ll I	Keys 🛛 👔
Product	Version	User Name	E-mail	Expiry Date	State

Figure 1.8 - License Key Manager

	Name	Function
A	Import license key	To import a license key.
₿	Delete the license key	To delete the license key imported.
O	Request Key	To request a 30 days evaluation key if you are not using the Community Edition. If you are using the Community Edition, it will request an activation key. Both keys will be sent to you by email.
0	Help	To show the Help. If no Help has been installed before, the Download Help dialog box will appear to enable downloading and installation of Help.

Table 1.1

2. Then, you can either select **License Keys > Import...** or press on the **Import License Key** button on the toolbar. This displays the **Import License Key** dialog box.

From the **File** field, enter the file path of license key. You can enter the path in the text field directly, or you can click on the ... button to browse for license key file. Click **OK**.



Figure 1.9 - Import License Key dialog

3. The imported key is then displayed in the Key Manager.

Product	Vers	User Name	E-mail	Expiry S
Smart Development Environment Enterprise Edi	4.1 De	emo	demo@visual-paradigm.com	Aug 2, 2007 Va

Figure 1.10 - The imported key displayed in Key Manager

Then, click Close from the License Key Manager to start using SDE for Eclipse.

Switching from Evaluation Key to Permanent Key

You can try SDE for Eclipse by using an evaluation key for 30 days. Then, you will need to buy a permanent key if you want to continue to use it. After purchasing, you should follow the steps below to switch your evaluation key to a permanent one. To switch from evaluation key to permanent key:

1. Open the License Key Manager from the main menu **Modeling** > **Key Manager...**.

💱 🍿 Request Key 🛛 Close			Sh	iow: Repired Novs [All Keys
Product	Vers	User Name	E-mail	Expiry Date	State
nart Development Environment Enterprise Edi	4.1	Demo	demo@visual-paradigm.com	Aug 2, 2007	Valid
					1

Figure 1.11 - License Key Manager with evaluation key with expiry date

2. Remove the evaluation key by clicking the **Delete the license key** button in License Key Manager dialog. You can also remove the key by clicking **License Keys** > **Remove**. If your key has expired, you have to check the **Expired Keys** to show your expired evaluation key in order to delete.

License Keys			
🚳 📺 Request Key 🛛 Close			
Produces	Vers	User Name	E-mail
Smart Development Environment Enterprise Edi	4.1	Demo	demo@visual-par

Figure 1.12 - Delete by clicking Delete the license key button

If your key has not expired, **Delete License Key** dialog will appear and ask if you really want to remove the key. Click **Yes** to confirm.

Delete I	License Key 🛛 🔀
?	This License Key has not expired. Are you sure you want to delete?
	Yes No

Figure 1.13 - Confirm deleting license key

3. Click **Import license Key** to import the permanent key. You can also select **License Keys** > **Import...** to import the key.

License keys							
Request Key Close							
PImport license key	Vers	User Name	E-mail				

Figure 1.14 - Import by clicking Import license key button

4. Select or type a path for the permanent key in Import License Key dialog. Click OK to confirm.

🖨 Import License Key 🛛 🔀
Import License Key A valid license key needs to be imported before you can run the program. A license key file has an extension of ".zvpl". You can either get an evaluation key (expires in one month) if you have selected the request key option while downloading the software, or you can acquire a permanent license key by purchasing the software.
File: C:\Documents and Settings\Desktop\permanent_key.zvpl
OK Cancel

Figure 1.15 - Select or type a path for permanent key

5. Permanent key imported. Unlike an evaluation key, the permanent key does not have expiry date.

License Keys				
🚳 📷 Request Key Close			Show: Expired Keys	🗌 All Keys 김
Product	Vers User Name	E-mail	Expiry Date	State
Smart Development Environment Enterprise Edi	4,1Demo 6	demo@visual-paradigm.com	ŀ	Valid
			\cup	/

Figure 1.16 - Permanent Key with no expiry date

Importing Upgrade Keys

From time to time, VP releases new versions. If your license keys are covered by the maintenance period, the latest version will be available to you without any payment. You can login to the Customer Service Center (<u>https://cs.visual-paradigm.com</u>) to download the latest version and get an upgrade key. The upgrade key should be used with the original license key, i.e. the original key should neither have been delete or expired.

After you have installed the latest version and downloaded the upgrade key, follow the steps below to import upgrade keys to use that version. Here, a license key of version 4.0 is used as an example to replace the key of version 3.1.

To import upgrade keys:

1. Open the License Key Manager from the main menu Modeling > Key Manager...

License Keys

LICENSE KEYS							
💐 前 🛛 Request Key 🔹 Close	\bigcirc		Sho	w: 🔜 Expired Keys	🗹 All Keys	?	
Product	Version	Jser Name	E-mail	Expiry Date	State		
Smart Development Environment Enterp	3.1	emo 1 📐	demo@visual-paradigm.com	-	Valid	^	
Visual Paradigm for UML Enterprise Edition	0.0D	emo VS	demo@visual-paradigm.com	Jun 24, 2007	Valid		
Smart Development Environment Enterp	3.17	emo 1	demo@visual-paradigm.com	-	Valid	-	

Figure 1.17 - License Key Manager with license key of version 3.1

2. Click **Import license Key** to import the upgrade key. You can also select **License Keys** > **Import...** to import the key. Remember the old key must still exist before you import the upgrade key.

License	Keys

Version	User Name
3.1	Demo 1
6.0	Demo
6.0	Demo
	3.1 6.0

Figure 1.18 - Import by clicking Import license key button

3. Select or type a path for the upgrade key in Import License Key dialog. Click OK to confirm.

🚔 Import License Key	×
Import License Key A valid license key needs to be imported before you can run the program. A license key file has an extension of ".zvpl". You can either get an evaluation key (expires in one month) if you have selected the request key option while downloading the software, or you can acquire a permanent license key by purchasing the software.	
File: C:\Documents and Settings\Desktop\license_key_for_4.1.zvpl	כ
OK Cancel	

Figure 1.19 - Select or type a path for upgrade key

4. The upgrade key has replaced your old one.

License Keys					
💐 🝿 Request Key 🛛 Close	\bigcirc		Show: 📃 Expired Key	ys 🔽 All Keys	?
Product	Version User Name	E-mail	Expiry Date	State	
Smart Development Environment Enterp	4,10 emo 1	demo@visual-paradigm.com	-	Valid	
Visual Paradigm for UML Enterprise Edition	Demo V	demo@visual-paradigm.com	Jun 24, 2007	Valid	
Visual Paradigm for UML Enterprise Edition	6.0Demo	demo@visual-paradigm.com	Jun 24, 2007	Valid	

Figure 1.20 - License Key Manager with license key of version 4.0

Floating License Key

VP Floating License allows you to deliver development software to every user in your organization without paying for unique licenses for every developer. When you use a floating license, the entire organization can access to SDE for Eclipse but the number of people that use VP at the same time is limited to the number of license keys you buy.

By using a floating license, you can reduce the cost of buying licenses, as you just need to purchase enough number of licenses that will run VP at the same time, instead of buying licenses for all developers in your organization.

The installation of floating license server and the configuration of client pointing to the server is a simple process. Our license server can be run on multiple platforms and can be installed in less than 10 minutes.

The license sharing process is automatic, which is convenient to use. VP Floating License automatically manages and shares the licenses through the network. When the client connects to the license server, the server will assign him a license until the license limit has been reached. Once it disconnects from the server, the license will be released automatically and the other user can start using VP with that license.

This kind of key is particularly useful for organizations which have limited access to VP at a certain time each time, e.g. a company has ten staff but only two staff will use SDE for Eclipse at the same time. The the company can then purchase just two floating license keys but the whole company will be able to use SDE for Eclipse at different times.

Before you use SDE for Eclipse with a floating license key, your machine need to access to the license server via LAN to acquire a license key first. For more details, you can refer to the Floating License Server Installation Guide about floating license server installation for more details.

Configuring Floating License Server

- To configure floating license server:
- 1. Open the License Key Manager.
- 2. Select License Keys > Floating License > Configure....

Licer	nse Keys			
E	Import	e		
Ŵ	Remove		Ver	User Name
	Remove All Keys	e Edition	4.3	lDemo
	Floating License	Configure	· N	
	Show Expired Keys	Export Flo	hating Lice	Åse
	Show All Keys	Import Flo	bating Lice	nse
	Close			

Figure 1.21 - Select configuration of floating license

3. Input the host and port. You can refer to Floating License Server User's Guide for more details.

🖨 Smart Development Environment Enterprise Edition for 🔀								
1st Host:		Port:	1998	View Keys]			
2nd Host:		Port:	1998	View Keys]			
3rd Host:		Port:	1998	View Keys]			
4th Host:		Port:	1998	View Keys]			
Description Visual Paradigm's Floating License allows you to deliver development software to every developer in your organization without paying for unique licenses for each. Just purchase enough number of licenses, all developers will be able to run the Visual Paradigm products as long as the number of concurrent users does not exceed the number of licenses purchased. Test Connection OK Cancel								
Test Conn	ection		ОК					

Figure 1.22 - Configuration dialog box

Exporting Floating License Key

To use a Floating License key, you need to have Local Area Network (LAN) access to the *Floating License Server*. You may choose to export one of the floating license keys to your laptop if you need to use it out of the office (e.g. a meeting with a client). If you export a floating license key the number of floating licenses in the server will decrease. This will be reverted when you import the licence key back to the server from your laptop.

To export floating license key:

1. Select License Keys > Floating License > Export Floating License.....



Figure 1.23 - Export the Floating License

2. Floating license key is exported from server.



Figure 1.24 - Floating license exported

Importing Floating License Key

When you finish using the exported license key, you can import the key back to the server.

To import floating license key:

1. Select License Keys > Floating License > Import Floating License... . The Import Floating License Key dialog is displayed.

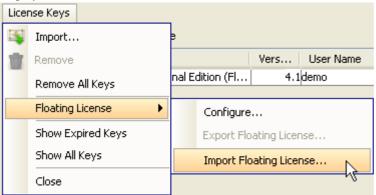


Figure 1.25 - Import Floating License

2. Select the key you want to import and click **OK** to confirm.

Import Floating License Key	×		
Select the Floating License Key(s): Select All Deselect All			
Select Product Server			
Smart Development Environment Enterprise 192.168.5.101			
hý l			
OK Cancel			

Figure 1.26 - Select license key to import

3. The key is imported successfully.

Import Floating License Key
Import Floating License Keys Success: Smart Development Environment Enterprise Edition for Eclipse Floating License Key is imported to server "192.168.5.101"
OK K

Figure 1.27 - License key imported successfully

If you did not import the exported key to the server when you switch off SDE for Eclipse, the next time you switch on SDE for Eclipse, it will ask if you want to import it to the server.

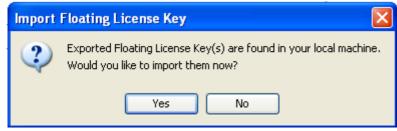
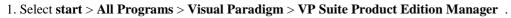


Figure 1.28 - Asking whether to import the license key

Switching Edition

There is a single installer for all editions. You can install any edition with the same installer. If you want to change your installed edition, you can either re-install the software or use the VP Suite Product Edition Manager as long as you have a valid key for that edition to run.

When evaluating SDE for Eclipse, you can ensure the features you want and are most likely to use are available in different editions.



	 Set Program Access and Defaults Windows Catalog Windows Update 	
	m Accessories	•
	🛅 Games	
Mozilla Firefox	🛅 Mozilla Firefox	•
E-mail	🥃 OpenOffice.org 2.2	
Outlook Express	🛅 Startup	
() TeamMessenger	i 🛅 Visual Paradigm	Ininstall
	Adobe Reader 8	Agilian 1.1 Standard Edition
Kisual Paradigm for L	🏉 Internet Explorer	Business Process Visual ARCHITECT 2.0 Analyst Edition
Enterprise Edition	🇐 Outlook Express	DB Visual ARCHITECT 4.0
SnagIt 8	칠 Remote Assistance	🛞 DB-VA SQL 1.0
	🕍 Windows Defender	SDE 4.1 for Eclipse Enterprise Edition
Agilian 1.0 Standard	🕒 Windows Media Player	🎯 VP Suite 3.1 Uninstaller
00	🚳 Windows Movie Maker	VP Suite Product Edition Manager 3.1
Windows Live Messer	🔫 Wink	WP Suite Update 3.1
Windows Media Playe	🛅 Filzip	•
	m HTML Help Workshop	•
OpenOffice.org Calc	🌯 Windows Live Messenger	
	🛅 XnView	
All Programs 🜔	🛅 SnagIt 8	
f start	Log Off 🔟 Turn Off Com	puter

Figure 1.29- Select Product Edition Manager

2. Select the desired edition in the edition manager.

DE 4.1 for Eclipse				
sde for eclipse	Edition:	Enterprise	-	Edition Comparison
		Enterprise		1
		Professional Standard Modeler Personal		
		Community Viewer		

Figure 1.30 - Select desired edition

Auto Switch Edition

When you start SDE for Eclipse of an edition other than the edition you have a license key for, the Switch Edition dialog will appear and ask whether you want to switch to the other edition.

For example, if you have imported a Standard Edition license key, when you run the Enterprise Edition, SDE for Eclipse will ask you if you want to switch to Standard Edition.

Switch Edition (Enterprise -> Standard Edition)				
?	Your license keys are not valid for the Enterprise Edition. However, it is detected that you have a license key for the Standard Edition do you want to switch to Standard Edition? * to be lower edition			
	Yes No			

Figure 1.31 - Switch Edition dialog

You may click Yes to switch to a lower edition, or No to display the License Key Manager dialog to import another key.

VP Suite Product Selector

Product selector is for a flexible license scheme, and is only for users using a floating license key. The selector is flexible so that you can view the license keys available in the floating license server and start a product with the selected key.

To start the Product Selector:

Select Product Selector from 'bin' folder in the directory where VP Suite is installed.



Product Selector		
Selected Product:		
SDE for Eclipse Enterprise Edition Iter	B	
Available Product(s):	0	Select Server (D)
Product	Available/Total	Refresh Server
Visual Paradigm for UML Enterprise Edition SDE for Eclipse Enterprise Edition	3/3 2/2	

Figure 1.33 - Product Selector

	Name	Function
A	Product	Name of products available.
₿	Start	To start the selected product.
©	Available/Total	The number of products in the server available. This is a fraction that the number of product available over the total product purchase.
0	Select Server	To select floating license server(s).
€	Refresh Server	To refresh a floating license server(s).

Table 1.2

Basic Environment

In this section, you will learn the basic environment of the SDE for Eclipse user interface, and get to know how to use it to perform modeling more efficiently.

After you have imported the license key, you will see the SDE for Eclipse main screen.

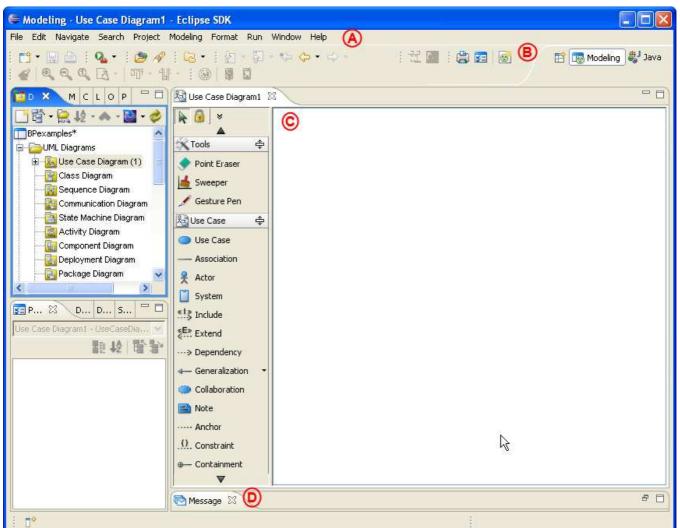


Figure 1.34 - Basic environment

	Name	Description
A	Menu	All the commands for execution.
₿	Toolbar	Frequently used commands.
©	Diagram pane	Area where you create your diagram.
0	Message pane	Display messages that are generated by performed operations.

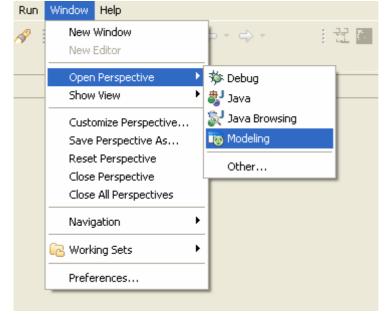
Table 1.3

Panes

SDE for Eclipse provides various panes for performing different tasks and for displaying the modeling project in different views.

Modeling Perspective

SDE for Eclipse provides different views, however, not all the views will be shown on the Eclipse's "Java" or "Resources" perspective automatically. Therefore, SDE for Eclipse provides Modeling Perspective to show all the views. To switch to Modeling Perspective. Select **Windows > Open Perspective > Modeling**. **Modeling** may not shown on the menu, then you may need to select **Other...** and select Modeling on the dialog.



If you want to show SDE for Eclipse's view on other perspective. Select **Windows > Show View > Other...**. Then select **SDE for Eclipse**. You can select the view you wanna to be shown.

Note that if SDE for Eclipse is starting and current perspective is not Modeling Perspective. SDE for Eclipse will ask you switch to Modeling Perspective.

Onfirm Perspective Switch		
Would you like to switch to Modeling	perspective now?	
Do not show this message again		
	<u>Y</u> es	

Diagram Navigator Pane

The Diagram Navigator Pane displays diagrams and their diagram elements in the project, which are categorized by diagram type.

To open this pane:

• Select Windows > Show View > Diagram Navigator

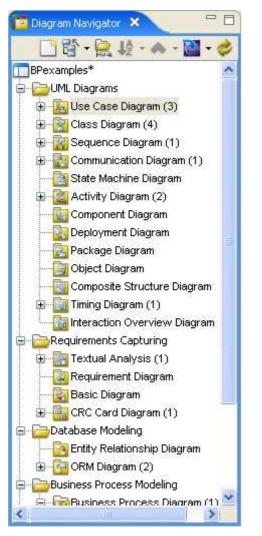


Figure 1.41 - Diagram Navigator Pane

Model Pane

The Model Pane displays models in the project. To open this pane:

• Select Windows > Show View > Model

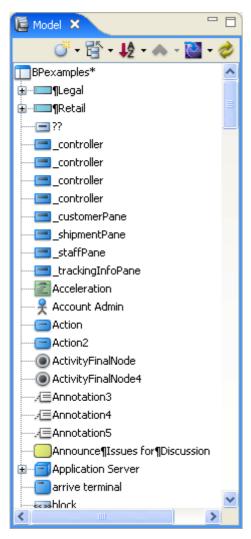


Figure 1.42 - Model Pane

Class Repository Pane

The Class Repository Pane displays packages and class models in the project. To open this pane:

• Select Windows > Show View > Class Repository

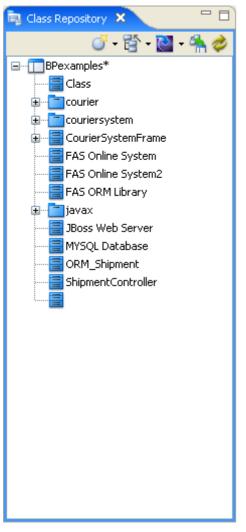


Figure 1.43 - Class Repository Pane

Logical View Pane

Logical View Pane displays logical view of the project that can be customized to the desired structure. To open this pane:

• Select Windows > Show View > Logical View

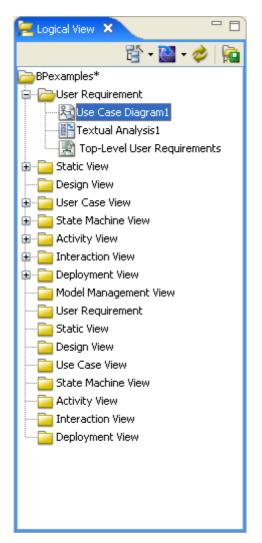


Figure 1.44 - Logical View Pane

ORM Pane

ORM Pane displays ORM-related views including classes and database configurations. To open this pane:

• Select Windows > Show View > ORM

🙋 orm 🗙	- 8
Class View	💌 📑 🤣 🔍
····· 🛅 classes	

Figure 1.45 - ORM Pane

Stencil Pane

Stencil Pane displays stencils that can be used to create custom shapes. You can also organize and select stencils here. To open this pane:

• Select Windows > Show View > Stencil



Figure 1.46 - Stencil Pane

Property Pane

Property Pane displays the properties of the selected element(s). You can also edit the properties here. To open this pane:

• Select Windows > Show View > Property

5E	Property ×	-			
Us	Use Case Diagram1 - UseCaseDiagram 👘				
	8 1				
	Name	Use Case Diagram1	^		
	Parent model	<no model="" parent=""></no>			
	Zoom ratio	90%			
	Background	🔲 White 🛛 🛄			
	Grid				
	Visible				
	Snap to grid	 Image: A set of the set of the			
	Width	10			
	Height	10			
	Color	🔲 Light gray 🛛 🛄			
	Connector style	Oblique			
	Connection P	Round the Shape	~		

Figure 1.47 - Property Pane

Diagram Overview Pane

This pane displays the overview of the active diagram which is scaled to fit the display area. The rectangle represents the visible area of diagram. You can navigate to different parts of the diagram by dragging the display area. To open this pane:

• Select Windows > Show View > Diagram Overview

🔯 Diagram Overview 🤌	

Figure 1.48 - Diagram Overview Pane

Documentation Pane

Documentation Pane can display documentation of the selected element. SDE for Eclipse also provides rich text documentation. You can edit your documentation directly here. To open this pane:

Select Windows > Show View > Documentation

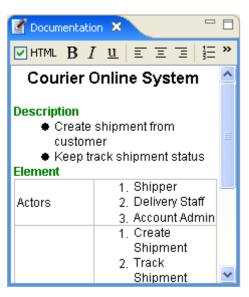


Figure 1.49 - Documentation Pane

Message Pane

Message Pane displays information, warning and error messages shown by SDE for Eclipse. To open this pane:

Select Windows > Show View > Message

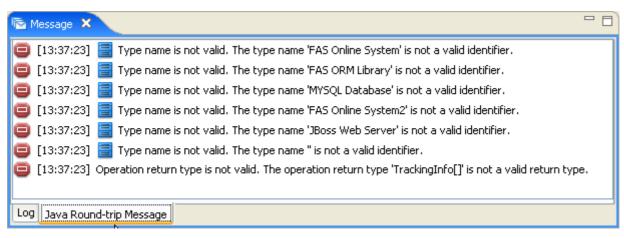


Figure 1.50 - Message Pane showing XMI Results

Open Specification Dialog Box

The open specification dialog box is a top-level window which enables you to browse for and edit the detail of model elements or diagrams. It can be invoked by right-clicking on either a model or a diagram and selecting **Open Specification...** from the popup menu.

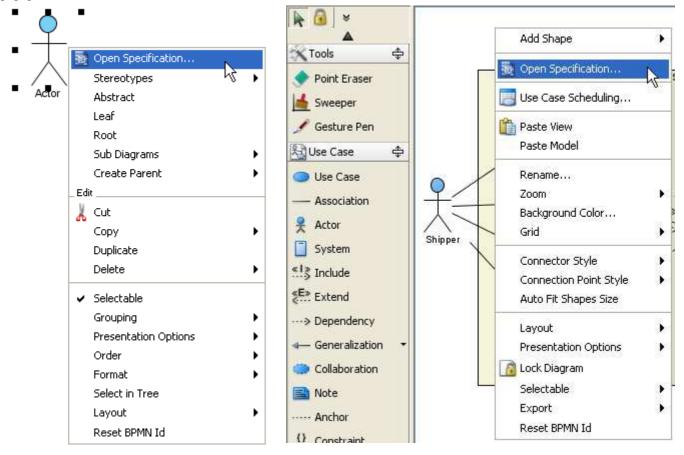


Figure 1.56 - Open Actor Specification

🖨 Actor Specificat	tion	×
Stereotypes General	Tagged Values Diagrams References Comments Attributes Operations Relations	
Name: Actor]
Documentation:	L E E E E E F Fr 🛷 🕈 📑 📲 🏪 🚨	
		1
Abstract Lea	af Roo <u>t</u>	
<u>R</u> eset	OK Cancel Apply Help	

Figure 1.57 - Open Diagram Specification

Figure 1.58 - Actor Specification

The open specification dialog box contains several pages which show different aspects of the selected item. General information such as name, stereotype, documentation, files are included in most of the model elements. For some of the model elements, relationship between other model elements (children, relations) and information that is specific to the model elements. (attributes/operations in Class, sub-diagrams of Package) will be displayed as well.

There are five buttons at the bottom of the dialog box: Reset, OK, Cancel, Apply and Help.

Button	Description	
Reset	Reset the changes made in the dialog box.	
OK	Accept the changes and close the dialog box.	
Cancel	Cancel and close the dialog box.	
Apply	Apply the changes immediately without closing the dialog box.	
Help	Display the help information of the Open Specification dialog box.	

Table 1.4

Navigating between Model Elements

You can navigate to other model elements via the open specification dialog box. This can be done in two ways. For model elements with a one-to-many relationship such as relations, children, you can invoke the open specification dialog box of a selected model elements by clicking on the **Open Specification...** button.

🖨 Actor Specifica	tion			X
Stereotypes General	Tagged Values Attributes	Diagrams Opera	References itions	Comments Relations
Name	Туре	Begins	Ends	
	Association	Actor	UseCa	ase
		Оре	n Specification	Remove
Reset	ОК	Cancel	Apply	Help

Figure 1.59 - Open Association Specification

Some of the properties of the model element are references to another model element (or a reference to itself) such as Supplier/Client of a Dependency, or Role A/Role B of an Association. In this case you can click on the ... button besides this property to navigate to that model element.

General	Stereotypes	Tagged Values References Comments		
Name:				
	Unspecified		*	
Associa	ition End From		V2-	
Role:	r1			
Element	: Actor			
Multiplic	ity: Unspecified		~	
Navigat	le: True		~	
Associa	ition End To			
Role:	r1			
Element	: UseCase	UseCase		
Multiplic	ity: Unspecified		~	
Navigat	le: True		~	
	Core Lange		Nation 1	
Documen				
HTML	B I 😐 🗏	C 🗉 🗐 🗄 🗄 🛛 F Fr 🥔 🕇 👬 🐙 🎋	= <u>@</u>	
Abstr	act 🗍 Leaf [Derived		
101 0 10 6 6 C	and the second second second	10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -		

Figure 1.60 - Association Specification

Note that if the open specification dialog box of the referenced model element is already opened, this button will be disabled.



Working with Diagrams

Chapter 2 - Working with Diagrams

SDE for Eclipse is a visual modeling tool that provides all well-known modeling toolsets to cover all aspects of modeling and documentation, from business process modeling to detailed system specification. SDE for Eclipse supports more than 20 diagram types including all diagram types in UML, BPMN, SysML, ERD, DFD and more. Visual Paradigm strives to continuously enhance the diagramming environment to increase effectiveness and efficiency of modeling, as when using SDE for Eclipse, most of your working time is with diagrams.

In this chapter you will learn:

- Creating Diagram
- Creating Diagram Elements and connecting them
- Basic Diagram editing
- Different Copy and Paste strategies
- Grouping Diagram Elements for easier management
- Some diagramming techniques

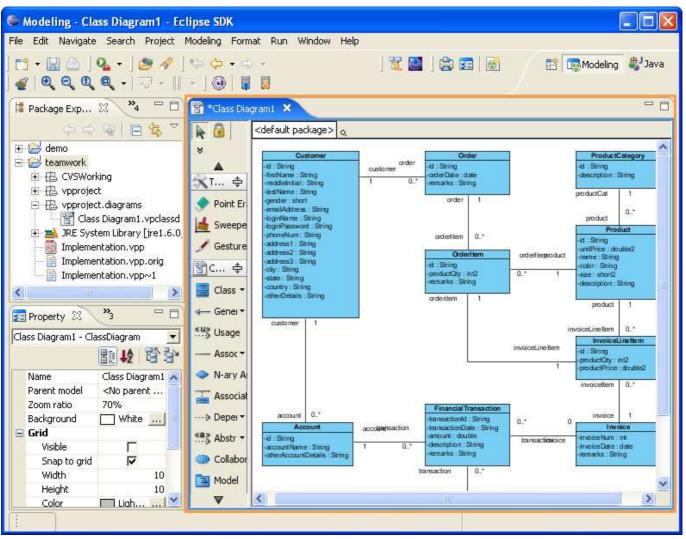


Figure 2.1 - Diagram pane

Creating Diagram

You can create diagrams in different ways:

- Using toolbar
- Using popup menu of Diagram Navigator

To use toolbar to create:

Click on the icon on the toolbar and select the diagram you want to create from the dialog box.

/indow Help
New SDE-EC Diagram
(default package >

Figure 2.2 - New Class Diagram icon on the toolbar

Use Case Diagram	^
Class Diagram	
Communication Diagram	
State Machine Diagram	
Activity Diagram	
Component Diagram	
Reployment Diagram	
Package Diagram	
🔄 Object Diagram	
Textual Analysis	
- 🛐 Business Workflow Diagram	
📲 CRC Card Diagram	
- 🔄 Composite Structure Diagram	
Timing Diagram	
Interaction Overview Diagram	
- Lei Overview Diagram	1000

Figure 2.3 - Select New SDE EE-EC Diagram

To use the popup menu of Diagram Navigator to create:

Right click on the diagram type node in Diagram Navigator and select New Class Diagram in popup menu.

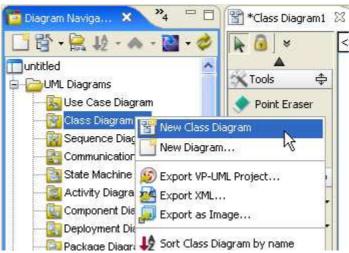


Figure 2.4 - Select New Class Diagram from popup menu of Diagram Navigator

Creating Diagram Elements

After creating a new diagram, you can create diagram elements using the diagram toolbar. In this section, we will introduce the techniques of how to create diagram elements and connectors:

- Creating Shapes
- Creating Connectors
- Creating Self-Connection

Creating Shapes

To create a shape, click on a diagram element button from the diagram toolbar and click on the diagram pane to create it. The element generated will have a default size.

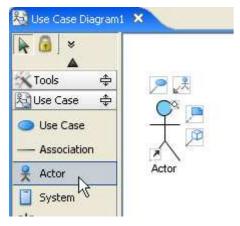


Figure 2.5 - Click to Create Shapes

You can also drag a specific boundary before releasing the mouse to define a shape's initial size.

🔵 Use Case	
— Association	
Actor	
📋 System	
∉E » Extend	
····» Dependency	
₄R . Realization ←	
🐡 Collaboration	
📑 Note	1
Anchor	

Figure 2.6 - Create Shapes with specific size

Alternatively, you can also create a diagram element by dragging a diagram element button then dropping it on the diagram pane.

🗞 Use Case 🛛 🗢	
🔵 Use Case	
Association	
😤 Actor	
System	R
*! 3 Include	1

Figure 2.7 - Drag and drop to Create Shapes

Add Shape 🕨 Use Case Association 🔯 Open Specification... Actor hà 📋 System Use Case Scheduling... 🎁 Paste View Extend Paste Model ---> Dependency Generalization Rename... ٠ 🐡 Collaboration Zoom 📄 Note Background Color... ----- Anchor Grid .Ω. Constraint Connector Style – Containment **⊕**− **Connection Point Style** 📊 Diagram Info Shape Auto Fit Shapes Size Layout ۲ Presentation Options ٠ 👩 Lock Diagram Selectable ۶ Export

Apart from that, you can use the diagram popup menu to add a shape.

Figure 2.8 - Create Shapes using diagram popup menu

Creating Connectors

To create a connector, select the desired connector from the diagram toolbar and click on the source shape. Drag the connector to the destination shape.

SDE for Eclipse provides continuous UML syntax checking. You will see a stop sign when you try to create an invalid connection, e.g. you cannot create a generalization relationship between an actor and a use case.

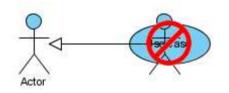


Figure 2.9 - Try to create an invalid connection

If the connection is valid you will see a blue rounded rectangle surrounding the destination shape.

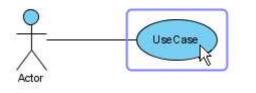


Figure 2.10 - Try to create a valid connection

You may also use resource to create connectors.

Click on the Association resource of a shape and drag over the shape you want to connect to. If you release the mouse on an empty space, a shape will be created with the connector.

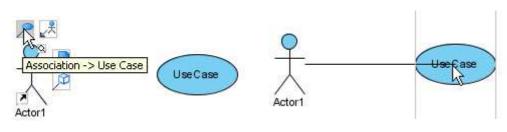


Figure 2.11 - Click on resource

Figure 2.12 - Drag over the shape

Creating Self-Connection

Some of the shapes can have a connection to itself, for example Self-Association of a Class or Self-Link of an Object in a Communication Diagram. To create a self-connection, click on the connector button on the diagram toolbar and click once on the target object.

Alternatively, you can click on the Self Association resource.

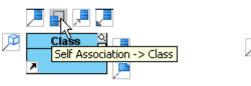


Figure 2.13 - Create Self-Connection

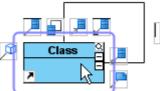


Figure 2.14 - Self-Connection

Resource-Centric Interface

Visual Paradigm is the first vendor to introduce the resource centric diagramming interface. The resource centric interface greatly improves the efficiency of modeling. You no longer needs to go back and forth between the toolbar and the diagram to create diagram elements, make connections and modify the diagrams. The resource centric interface can make sure the modeler is able to create a diagram with correct syntax more quickly. There are three types of resource:

Connection Resource

- Manipulation Resource
- Branching Resource

Connection Resource

It is designed for creating elements and making connections. Here, the connection between an actor and a use case is used as an example.

To use Connection Resource:

1. Move mouse over Association - > Use Case resource.

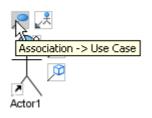


Figure 2.15 - Association - > Use Case resource

2. Drag resource to empty space on diagram pane.

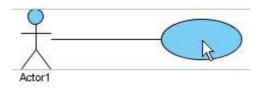


Figure 2.16 - Drag resource

3. Release the mouse, new connector and shape are created.

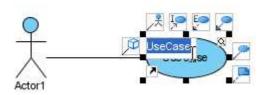


Figure 2.17 - Connector and shape created

Manipulation Resource

You can use Manipulation Resource to modify properties or appearance of elements. For example, you can show or hide compartments, add references, add sub-diagram and fit size. To use Manipulation Resource, simply click once on it.



Figure 2.18 - Reference of Manipulation Resource

Branching Resource

Branching Resource helps you to create decision structure in diagram. To use branching resource:

1. Move mouse over a Branching Resource.



Figure 2.19 - Branching Resource

2. Drag resource to empty space on diagram.

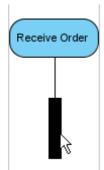


Figure 2.20 - Drag resource

3. Release mouse, a branch is created.

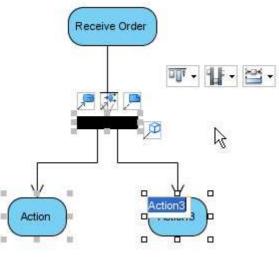


Figure 2.21 - Create branch

Alternatively, if a shape in the branch already exists, you can drag the resource over it.

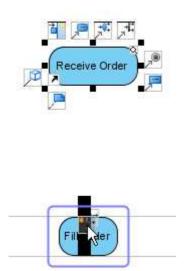


Figure 2.22 - Drag resource over existed shape

When mouse is released, a branch is created involving the target shape.

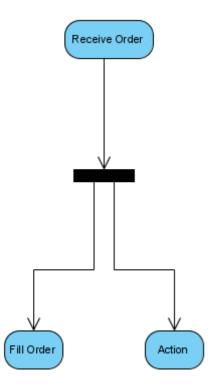


Figure 2.23 - Create branch

Enabling/Disabling the Resource-Centric Interface

To enable/disable the resource centric interface feature, select/deselect menu **Format** > **Resource Centric**. This option will be applied to all diagrams.



Figure 2.24 - Enable/Disable Resource Centric Interface

Enabling/Disabling Group Resource-Centric Interface

Group resources appear when two or more shapes are selected. They are used to perform actions on the selected shapes, e.g. alignment and distribute shapes.

To enable/disable, select/deselect **Modeling** > **Application Options...** to open the Options dialog box, select **Diagramming** > **Resource Centric** tab. This option will be applied to all diagrams.

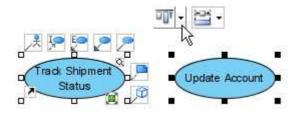


Figure 2.25 - Group Resources Centric Interface for use case

Show Extra Resources

By default the resource centric interface displays the most commonly used resources of a diagram element. You can choose to view less common resources clicking on the **Format** > **Show Extra Resources** in the main menu. The figures below show the view of a Action element with "Show Extra Resources" turned off and on.





Figure 2.26 - Resource-Centric of Action

Figure 2.27 - Action with an Extra Resource-Centric

Show Generic Resource-Only

Generic Resource is a special kind of resource in the Resource-Centric Interface. Unlike other resources, the type of the connector and/or shape type that will be created is undetermined, you will be asked for the desired connector/shape type when the creation is confirmed.

To show/not to show Generic Resource Only, select **Modeling > Application Options...** to open the Options dialog box, select **Diagramming > Resource Centric** tab.



Figure 2.28- Show Generic Resources-Only

Basic Editing

Multiple Selection

Multiple selection can be made with mouse alone or with keyboard and mouse. With mouse alone:

Click on an empty space of the diagram and drag to include desired shapes in the dashed-line rectangle.

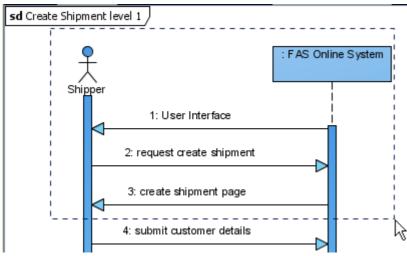


Figure 2.29 - Multiple selection using mouse

With keyboard and mouse:

With the **Shift** or **Ctrl** key held down, click on the shapes to select them. After selecting a shape, you may click it again to deselect it.

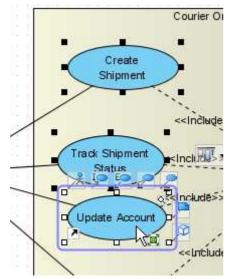


Figure 2.30 - Multiple selection using mouse and keyboard

Moving Shape

SDE for Eclipse diagram editor supports true WYSIWYG diagram editing. You can move shapes with the mouse or keyboard.

With mouse:

Click on a shape to drag it to the desired direction to move it.

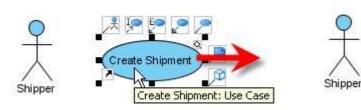


Figure 2.31 - Shape before moving to the right

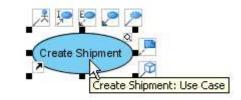


Figure 2.32 - Shape after moving to the right

With keyboard:

1. Select shape(s) which you want to move.

2. Press the up/down/left/right arrow key to move the shape(s).

Moving Shape in One Direction

Instead of moving shapes in any direction, you may restrict the shapes to move in one direction only for easier alignment, i.e. you may move the shapes vertically or horizontally, but not diagonally. This can be done by pressing **Shift** key while dragging the shapes.

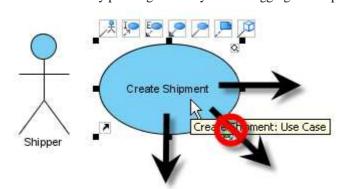


Figure 2.33 - Restrict moving direction

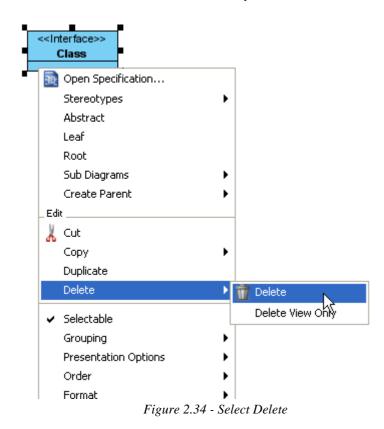
Delete

The main difference between CASE Tool and drawing tools is that CASE Tool has a Model and View concept. The model is where information is stored, while the view is a presentation of the model. A model can have multiple views, for example, you can show the same class in different class diagrams. Upon pressing 'delete', SDE for Eclipse will assume you are deleting the view of the model, but will prompt you to delete the model if all views of a specific model are deleted. This section will show you how to delete models and views.

Delete

To delete view together with model: 1. perform one of the following action:

- Select **Delete** > **Delete** in the popup menu of that element.
- Press the **Delete** button on the keyboard.



2. A Delete dialog box will display and ask you if you want to delete. Click **Yes** to confirm. If you want to set this option as default, check **Use this option as default and don't ask again**.

Delete 🔀
Are you sure you want to delete "Class"?
This dialog can be turned off in Option > General > Project > Confirm delete shape
Use this option as default and don't ask again
Yes No

Figure 2.35 - Delete dialog box for confirming deleting

3. If there is no referenced view other than deleted view, the Delete dialog will ask you if you want to delete the model from the repository. Click **Yes** to confirm. If you delete more than one diagram element at one time, you may click **Yes to all** to confirm.

Delete 🔀		
"Class" has no referenced view. Delete "Class" from the repository?		
This dialog can be turned off in Option > General > Project > Delete no referenced model		
Use this as the default and do not ask again		
Yes Ves to all No No to all		

Figure 2.36 - Confirm deleting from the repository

Delete View Only

To delete view(diagram element of model) only: 1. Select **Delete > Delete View Only** in the popup menu of that element.

	 P	
< <interface></interface>		
Class	🔯 Open Specification	
•	Stereotypes	•
	Abstract	
	Leaf	
	Root	
	Sub Diagrams	•
	Create Parent	•
	_Edit	
	👗 Cut	
	Сору	•
	Duplicate	
	Delete	🕨 📺 Delete
	✓ Selectable	Delete View Only
	Grouping	•
	Presentation Options	•
	Order	•
	Format	•
	Figure 2.37 - Select	t Delete View Only

2. A Delete dialog box will display and ask you if you want to delete. Click **Yes** to confirm. If you want to set this option as default, check **Use this option as default and don't ask again**.

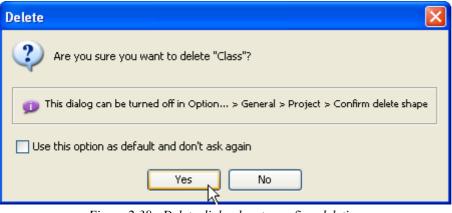


Figure 2.38 - Delete dialog box to confirm deleting

Copy and Paste

Сору

SDE for Eclipse support various copy and paste options. By default your copy will only within SDE for Eclipse and will not affect the content in your system clipboard. If you want to copy the content to other application, you can copy to clipboard as image then you can paste your design to other application. This section, we will show you different copy and pasts options SDE for Eclipse provides.

Copy within SDE-EC

Copying diagram elements within SDE-EC allows you to copy selected diagram elements to the application clipboard. You can paste the diagram elements to other SDE-EC diagrams from the current project or across another project.



You cannot paste the selected content to other applications.

To copy selected diagram elements within SDE-EC, perform one of the following actions:

- Select Edit > Copy from main menu.
- Right-click on the selected diagram elements and choose Copy > Copy within SDE EE-EC from popup menu.
- Press *Ctrl-C*.

Copy within SDE-EC is the default copy action. For more details about the default copy action, please reference to the section "Setting Default Copy Action" below.

Copying to the Clipboard as Image (JPG)



Copying diagram elements as JPG image will copy the selected diagram element as a JPG image to the system clipboard, which you can copy to other applications.

To copy selected diagram elements to the system clipboard as JPG image, perform one of the following actions:

- Select Edit > Copy to Clipboard as Image (JPG) from main menu.
- Click on the Copy drop down button on the toolbar and select Copy to Clipboard as Image (JPG) from the drop down menu.
- Right-click on the selection and choose Copy > Copy to Clipboard as Image (JPG) from popup menu.
- Press Ctrl-Alt-C.

Copying to the Clipboard as Image (EMF)



Copying diagram elements as EMF (Enhanced Metafile) image will copy the selected diagram element as an EMF image to the system clipboard, which you can copy to other applications. Unlike copy as JPG image, the copied content is in EMF format, which is a more scalable format where image quality can be retained even after being resized/zoomed.

The copy to system clipboard as EMF image feature is available on Windows platforms only.

To copy selected diagram elements to the system clipboard as EMF image, perform one of the following actions:

- Select Edit > Copy to Clipboard as Image (EMF) from main menu.
- Click on the Copy drop down button on the toolbar and select Copy to Clipboard as Image (EMF) from the drop down menu.
- Right-click on the selection and choose Copy > Copy to Clipboard as Image (EMF) from popup menu.
- Press *Ctrl-Alt-Shift-C*.

Setting Default Copy Action

The default copy is triggered when the hotkey Ctrl + C is pressed. The actual action performed by default copy follows the SDE for Eclipse application option (as configured in the Options dialog box -> Diagramming category -> Environment page). The default copy action can be set to one of the following:

- Copying within SDE-EC
- Copying to Clipboard as OLE
- Copying to Clipboard as Image (JPG)
- Copying to Clipboard as Image (EMF)

Paste

You can select different paste methods according to what you have copied.

Pasting View

The pasted diagram elements share the same content of the copied diagram elements. Any changes made on the pasted elements will result in the same changes appearing on the elements copied, as the model elements are shared on the diagram elements.

To paste diagram element with model sharing, perform one of the following actions:

- Select Edit > Paste from main menu.
- Right-click on the target diagram and choose **Paste View** from popup menu.
- Press *Ctrl-V*

Pasting Model

It clones a copy of the copied diagram elements and the model element, then pastes them to the diagram. It is enabled to copy within SDE-EC.

To paste diagram element without model sharing, perform one of the following actions:

• Right-click on the target diagram and choose Paste Model from popup menu.

Pasting as Image Shape

With image shape, you can easily annotate and document your diagrams with related images. Instead of creating an image shape manually, you can copy an image from any application to the clipboard and then paste it to the diagram as a new shape.

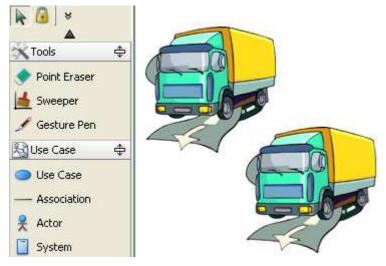


Figure 2.39 - Paste as Image Shape

To paste an image shape, perform one of the following actions:

- Select Edit > Paste from main menu.
- Right-click on the target diagram and choose **Paste View** from popup menu.
- Press *Ctrl-V*

Undo/Redo

When you create and edit a diagram, you may make mistakes like accidentally deleting a diagram element. You can use the Undo function to cancel the previous action. On the other hand, you may re-perform the action using the Redo action. The undo/redo feature in SDE for Eclipse is diagram based.

Undo

You can roll back undesirable changes by performing Undo. To undo an action, perform one of the following actions:

- Select **Edit** > **Undo** from main menu.
- Press *Ctrl-Z*.

Redo

This feature is to re-perform actions that were just undone. To redo an action, perform one of the following actions:

- Select **Edit > Redo** from main menu.
- Press *Ctrl-Y*.

Grouping

After you have applied alignment to a group of shapes, you may want to keep its configuration and not want them to get messed up. Grouping feature is designed for this usage. After shapes are grouped, you can treat the grouped shapes as a single shape.

In SDE for Eclipse, you can perform multiple level grouping - that is, group a shape with other shapes, and even with other groups.

Grouping Shapes

To group shapes, select shapes in the diagram and perform one of the following actions:

- Select menu Edit > Group.
- Right-click on the selection and select **Grouping > Group** from the popup menu.

Ungrouping Shapes

To ungroup shapes, select the grouped shapes in the diagram and perform one of the following actions:

- Select menu Edit > Ungroup.
- Right-click on the selection and select **Grouping > Ungroup** from the popup menu.

Resizing Shapes in Group

In some cases, you may want to resize multiple shapes on the diagram, SDE for Eclipse allows you to resize the shapes in a group, which in turn reduces the handling time for resizing the shapes individually. When you resize one shape of the selected shapes, all the selected shapes will resize by the same amount, regardless of their original sizes. To resize the shapes in a group:

1. Select multiple desired shapes on the diagram.

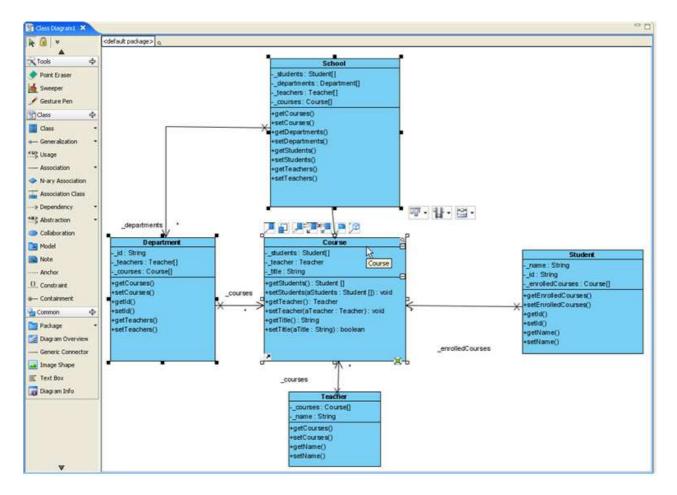


Figure 2.40 - Multiple desired shapes on diagram

2. Resize one of the selected shapes. All selected shapes will resize proportionally.

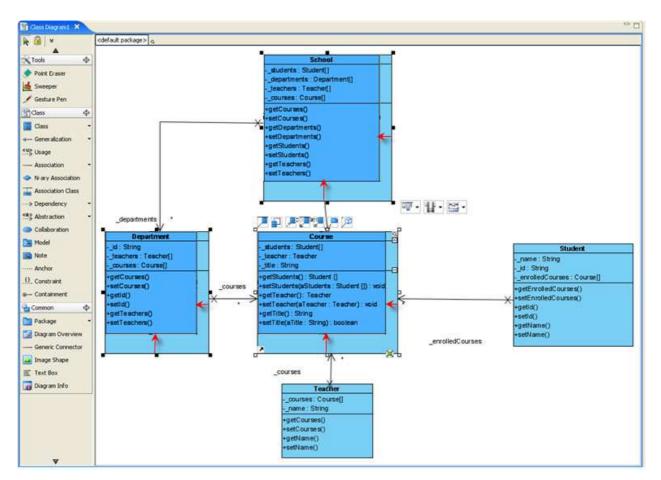


Figure 2.41 - Resize one of the selected shapes. All selected shapes will resize proportionally



If the size of the resizing shape returns to its original shapes before resizing, all selected shapes will not resize accordingly

Reversing Connector Direction

Reverse Connector can be used to reverse the direction of connector.

Here, the direction of connector between Shipper and FAS Online System is inverted.



Figure 2.42 - Before reversing Connector Direction

To reverse the connector, right-click on the connector and select Reverse Connector from the popup menu.

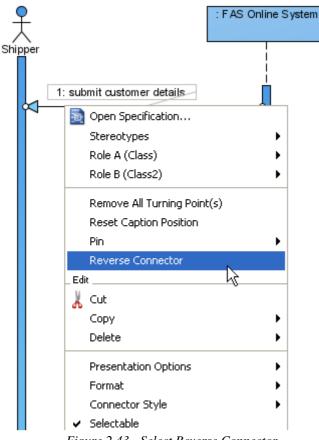


Figure 2.43 - Select Reverse Connector

The direction of connector is now inverted.

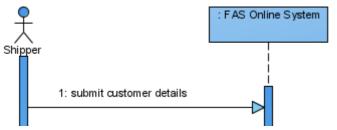


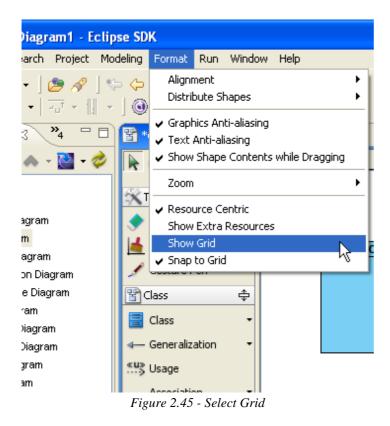
Figure 2.44 - After reversing Connector Direction

Grid

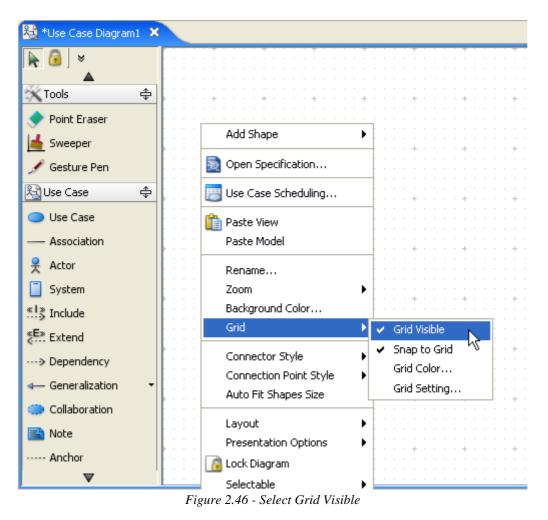
Showing/Hiding Grids

To toggle the visibility of grid lines, perform one of the following actions:

• Check/Uncheck Format > Show Grid from main menu to show/hide grid lines.



• Right-click on the target diagram, check/uncheck Grid > Grid Visible from popup menu to show/hide grid lines.



From the property table, check/uncheck Visible under Grid heading to show/hide grid lines.

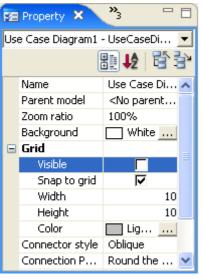


Figure 2.47 - Check Visible

• Right-click on the target diagram and choose **Open Specification** from popup menu. This displays the **Diagram Specification** dialog box. From the dialog box, switch to **Grid Setting** tab and check/uncheck **Grid Visible** to show/hide grid lines.

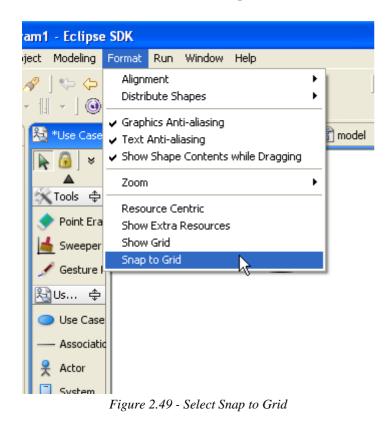
🖶 Use Case Diagram Specification 🛛 🔀		
General	Grid Setting Comments	
Grid vi	isible Snap to grid Width: 10 Height: 10	
Grid color:	Light gray	
	Set as Default Restore to Default	
Reset	OK Cancel Apply Help	

Figure 2.48 - Check Grid visible

Snap to Grid

This feature is used to set whether diagram elements should stick to grid lines when moving in the diagram. To turn the option on/off, perform one of the following actions:

• Check/Uncheck Format > Snap to Grid from main menu to turn on/off the snap to grid option.



• Right-click on the target diagram, check/uncheck **Grid** > **Snap to Grid** from popup menu to turn on/off the snap to grid option.

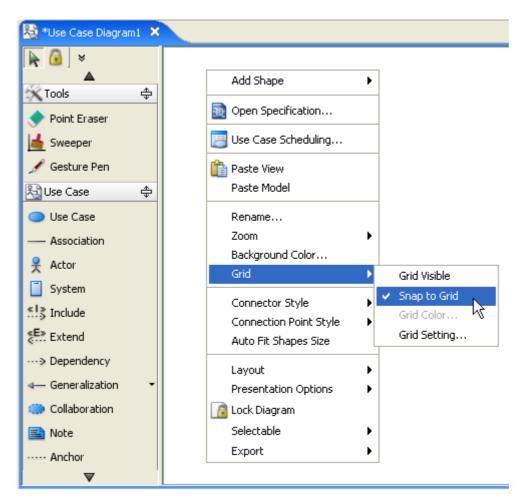


Figure 2.50 - Select Snap to Grid using popup menu

• From the property table, check/uncheck Snap to Grid under Grid heading to turn on/off the snap to grid option.

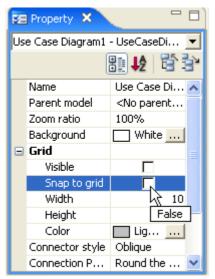


Figure 2.51 - Select Snap to grid

• Right-click on the target diagram and choose **Open Specification** from popup menu. This displays the **Diagram Specification** dialog box. From the dialog box, switch to **Grid Setting** tab and check/uncheck **Snap to Grid** to turn on/off the snap to grid option.

🖶 Use Case Diagram Specification 🛛 🔀				
General Grid S	Setting Comments			
Grid visible	Viden: 10 Height	: 10		
Grid color:	Light gray			
		Set as Default Restore to Default		
Reset	OK Car	ncel Apply Help		

Figure 2.52 - Check Snap to grid in Specification

Grid Size

To adjust the grid size, perform one of the following actions:

• From the property table, enter the value for Width and Height property under Grid heading.

🔁 Property 🗙 📃 🗖				
Us	Use Case Diagram1 - UseCaseDi 💌			
8 12 18 3°				
	Name	Use Case Di 🔨		
	Parent model	<no parent<="" td=""></no>		
	Zoom ratio	100%		
	Background	White		
	Grid	=		
	Visible			
Ι.	Snap to grid			
	Width	10		
	Height	10		
	Color	Lig		
	Connector style	Oblique		
	Connection P	Round the		

Figure 2.53 - Adjust grid size in property table

• Right-click on the target diagram and choose **Open Specification** from popup menu. This displays the **Diagram Specification** dialog box. From the dialog box, switch to **Grid Setting** tab and enter the value for Width and Height.

🖶 Use Case Diagram Specification 🛛 🔀				
General Grid	Setting Commen	ts		
Grid visible Snap to grid				
Grid size:	Width: 10	Height: 10		
Grid color:	Light gray			
		Set as Default Restore to Default		
Reset	ОК	Cancel Apply Help		

Figure 2.54- Adjust grid size in specification

Grid Color

To adjust the grid color, perform one of the following actions:

• Right-click on the target diagram and select **Grid > Grid Color...**from the popup menu. This displays the **Select Grid Color** dialog box for setting the grid color.

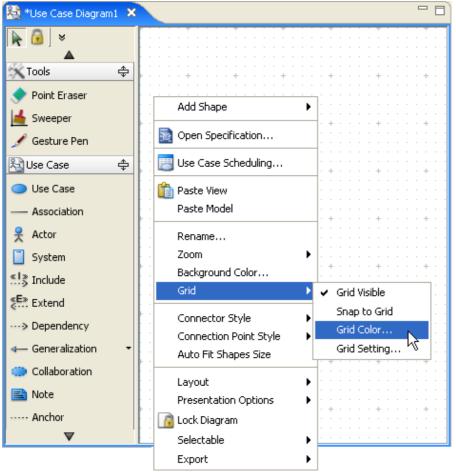


Figure 2.55 - Select Grid Color

• From the property table, click the ... button in the Value column of **Color** property under **Grid** heading. This displays a color chooser for selecting a grid color

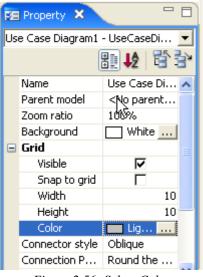


Figure 2.56- Select Color

• Right-click on the target diagram and choose **Open Specification** from the popup menu. This displays the **Diagram Specification** dialog box. From the dialog box, switch to **Grid Setting** tab, click on the button ...from the Grid Color field and select the grid color from the drop-down color chooser.

🖨 Use Ca	se Diagram	Specification	
General	Grid Setting	Comments	
🔽 Grid v	isible 📃 Sna	ap to grid	
Grid size:	Width:	10 Height: 10	
Grid color:		ht gray 🛄	
		Ч	
		Set as Default Restore to De	fault
Reset		OK Cancel Apply H	elp

Figure 2.57- Select Grid Color

The grids must be visible before setting the grid color.

Zooming

Zooming In

The zoom in feature allows you to get a close-up view of the diagram. To perform zoom in, perform one of the following actions:

- Select Format > Zoom > Zoom in from main menu.
- Click on the **Zoom In** Sutton on the toolbar.
- Right-click on the target diagram and choose **Zoom > Zoom In** from the popup menu.
- Press *Ctrl-=* (*Ctrl-Equals*).

Zooming Out

The zoom out feature allows you to see more of the diagram at a reduced size. To perform zoom out, perform one of the following actions:

- Select Format > Zoom > Zoom Out from main menu.
- Click on the **Zoom Out** Sutton on toolbar.
- Right-click on the target diagram and choose **Zoom > Zoom Out** from popup menu.
- Press Ctrl-- (Ctrl-Minus).

Zooming to 100%

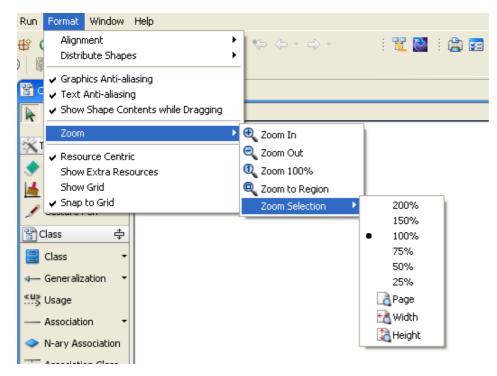
The zoom to 100% feature allows you to view the diagram in its actual size (100%). To restore the zoom ratio to 100%, perform one of the following actions:

- Select Format > Zoom > Zoom 100% from main menu.
- Click on the **Zoom 100%** Utton on toolbar.
- Right-click on the target diagram and choose **Zoom > Zoom 100%** from popup menu.
- Press *Ctrl-0*.

Zooming to a Specific Ratio

The zoom to a specific ratio feature allows you to choose the zooming ratio from the main menu. To perform zoom to a specific ratio, perform one of the following actions:

• Select Format > Zoom > Zoom Selection on the main menu, select a zoom ratio from the menu.





- Right-click on the target diagram and choose **Open Specification** from the popup menu. This displays the **Diagram Specification** dialog box. From the dialog box, select a zoom ratio from the **Zoom ratio** drop down menu, or enter the specific zoom ratio to the field.
- From the property table, select a zoom ratio from the drop down menu on the row **Zoom ratio**, or enter the specific zoom ratio to the field.

Zooming to Fit Diagram to Window

Beside standard zoom in/out and zoom to ratio, there are dynamic zoom options that allow you to zoom the diagram to fit its content to the window.

Select **Format** > **Zoom** > **Zoom** Selection on the main menu (or click on the **Zoom ratio** combo box in the Property pane when a diagram is active), you will see the **Page**, **Width** and **Height** zoom items.

- Page Zoom the whole diagram to fit to window
- Width Zoom the width of the diagram to fit to window
- Height Zoom the height of the diagram to fit to window

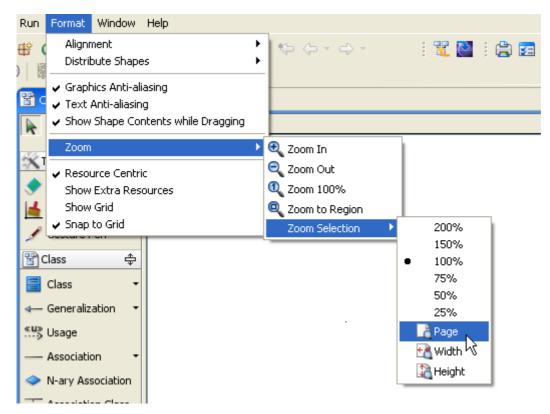


Figure 2.59 - Select zoom ratio to fit with page

Just select the zoom item to apply the corresponding zoom option.

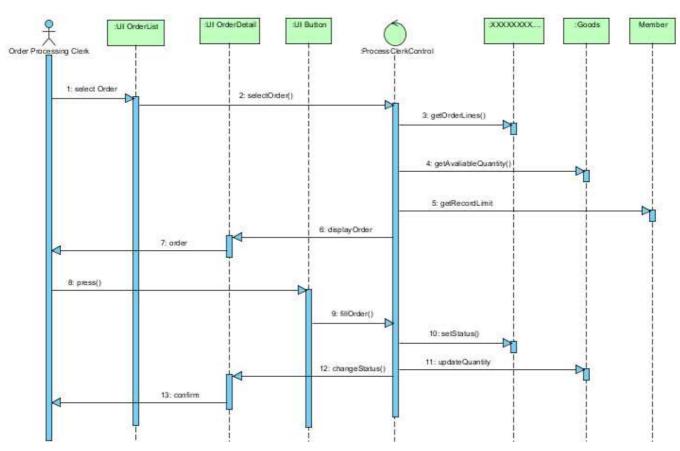


Figure 2.60 - Zoom to show all the Page

Zooming to Region

The zoom to region feature allows you to zoom the diagram to any selected region.

1. To zoom a diagram to region, click on the **Zoom to Region** button on the toolbar.



Figure 2.61 - Zoom to region

2. Press the mouse on the diagram, hold and drag the desired zoom region (just like multi-select shapes). The region is indicated by the dotted-line rectangle.

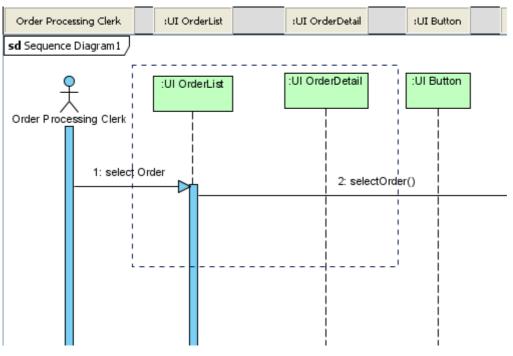


Figure 2.62 - Select the zoom region in the diagram

3. Release the mouse button and you will see the diagram is zoomed to the desired region.

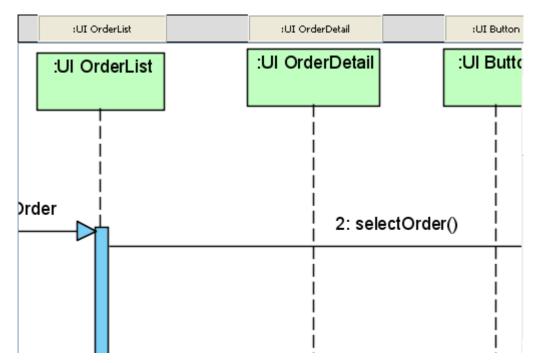


Figure 2.63 - Zoom to the Region

Quick Previewer

SDE for Eclipse provides a quick previewer in Diagram Navigator tree. You can preview the diagram before open the diagram.

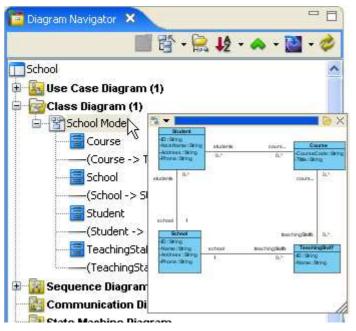


Figure 2.64 - Quick Previewer

To preview a diagram, move the mouse cursor over a Diagram node on Diagram Navigator. This displays the Quick Previewer. To open the diagram, click the button on the toolbar. To resize the Quick Previewer window:

- 1. Move the cursor to the bottom right-hand corner of the Quick Previewer window. The cursor changes to "³/₂", indicating that you can resize the window.
- 2. Press on it.
- 3. Drag to resize the window.
- 4. Releases the mouse press until you are satisfied with the size of Quick Previewer.

Apart from preview image, Quick Previewer also shows the documentation of diagrams. To display the documentation of a diagram, Click the button on the toolbar of the previewer and choose Documentation.

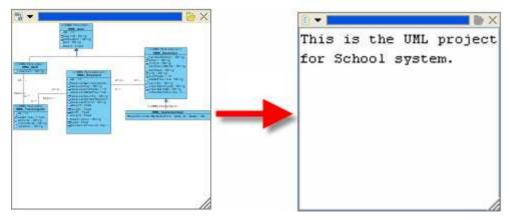


Figure 2.65 - Preview documentation

SDE for Eclipse records the size and position of the previewer and restores this when displaying again. To reset this record, double-click the toolbar of the previewer window.

Generic Connector

A generic connector allows you to connect any shapes, so it can represent the idea beyond the standard UML notation. You can edit the connector using resource.

To edit an arrow head of a connector using Format Arrow Head resource:

1. Click on the **Format Arrow Head** resource. The Format Arrow Head resource which is nearer to one end of line controls the arrow head at that end.

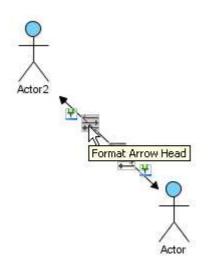


Figure 2.66 - Resources for Format Arrow Head

2. Select a format of arrow head in the popup menu.

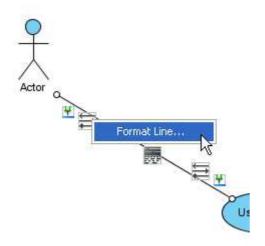


Figure 2.67 - Edit arrow head of generic connector

To edit the line style of a connector using the Format Line resource:

1. Click on the Format Line resource (located in the middle of the connector).

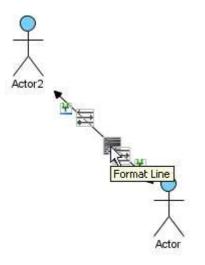


Figure 2.68 - Resources for Format Arrow Head

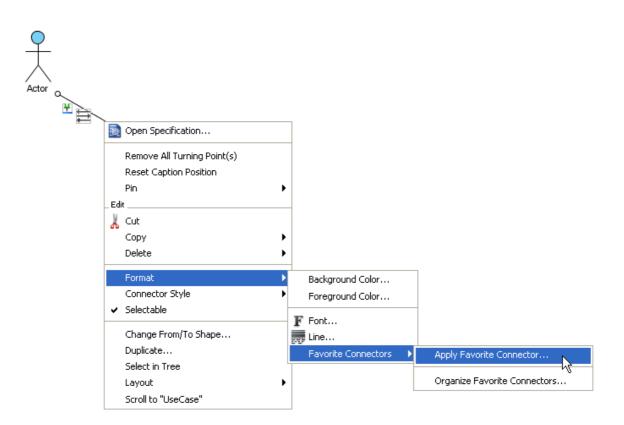
2. Select a style of line using the Style combo box in the Format Line dialog box.

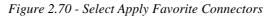
🖨 Format L	ine				
Style:	1:	•	-	Preview]
Weight:		1	*		
Color:	Black				
Transparency:	н 🖓 та та та та	· · · · · · • • •	%		
Begin		End			
Arrow head:	0: None 💌	Arrow head: 0: None	-		
Size:	Medium	Size: Medium	-		
Width:	0 🗘	Width:	0 🗘		
Height:	0	Height:	0 🗢		
Fill		Fill			
🗖 Use fill	color	🔲 Use fill color			
Fill color:		Fill color:			
<u>R</u> eset	Add to Favorite			<u>Q</u> K <u>C</u> ancel	Apply <u>H</u> elp

Figure 2.69 - Select format of generic connector

You can also apply your favorite connectors. There are two methods:

You can right click on the connector and select **Format** from popup menu and select **Favorite Connectors** > **Apply Favorite Connectors...**





Alternatively, you can click on the Format Line resource and select Apply Favorite Connector....

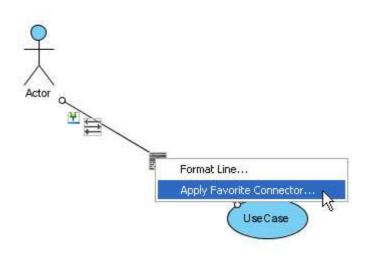


Figure 2.71 - Select Apply Favorite Connectors

Then, select your favorite connector to apply it.

🖨 Apply Favorite Co	onnector	×
<no end="" line=""></no>		^
Arc begin arrow		
Arc end arrow	•	: =
Arc two-way arrow	<>	
Circle begin arrow	•	
Circle end arrow	•	
Circle two-way arrow	• •	~
	OK Cancel	

Figure 2.72 - Save your favorite connectors

Apart from apply, you can organize your favorite connectors:

- 1. Right click on the connector and select **Format** from the popup menu.
- 2. Select Favorite Connectors > Organize Favorite Connectors.

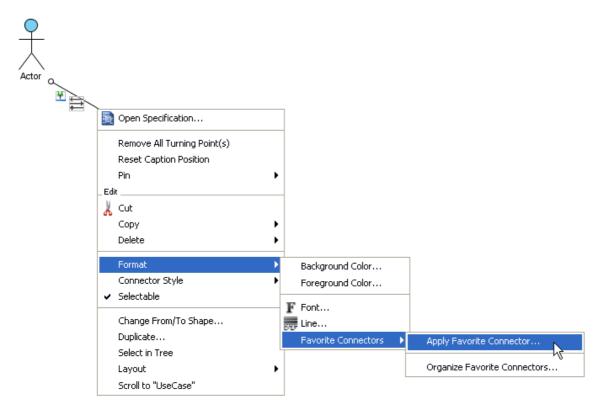


Figure 2.73 - Select Organize Favorite Connectors

3. You can choose to Create..., Duplicate..., Edit... or Remove any connectors.

🖨 Organize Favorite C	onnectors	
Favorite connectors:		
<no end="" line=""></no>		Create
Arc begin arrow		Duplicate
	=	
Arc end arrow	Arc end arrow	Remove
Arc two-way arrow	·	_
Circle begin arrow	•	
Circle end arrow		
Circle two-way arrow	• • • •	
	Close	e Help

Figure 2.74 - Organize Favorite Connectors

Text Box

A Text Box allows you to add free text to a diagram.

To add text using Text Box:

- 1. Click on the **Text Box** in the toolbar.
- 2. Click on the diagram pane where you want to add text.
- 3. Add text in the box provided.

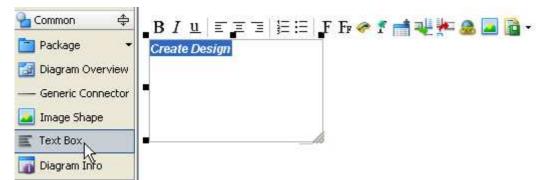


Figure 2.75 - Add a free text

Diagram Info Shape

Diagram Info Shape allows you to add useful information to a diagram.

To use **Diagram Info Shape**:

1. Right-click on the blank area of the diagram and select Add Shape > Diagram Info Shape from the popup menu.

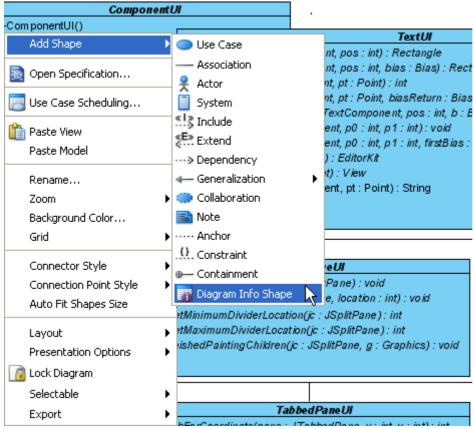
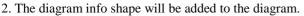


Figure 2.76 - Select Diagram Info Shape from popup menu



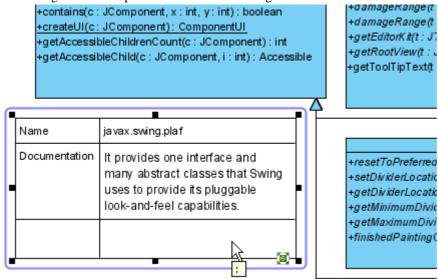


Figure 2.77 - Diagram info shape is added

By default, there are 2 items provided in the diagram info shape table: The **Name** cell follows the diagram name.

The **Documentation** cell follows the diagram documentation.

To add a new item:

1. Right-click on the diagram info shape, select Add Item from the pop-up menu. A new row will be created.

Nam	ie	javax.swin	ja vax.swing.pla f		
Documentation		It provides one interface and many abstract classes that Swin uses to provide its pluggable look-and-feel capabilities.		t Swing	
	Add It	em			
	_Edit			(8	
	👗 Cut				
	Сору		•		
	Duplica	ite			
	Delete		•		
	🗸 Selecta	able			
	Groupi	ng	•		
	Order		•		
	Forma	:	•		
	Select	in Tree			
	Layout		•		

Figure 2.78 - Select Add Item

2. Type in the newly added item and the information in the new row. You can add as many new items as needed.

l	
Name	javax.swing.plaf
Documentation	It provides one interface and many abstract classes that Swing uses to provide its pluggable look-and-feel capabilities.
John, 2007-05-28	Added new classes
Peter, 2007-05-30	Rearranged classes
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
	Documentation

Figure 2.79 - New item added

#### The diagram info shape is added.

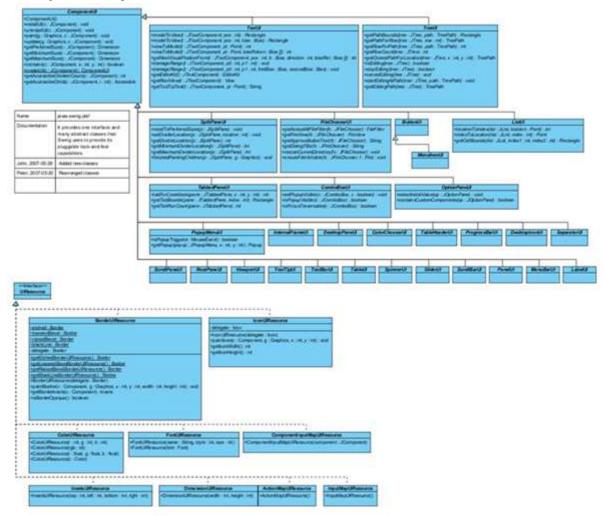


Figure 2.80 - Diagram info shape added

# **Rich Text Documentation**

In SDE for Eclipse, you can add rich text documentation on different models and diagrams. The styles and formats of the documentation can be included when you generate a document.

Rich text documentation can also be used in:

Notes

{ <b>self</b> .boss->isEmpty() <b>or</b>	
self.employer =	
self.boss.employer}	

Figure 2.81 - Note with rich text documentation

• Textboxes



Figure 2.82 - Text box with rich text documentation

To add rich text documentation:

1. Right click the diagram element and select **Open Specification** from popup menu.

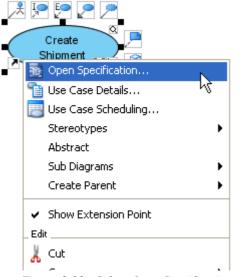


Figure 2.83 - Select Open Specification

2. Specify the documentation.

🖨 Use Case Spe	cification		
Tagged Values General	Constraints Dia Extension Points	agrams Referen Relations	ces Comments Stereotypes
Name: Create Shi Rank: High Documentation:			
This is the docu 1. Point 1 2. Point 2 3. Point 3		IF 🛷 I 📷 👐 1	••• ••• ••• •••
Abstract	Leaf 🔲 Root 📄 Business n	nodel	
Reset	OK	Cancel 4	Apply Help

Figure 2.84 - Specify the documentation

You can then switch to the **Documentation** pane to preview.

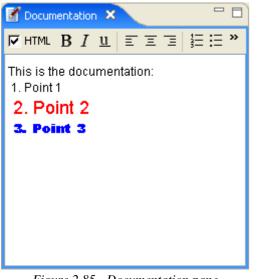


Figure 2.85 - Documentation pane

You can also see the result in the report generated.



## Summary

Name	Documentation	
Create Shipment	This is the documentation:	
	2. Point 2	
	3. Point 3	

Figure 2.86 - Documentation generated

## **Inserting Image to Documentation**

You can further visualize your concept by incorporating images into documentation. 1. Select an element in the diagram.



Figure 2.87 - Select a diagram element

2. Place the text cursor in the **Documentation** pane to locate where you want to insert the image, and then click the **Insert image...** button on the documentation toolbar (if this button is hidden, click the double-arrow button to expand the toolbar).

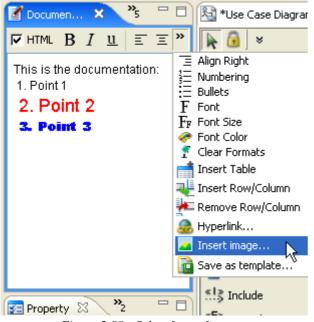


Figure 2.88 - Select Insert Image...

3. Select one or more images to insert.

🖨 Choose ima	ge(s)		
Look in:	🞯 Desktop	×	0 🕸 📁 📰 🚍
My Recent Documents	My Document My Computer My Network P		Preview
Desktop			
My Documents			
My Computer			Size :128 × 125
	File name:	Chapter_3_Working_with_Diagr	amsImage52.jpg 🖌 Open
My Network	Files of type:	Image files (*.jpg, *.jpeg, *.gif	, *.png, *.bmp) 🖌 🛛 Cancel

Figure 2.89 - Choose one or more images

4. The image(s) will be inserted to the documentation.

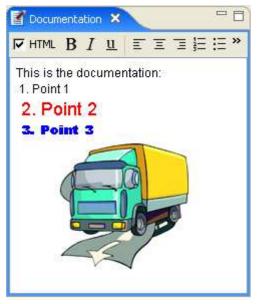


Figure 2.90 - Image added

## **Using Template**

By using template, you can reuse pre-defined documentation structures to save time and effort.

To save documentation as template:

1. Open the specification dialog box of a model.

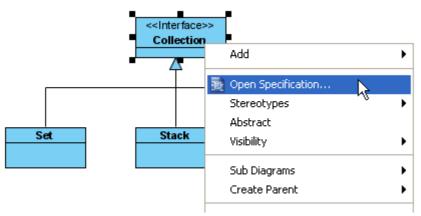
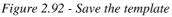


Figure 2.91 - Select Open Specification

2. After editing the documentation, click the Save as template... button on the documentation toolbar.





3. Specify the template name and click **OK** to save the template.



Figure 2.93 - Specify the template name

To load documentation from a template:

1. Open the specification dialog box of a model. Click the template drop-down button on the documentation toolbar to select a saved template.

Document	UEEE	ΈΞ	FFr 🥏	1	ali 🎠 🧟 🗖			
1		1. 1992 J.		- tasti		I CONTRACTOR	as template	
1						🔍 Collec	tion Description	R
		Figure	2.94 - Sel	lect a so	aved template			

2. The template content is loaded. Even if you edit the documentation of the model, the template will still remain the same.



Sorting: FIFO | LIFO | No sort

Figure 2.95 - A template is loaded

# **Compartment Visibility Control**

SDE for Eclipse provides a visibility control in class diagram. It allows you to hide or show the attributes or operation using the resource-centric of a class.

To show the attributes compartment or operations compartment click the " $\boxplus$ " sign button in resource-centric. To hide the attributes or operation click the " $\boxplus$ "sign button in resource-centric.

You can also use popup menu to change visibility.



Figure 2.96 - Compartment Visibility Control



When you reverse the code into class diagram(s) the attributes and operations are visible by default. The compartment visibility control is useful when you want to hide the attributes or operations in one click (saves time from choosing the presentation option in the popup menu).

# **Printing Diagrams**



### **Print Preview**

The **Print Preview** dialog box allows you to preview the printout and provides a set of options for changing the printout style. To display the dialog box, perform one of the following actions:

- Select File > Print SDE-EC Diagrams... from main menu
- Click on the **Print** button **b**on the toolbar

Printing.	From left to right	Fit to: Ratio 💌	00 % Quarlansing	0 %   With frame 💌 🏠 📑
Statistic second parameter framework (	From lest to right		too is overlappingt	
2 0				
Courier				
– 📓 🔲 Use Case Diagram (1)				
– 🛐 🔲 Class Diagram (2)				
📲 🔲 Sequence Diagram (5)				
– 🛃 🔲 Communication Diagram (1)				
– 📴 🔲 State Machine Diagram (1)				
– 🧱 📋 Activity Diagram (2)				
– 🔛 🔲 Component Diagram (1)				
🕆 🛃 🔲 Deployment Diagram (1)				
– 🛃 🔲 Package Diagram (1)				
- 🧾 🗌 Object Diagram (1)				
🛛 🔄 Composite Structure Diagram (1)				
- 🧾 🔲 Timing Diagram (1)				
🛛 🔯 📃 Interaction Overview Diagram (1)				
- 📴 🔲 Textual Analysis (1)				
- 🧕 🔲 Basic Diagram (1)				
📴 🔲 CRC Card Diagram (1)				
- 🧕 🔲 Entity Relationship Diagram (1)				
📴 🔲 ORM Diagram (1)				
🔡 🔲 Data Flow Diagram (1)				
EJB Diagram (1)				
Overview Diagram (1)				

Figure 2.97 - Print preview dialog

The toolbar of the print preview pane allows you to configure the print settings. The buttons and their descriptions are shown in the table below:

Icon	Button	Function	
	Print	Print the diagram(s). The Print dialog box will be opened.	
	Quick Print	Print diagrams without previewing them. The Quick Print dialog will be opened.	
4	Page Setup	Set up the page properties such as paper size and orientation.	
	Adjust Margins	Adjust the margins of the pages.	
	Use Gradient Color	Select to use gradient color in printout. Since printing gradient color will use up lots of memory, it is recommended to turn this option off for better performance.	
50%	Zoom	Select the percentage to reduce/enlarge the print preview of diagrams.	
<b>P</b> / <b>R</b>	Paper Base Layout/Diagram Base Layout	If the <b>Fit to Pages</b> option is selected, and there are multiple pages in the printout, selecting <b>Paper Base Layout</b> will cause the distribution of pages to be paper-oriented (the diagram size is ignored in arranging the preview);	

		while selecting <b>Diagram Base Layout</b> will cause the distribution of pages to be diagram-oriented. Note that this option affects the preview only; the order of the printout remains unchanged.
₽¢/ #8	Paper Place Style	To change the order of the printout. A large diagram is divided into many pages, selecting <b>From left to right</b> will arrange the printout order from the pages on the left to the pages on the right, while selecting <b>From top to bottom</b> will arrange the print order from the pages on the top to the pages on the bottom.
Fit to: Ratio 💙 100 %	Fit to Ratio	Set the diagram size to fit to the specified ratio.
Fit to: Pages 💌 👯 1 × 1	Fit to Pages	Set the diagram to be printed on the number of pages specified.
Overlapping: 0 %	Overlapping	Set the percentage of the margins to overlap among adjacent pages.
	Show/Hide Clip Marks on Page	Select/deselect to show/hide the clip marks on the printout.
	Edit Header/Footer	Edit the header and the footer of the printout.
	Multiple Page Mode	Switch to the Multiple Page Mode to set the multiple page options.
?	Help	Calling the SDE-EC help file
Ф	Close Print Preview	Close the print preview pane and return to the design area.

Table 2.1

### **Printing a Diagram with Preview**

You can use the Print command to select the printer. Set the range of pages and number of copies to be printed.

1. Select the desired diagrams for printing. The selected diagrams will be shown at the preview area.

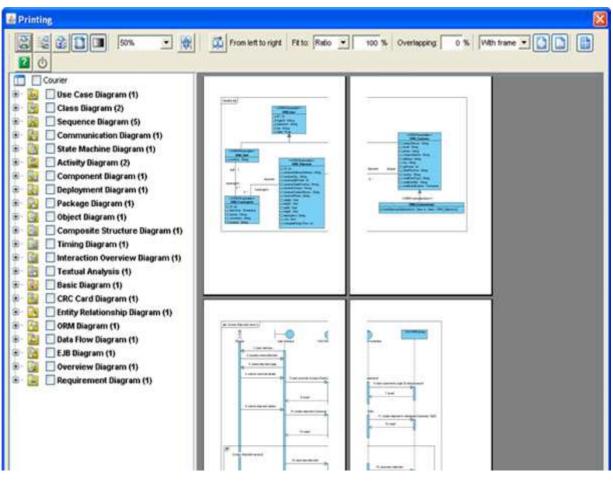


Figure 2.98 - Diagram Preview

2. Click on the **Print** button is on the Print Preview Toolbar. The **Print** dialog box appears.

Prin	nt		? 🛛
ΓP	Printer		
P	Name:	HP OfficeJet R60 on 192.168.1	1.130 (from C  Properties
	Status:	Ready	
	Туре:	HP OfficeJet R60	
	Where:	TS001	
0	Comment:		Print to file
P	^o rint range		Copies
	🖲 All		Number of copies: 1
	O Pages	from: 1 to: 1	
(	C Select	ion	
			OK Cancel

Figure 2.99 - Print the Diagram

- 3. Select the printer to use, the page range and the number of copies to be printed. You may click on the **Properties...**button to configure the printer-specific properties as well.
- 4. Click **OK** to start printing.

#### Page Setup

Page Setup allows the user to specify the page size, orientation as well as the margins of the pages.

Page Setup	? 🛛
	Provide Statistical Statistics       12. Statistical Statistics       13. Statistical Statistics       14. Statistical Statistics       15. Statistical Statistics       15. Statistics       16. Statistics       17. Statistics       18. Statistics
Paper	
Size:	etter 💌
Source: A	utomatically Select
- Orientation	Margins (inches)
<ul> <li>Portrait</li> </ul>	Left: 1 Right: 1
C Landscape	Top: 1 Bottom: 1
	OK Cancel Printer

Figure 2.100 - Page setup

- 1. Click on the **Page Setup** button is on the toolbar. The **Page Setup** dialog box appears.
- 2. You can click on the Size drop-down menu to select the paper size to use.
- 3. You can select the orientation for the page(s) to be printed (either **Portrait** or **Landscape**) in the **Orientation** field.
- 4. You can enter the value into the **Left**, **Right**, **Top** and **Bottom** text fields to adjust the size of the corresponding margin.
- 5. Click **OK** to confirm the settings.

## **Adjusting Margins**

The Margins pane allows user to specify the margins of the pages, header and footer.

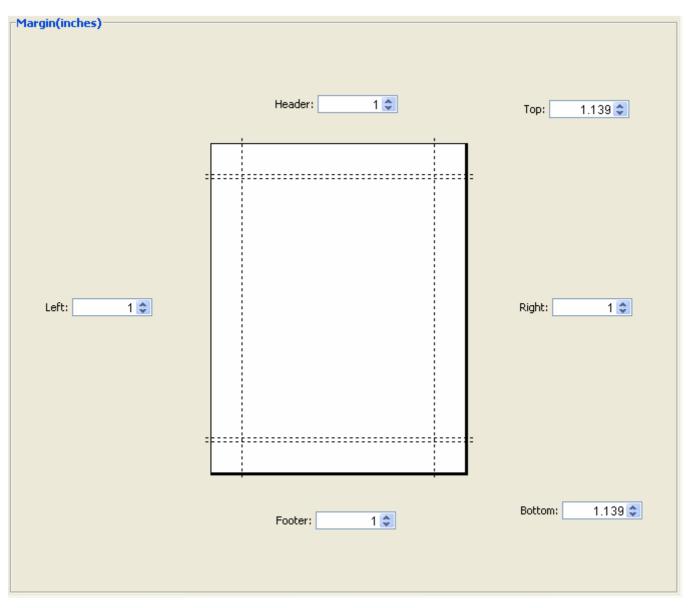


Figure 2.101 - Adjusting Margins

- 1. Click on the **Adjust Margins** button is on the Toolbar. The preview area shows the margin setting page.
- 2. You can edit the margins sizes by entering the sizes into the text fields. Alternatively, click on the spinner buttons to increase/decrease the margin sizes.
- 3. Click the **Finish Adjust Margin** button when you have finished configuring the margin settings. The margin sizes will then be updated.

#### **Zooming Pages**

Diagrams can be zoomed in or zoomed out according to user preference. Click on the **Zoom** drop-down menu to select the desired zoom ratio.

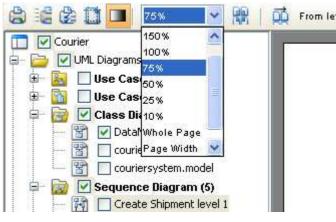


Figure 2.102- Set the Zoom ratio

The preview area will show the diagrams in the zoom ratio that you have selected.

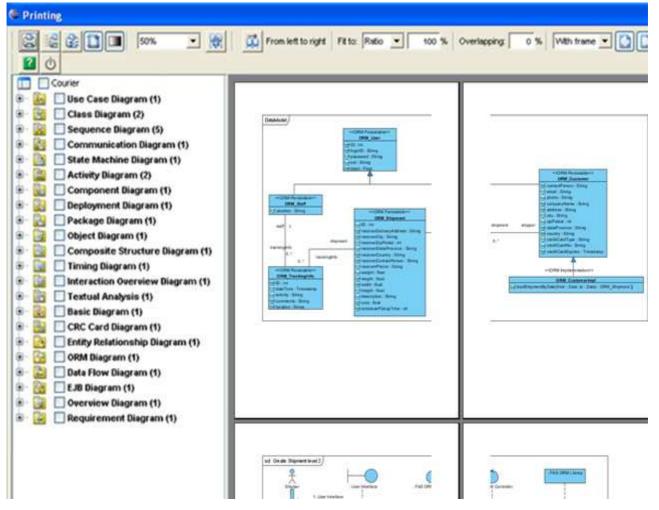


Figure 2.103 - Preview in the preview dialog

### **Selecting the Preview Layout**

There are two layouts that you can select for the print preview, the **Paper Base Layout** and the **Diagram Base Layout**. If the **Fit to Pages** option is selected and there are multiple pages in the printout, selecting **Paper Base Layout** will cause the distribution of pages to be paper-oriented (the diagram size is ignored in arranging the preview); while selecting **Diagram Base Layout** will cause the distribution of pages to be diagram-oriented.

Note that this option affects the preview only; the order of the printout remains unchanged

To select a layout of the preview, click on the **Paper Base Layout** button or **Diagram Base Layout** button is on the toolbar. A popup menu will appear where you can select the layout to use.

The preview after applying the Paper Base Layout:

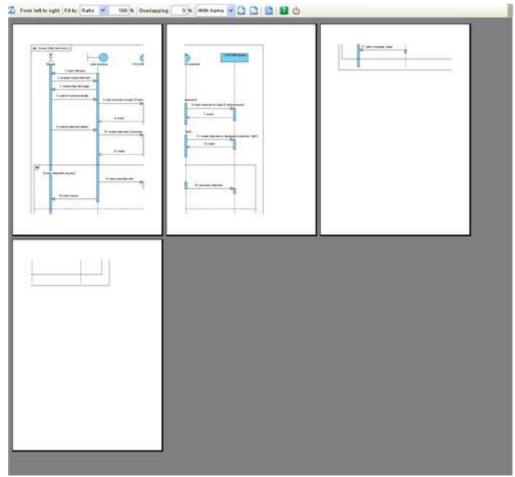


Figure 2.104 - Preview in paper Base Layout

#### The preview after applying the Diagram Base Layout:

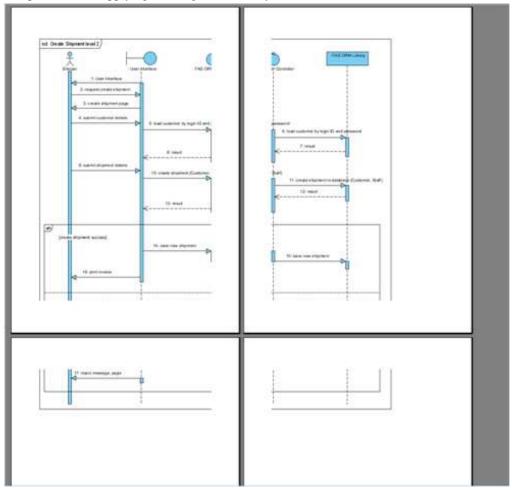


Figure 2.105 - Preview in Diagram Base Layout

### **Setting Paper Place Style**

You can select the paper place style to change the order of the printout. To select the paper place style, click on the **Paper Place Style** button on the toolbar. A popup menu appears where you can select a paper place style.

Consider a large diagram is divided into many pages, selecting **'From left to right**' will arrange the printout order from the pages on the left to the pages on the right, while selecting **'From top to bottom**' will arrange the print order from the pages on the top to the pages on the bottom

The order of the printout after selecting From left to right.

Ind Development Hand 2)	
	A from subsets by tage II and extenses
۲۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰	1 mm
and sensity with	

Figure 2.106 - Printout order is left to right

#### Fit to Ratio

Fit to Ratio is used to resize the diagrams in the printout to a specific ratio.

Click on the Fit to drop-down menu and select Ratio.

You can enter the ratio into the textbox, e.g. enter 150 to set the ratio to 150%. After you have edited the ratio, the diagrams in the printout will be resized to the new ratio.

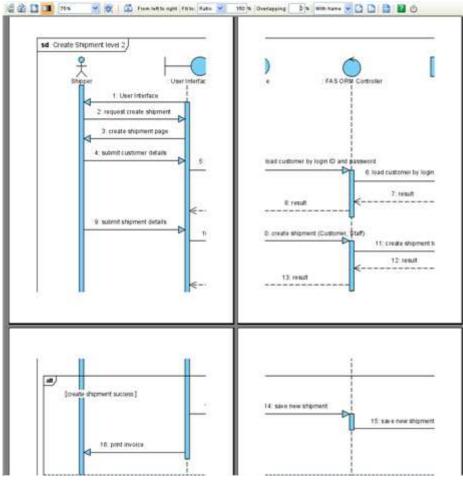


Figure 2.107 - Fit to ratio

### **Fit to Pages**

Fit to Pages is used to split the diagram to a desired number of pages when printing.

- 1. Click on the **Fit** to drop-down menu and select **Pages**.
- 2. Click on the Multiple Pages button 🛅 on the toolbar. The page selector appears.

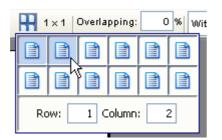


Figure 2.108 - Select multiple pages Page

4. Click on the row-column combination to select it (note that you can click and drag on the page selector to extend the selection). The diagram will be split into multiple pages by the rows and columns that you have selected.

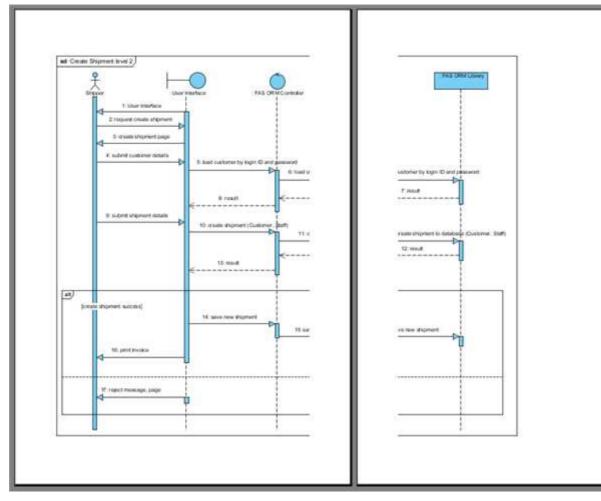


Figure 2.109 - Fit to page

### Setting the Diagram Overlap Percentage

Overlapping is used when users want the diagrams to have overlapping at the boundaries between pages. This is particularly useful when you have a large diagram that span multiple pages and you want to stick the pages of the printout together; the overlapping area can then be used as a hint when sticking the pages.

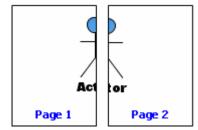


Figure 2.110- Multiple page without overlap

- 1. Click on the **Overlapping** textbox to input the overlapping percentage and press the Enter key.
- 2. The printing area near the boundaries of the pages will be duplicated by the overlapping percentage inputted.

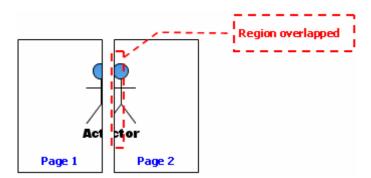


Figure 2.111 - Multiple page with overlap

#### **Printing with Frame/Border Option**

You can print your diagram with a frame or border. There are three options:

- With frame
- With border
- No border

Select With frame/ With border/No border option from the drop-down menu.



Figure 2.112 - Select option from drop-down menu

Output of printing with frame

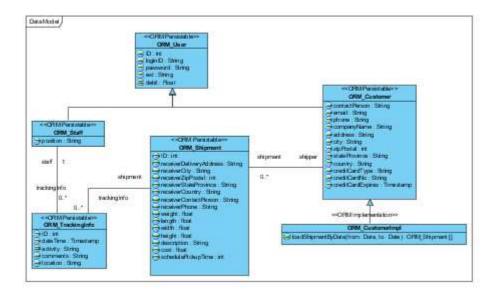


Figure 2.113 - Printing with frame

#### Output of printing with border

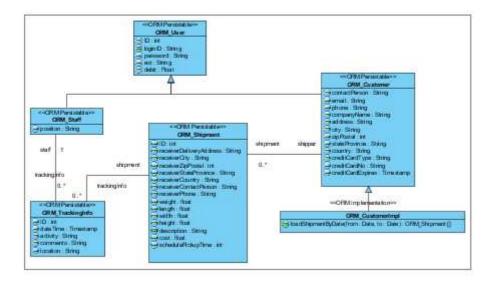


Figure 2.114 - Printing with border

Output of printing with no border

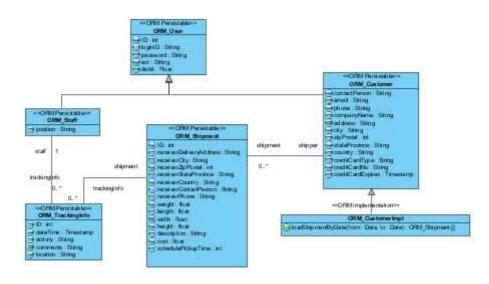


Figure 2.115 - Printing with no border

#### **Showing/Hiding Clip Marks on Page**

Clip marks act as an indication of the boundary of a page.



Figure 2.116 - Clip marks

To show clip marks on the printout click on the **Show Clip Marks on Page** button  $\square$ . You will see the boundaries of the pages are surrounded by clip marks. To hide the clip marks click on the **Hide Clip Marks on Page** button  $\square$  again.

#### **Editing Header/Footer of the Pages**

To edit the header/footer of the printout click on the **Edit Header/Footer** button in the toolbar. You will then switch to the edit header/footer pane.

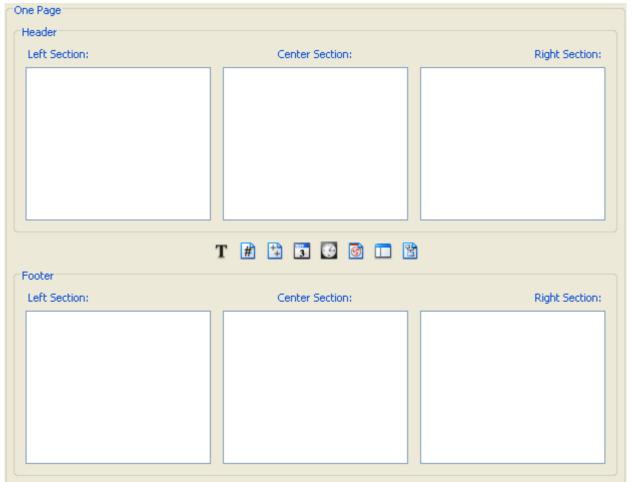


Figure 2.117 - Editing Header/Footer of the Pages

You can edit the header and the footer in the **Header** panel and the **Footer** panel respectively. Each of the panel consists of the **Left Section**, **Center Section** and the **Right Section**, which represents the position that the content will be located in the header/footer.

There is a toolbar between the **Header** panel and the **Footer** panel, which facilitates the editing of header/footer. The description of the buttons in the toolbar can be found in the following table:

Icon	Name	Description
Т	Select Font	Select the font to use for the selected section. Note that you must click on the section once in order to select it
#	Insert Page Number	Insert the page number
++	Insert Number of Page	Insert the total number of pages
<u>877</u>	Insert Date	Insert the date that the printing starts
•	Insert Time	Insert the time that the printing starts
1	Insert File Name	Insert the file name of the SDE-EC project
	Insert Project Name	Insert the name of the SDE-EC project
	Insert Diagram Name	Insert the diagram name

#### Table 2.2

After you have finished editing the header/footer, click on the **Close Edit Header/Footer** button is to switch to the print preview mode. A sample page that has the header and footer formatted is shown in the picture below:

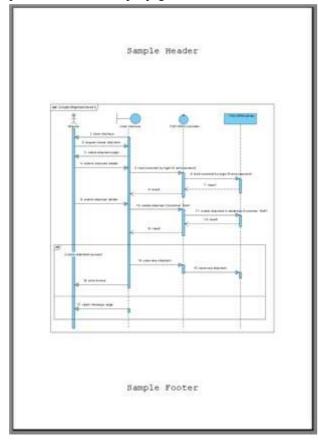


Figure 2.118 - Page with header and footer

#### The Multiple Page Mode

The Multiple Page Mode allows users to configure how the diagrams should be distributed in multiple pages. To switch to the

Multiple Page Mode click on the **Multiple Page Mode** button 🛅 on the toolbar.

Clicking on the button beside the **Multiple Pages** field will invoke the page selector, where you can select the row-column combination for the printout. Alternatively, you can type in the **Row** and **Column** text field directly.

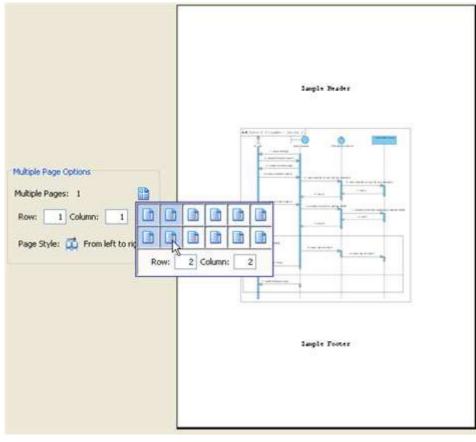


Figure 2.119 - Select multiple page

Click on the button beside the **Page Style** field to change the printout order. Consider a large diagram is divided into many pages, selecting '**From left to right**' will arrange the printout order from the pages on the left to the pages on the right, while selecting '**From top to bottom**' will arrange the print order from the pages on the top to the pages on the bottom.

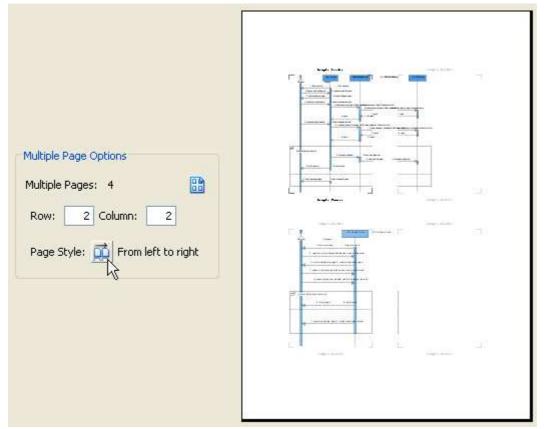


Figure 2.120 - Distributes diagram in multiple page

After you have finished configuring the multiple page settings click on the **Close Multiple Page Mode** button to close the Multiple Page Mode.

## **Printing a Diagram with Quick Print**

The Quick Print feature allows you to print diagrams without previewing them, hence speeding up the print job. To quick print, perform one of the following actions:

• Select File > Print SDE-EC Diagrams... from main menu. This displays the Print Preview dialog box. Click is on the toolbar of the Print Preview dialog box.

In both cases, the Quick Print dialog box will show.

ange	Scaling
	O Scaling
tive	O Fit to pages Rows: 1 Columns: 1 C
igrams:	
Courier	Border option: With frame
🛛 🗹 Use Case Diagram (1)	Page Setup Page numbers Use gradient color
Class Diagram (2)	rage becup Prage numbers of use gradient color
Sequence Diagram (5)	Selected 28 diagrams, printing on 74 papers.
Communication Diagram (1)	
🛛 🗹 State Machine Diagram (1) 🛛 💻	🔀 Use Case Diagram1 (2 papers)
Activity Diagram (2)	
Component Diagram (1)	
Deployment Diagram (1)	🖀 DataModel (2 papers)
Package Diagram (1)	BB
🔽 Object Diagram (1) 🛛 🤍	
	😭 couriersystem (8 papers)
<ul> <li>Activity Diagram (2)</li> <li>Component Diagram (1)</li> <li>Deployment Diagram (1)</li> <li>Package Diagram (1)</li> </ul>	DataModel (2 papers)

#### Figure 2.121- Quick Print dialog

Field	Description
Print Range	Click on either of the below options to specify the print range. All - Print all the diagrams within the current project Active - Print only the active diagram Diagrams - Check from the diagram tree to select the diagram(s) for printing
Scaling	Select No scaling to print with diagrams' original size. Numbers of pages used for each diagram are subject to the scale of diagrams. Select Fit to pages to print with specified number of pages per diagram with respect to the specified number of rows and columns.
Border option	Select border option of printout.
Page Setup	Page Setup allows you to specify the page size, the orientation as well as the margins of the pages.
Page numbers	Select to print diagrams with page number on it.
Use gradient color	Select to use gradient color in printout.

# **Shape Alignment**

# **Aligning Shapes**

This feature provides a facility to align selected diagram elements. You can align using toolbar, popup menu or group resource. All alignment methods calculate the resulting shape boundaries on a referenced shape. You can refer to the section 'Referenced Shape for Alignment' for details.

Before you use any one of the methods to align, you should first select more than one shape.

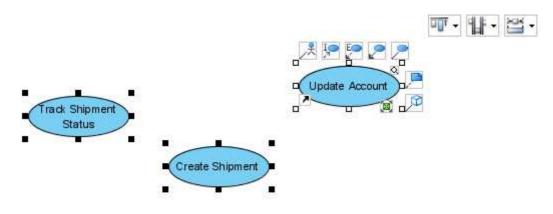


Figure 2.122 - Three use cases selected

Here, three use cases aligning towards the top is used as an example.

#### To align using toolbar, you can select **Format** > **Alignment** > **Top** from the main menu.

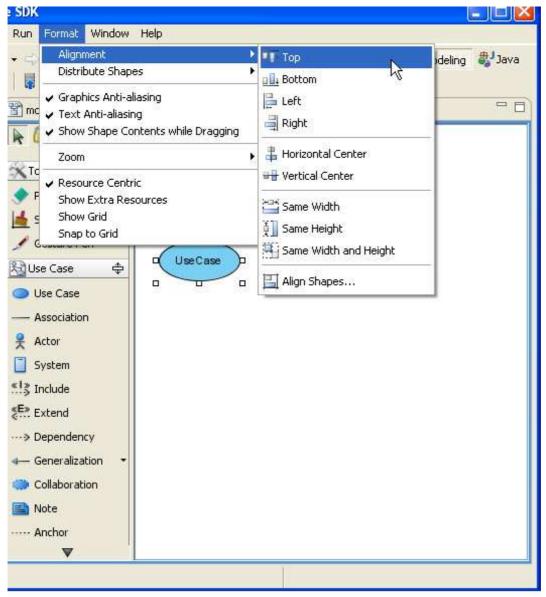


Figure 2.123 - Select Top from main menu

To align using popup menu, you can select **Alignment** > **Top** in the popup menu.

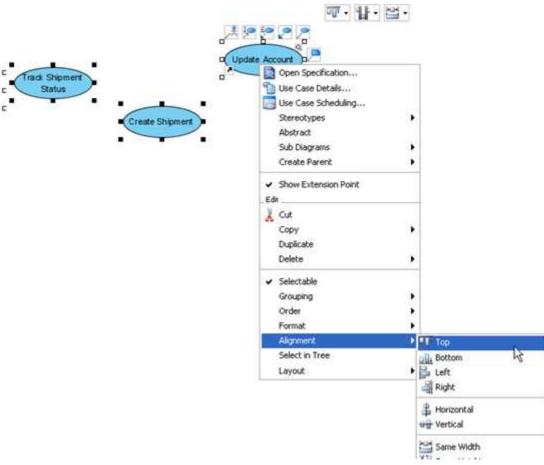


Figure 2.124 - Select Top from popup menu

To align using group resource, you can select the **Alignment** resource > **Align Top** which appears when two or more shapes are selected.

You can select the way of aligning from the drop-down menu.

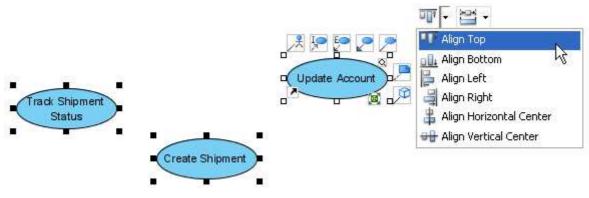


Figure 2.125 - Select Align Top from Alignment resource

By using any of the above methods, the shapes are aligned.



Figure 2.126 - Shape aligned

#### **Distributing Shapes**

This feature provides a facility to distribute selected diagram elements with uniform space. You can use resource, toolbar and menu to distribute shapes.

Before you use any one of the methods to distribute shapes, you should first select more than two shapes.

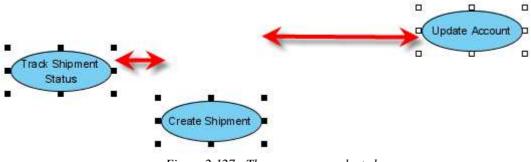


Figure 2.127 - Three use cases selected

Here, three use cases distributing horizontally is used as an example.

Use resource to distribute shapes:

To align using group resource, you can select the **Distribute** resource > **Distribute** Horizontally which appear when more than two shapes are selected.

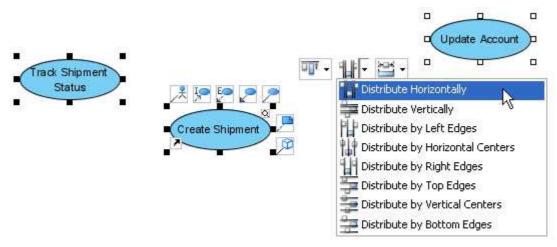


Figure 2.128 - Select Distribute Horizontally

The use cases after **Distribute Horizontally**.

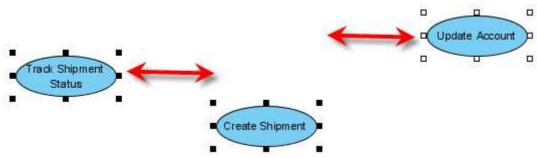


Figure 2.129 - Three use cases distribute horizontally

## Making Shapes Same Width and Height

This feature provides a facility to set selected diagram elements to the same width, same height, or both. You can use resource, toolbar and menu to make the shapes being the same width/height.

The methods calculate the resulting shape boundaries based on a referenced shape. You may refer to the section 'Referenced Shape for Alignment section' below for details.

You need to select two or more shapes in order to apply this feature. Here, making three use cases the same width is used as an example.

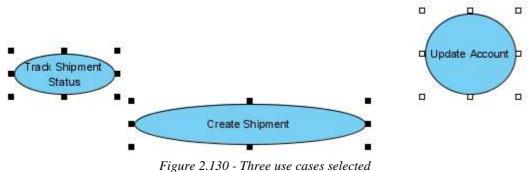
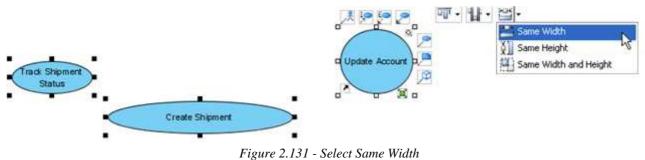
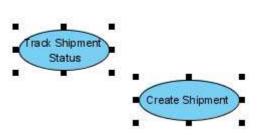


Figure 2.150 - Inree use cases selected

To make shapes same width, you can select Make Same Width resource > Same Width.



The resultant use cases now have the same width.



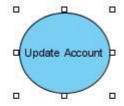


Figure 2.132 - Resultant use cases

#### **Referenced Shape for Alignment**

When there are multiple shapes selected, the last selected shape will be used as the referenced shape for alignment. That is, the alignment method will be performed based on the position/size of the referenced shape. The referenced shape will be rendered with its resize handles surrounded by white rectangles.

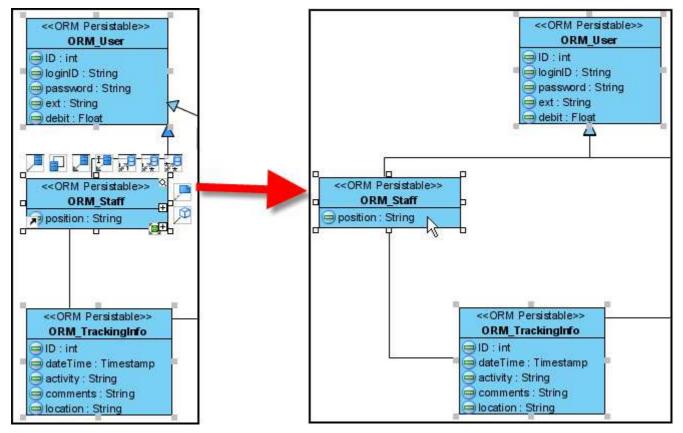


Figure 2.133- before and after Alignment left

You can set a shape as the referenced shape for alignment (if it is currently not) by shift-clicking on the shape for two times (the first time to deselect the shape, and the second time to reselect it).

## Using the Align Shapes Dialog Box

You can invoke the **Align Shapes Dialog** either **Format** > **Alignment** > **Align shapes...** in the menu bar or the toolbar, or using the hot key F12. The **Align Shapes** dialog box allows you to configure the top/bottom, left/right alignments and same width/same height options all at a time. Select the desired options and click **OK** to apply the settings.

🖶 Align Shapes Dialog	
Top/Bottom Alignment	0
Left/Right Alignment	0
Same Size	
<u>O</u> K <u>C</u> ancel	

Figure 2.134 - Align Shapes Dialog

## **Visual Alignment Guide**

When you move a shape, visual alignment guide helps you to align with the closest shape. The guide lines show the vertical edge of the closest shape if you move a shape horizontally. Similarly, the guide lines show the horizontal edge if you move a shape vertically.

Here, a use case moving horizontally to align with other use cases is used as an example.

To align with other shapes:

1. Move the use case which you want to align with others. You can see the Visual Alignment Guide line.

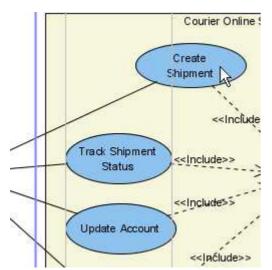


Figure 2.135 - Use case with guide lines before alignment

2. Move until the use case align with the others.

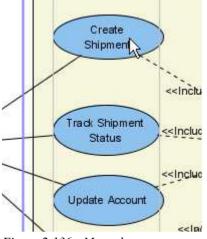


Figure 2.136 - Move the use case

3. Release the mouse and you will see the aligned use case.

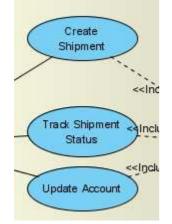


Figure 2.137 - Use case aligned

You may also change the alignment guide style, or enable/disable it. 1. To perform these task, select **Modeling** > **Application Options...** to open the Options dialog box.

😂 Options	
General Diagramming	General
View Instant Reverse	Project Appearance Connection Printing Edition
Office Exchange User Path	Auto Save
Data Type File Types Code Synchronization	Auto save project Auto save interval (mins):
Code Synchronization	Delete no referenced model
	Open exported image file
	💿 Ask 🔘 Yes 🔘 No
	<ul> <li>Backup level : 2 ▼</li> <li>Confirm close project</li> <li>Confirm delete diagram</li> <li>Confirm delete shape</li> <li>✓ Open last project on startup</li> </ul>
<u>.</u>	Reset Reset to Default App OK Cancel Apply H

Figure 2.138- Options dialog box

#### 2. Select **Diagramming** > **Environment** tag.

Coptions				
General Diagramming	Diagramming			
View Instant Reverse Office Exchange User Path	Activity and State Resource Centric Appearance	Component Diagram Class Association Environment	Business Pro ERD & ORM Model Generation	cess Requ Interaction Shape
Data Type File Types Code Synchronization	Textual Analysis Highl	- · ·		



To enable/disable the guide lines, check/uncheck the option Show diagram alignment guide.

Alignment Guide <ul> <li>Show edges</li> <li>Show center</li> </ul>	
Delay of show Quick Preview in Diagram Tree (second) :	1.5 👻
Default Copy Action :	Within VP-UML SE
Copy as image with frame : Show shape content when dragging Show diagram alignment guide	Unspecified 💙

Figure 2.140 - Enable/disable the guide lines

You can also change the guide line style by choosing Show edges or Show center.

Alignment Guide	
Show edges  Show center	
Delay of show Quick Preview in Diagram Tree (second) :	1.5 🗸
Default Copy Action :	Within VP-UML SE 🛛 👻
Copy as image with frame :	Unspecified 💙
Show shape content when dragging	
🔽 Show diagram alignment guide	

Figure 2.141- Change the style of guide lines

If you choose **Show center**, the guide line shows the center of the closest shape.

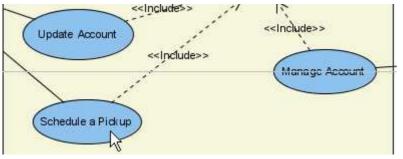


Figure 2.142 - Show center of the closest shape

If you choose Show edges, the guide lines show the edge of the closest shape.

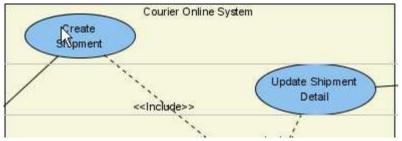


Figure 2.143 - Show edges of the closest shape

# Selectable

The option allows you to make certain diagram elements read-only so that you can focus on editing other elements. All diagram elements are selectable by default.

To make one or more diagram elements non-selectable:

1. Right-click on the elements and deselect from the popup menu to make the selected element non-selectable.

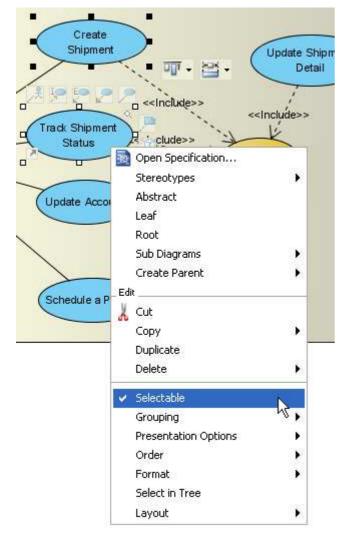


Figure 2.144 - Deselect the selectable option

2. When a diagram element is non-selectable, it can not be detected by mouse or key actions. This means that if you click or drag on it, it will be the same as clicking or dragging on the white space of the diagram and nothing with happen

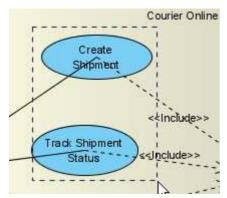


Figure 2.145 - Diagram element after deselection

3. To make a non-selectable diagram element selectable again, right-click on it and select Selectable from the popup menu.

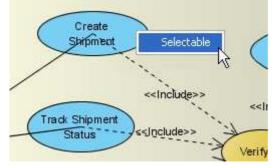


Figure 2.146 - Diagram element can be selected again

4. You may also right-click on the diagram and select **Make All Non-Selectable/Make All Selectable** from the popup menu to make all elements non-selectable/selectable.

Add Shape	•
Open Specification	
📙 Use Case Scheduling	
💼 Paste View	
Paste Model	
Rename	
Zoom	•
Background Color	
Grid	►
Connector Style	•
Connection Point Style	•
Auto Fit Shapes Size	
Layout	•
Presentation Options	•
👔 Lock Diagram	
Selectable	► I
Export	►

Figure 2.147 - Make all diagram elements Selectable or Non-selectable

# Locking a Diagram

If a diagram is locked, you can only view but not change the elements on the diagram. A diagram is locked by right-clicking the diagram and then selecting **Lock Diagram** from the popup menu.

Add Shape 🕨 🕨
Dpen Specification
🔡 Use Case Scheduling
💼 Paste View
Paste Model
Rename
Zoom 🕨
Background Color
Grid 🕨 🕨
Connector Style
Connection Point Style
Auto Fit Shapes Size
Layout 🕨
Presentation Options
👔 Lock Diagram
Selectable 😽 🕨
Export •

Figure 2.148- Locking a diagram



# **Style and Formatting**

# **Chapter 3 - Style and Formatting**

This chapter will show you how to change the style and format of diagram elements.

One of the goals of modeling is help the modeler and readers to understand the subject being modeled. As a result, applying consistent style and formatting can greatly improve the efficiency of modeling. In SDE for Eclipse, it supports a rich array of tools in a set to help the modeler to perform modeling.

In this chapter:

- Changing connector styles
- Setting and pinning connection end points
- Filling color
- Formatting lines

# **Connector Styles**

Connectors are the lines that connect two shapes. When more shapes are created and more connectors appear, you may find that it is difficult to handle the straight spaghetti-like connectors. To overcome this problem, SDE for Eclipse provides five connector styles to help you handle the connectors, namely Rectilinear, Oblique, Curve, Round Oblique and Round Rectilinear.

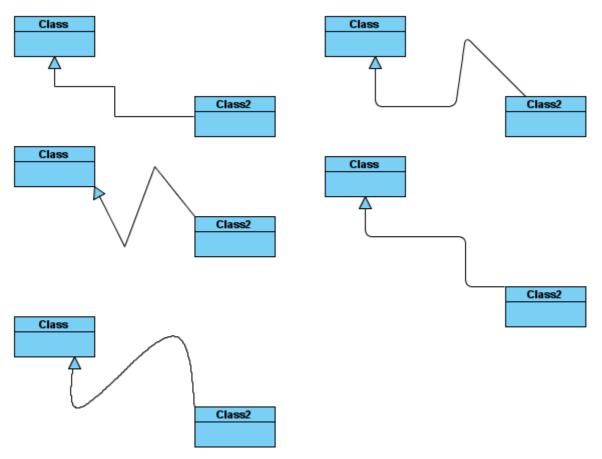


Figure 3.1 - Different types of connectors

## **Setting Connector Style**

When a new connector is created, it follows the default connector style defined in the Options of the application. It is possible to change the connector style individually. There are two ways to change the connector style. The first one is via a popup menu and the other is via the **Property table**.

To change the connector style via popup menu:

- 1. Right click the connector that you want to change the style of.
- 2. Select the **Connector Style** menu and then the connector style sub-menu will appear.
- 3. Select either Rectilinear, Oblique, Curve, Round Oblique or Round Rectilinear.

<default package=""> 🔍</default>			
Class2	ass 8		
	Open Specification Stereotypes Visibility Remove All Turning Point(s) Reset Caption Position Pin Edit Cut Copy Delete	> >	
	Delete Format Connector Style ✓ Selectable Change From/To Shape Duplicate Select in Tree Layout Scroll to "Class" Reset BPMN Id	Follow Diagram CRectilinear Coblique Curve Round Oblique CRound Rectilinear	

Figure 3.2 - Change connector style on popup menu

To change the connector style via Property table:

- 1. Select the connector whose style you want to change.
- 2. Find the **Connector style** row in the Property table.
- 3. Click the Value column of **Connector style** row.
- 4. Select either Rectilinear, Oblique, Curve, Round Oblique or Round Rectilinear.

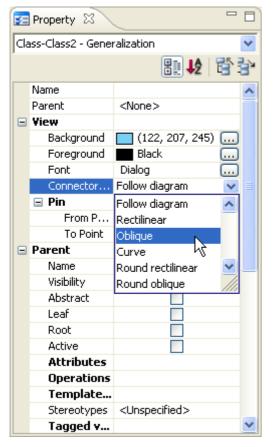


Figure 3.3 - Change connector style on properties table

#### **Rectilinear Connector Style**

Once the connector is set to Rectilinear, the connector always remains either horizontal or vertical. You cannot create a breakpoint on the connector by yourself. The breakpoints are generated on the connector automatically after you reshape the line.

In the following figure, there is a pin icon at each end of the connector. Pinning a connection end point allows the pinned end point of a connector to be fixed, no matter how the connecting shapes are moved. For further details, please refer to **Connection Point Style> Pinning the Connection End Point** in this chapter.

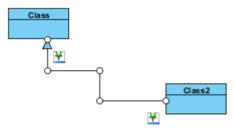


Figure 3.4 - Rectilinear Connector Style

To reshape the connector, you can drag the lines or the break points at the connector.

#### **Dragging on Lines**

There is a horizontal line and vertical line along the connector. If you are dragging on the horizontal lines, the lines can only move up or down. In the following figures, the line we want to move is in blue. As you can see, the right end point of the blue line is touching Class2. After moving the red line upwards, the right end point of the blue line does not touch Class2. To rectify this, a vertical line is automatically created to continue the connection between Class and Class2.

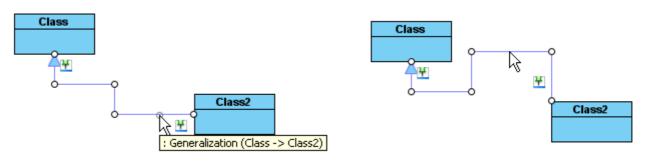


Figure 3.5 - Drag on the line

The result of dragging the vertical line is similar to dragging the horizontal line. The difference is that the line is restricted to vertical movement (either from left to right or from right to left). When two shapes are disconnected, a horizontal line will be created at the end of point to continue the connection between shapes.

#### **Dragging on Break Points**

Dragging on break points provides two dimensional movements to the point, modifying the connectors. The point being moved may affect all lines of the connector that depends on the numbers of line in the connector. The following figures demonstrate the result of dragging the orange point along the red arrow.

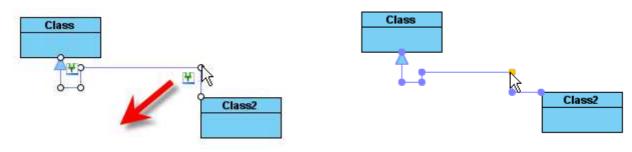


Figure 3.6 - Drag on break point

## **Oblique Connector Style**

There is no boundary for the modification of the connectors. You can create break points anywhere you like on the connector, and the lines in the connector will not be aligned with the horizontal or vertical axis. If you drag a line, a new breakpoint will be created at the drag point and two lines will be created. If you wish to modify a line to be horizontal or vertical, you may do this by hand.

The following figures demonstrate modifications to the connector. The new breakpoint is created when you drag the connector away from its starting point. When you release the mouse click the breakpoint will be finalized.

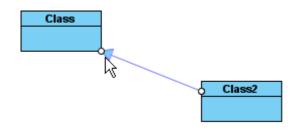


Figure 3.7 - Oblique Connector Style

The figure below shows the modification to the connector with the oblique connector style. The connector is divided into two lines and a new break point is created on the connector.

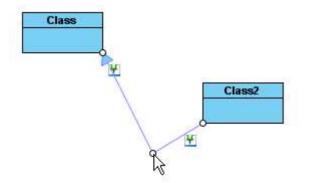


Figure 3.8 - Create a break point by drag on the line

You can use the **Point Eraser** in the Diagram Toolbar or double click on the connector point to erase that points.

#### **Curve Connector Style**

By applying the Curve connector style, the connector will be arranged as a smooth curve line. To change the curve shape, simply add/move/remove point(s) on the connector and the curve will be automatically re-calculated according to the points. The Curve connector style makes the connectors much easier to route in complex diagrams to avoid crossing connectors.

The following figures demonstrate the modifications to the connector. The new breakpoint is created when you drag the connector away from its starting point. When you release the mouse click the breakpoint will be finalized. Another breakpoint is created in the middle of the connector to make a curvature.

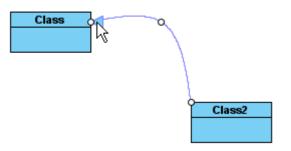


Figure 3.9 - Curve Connector Style

The figure below shows the modification to the connector with the curve connector style. The connector has one more curvature and a new break point is created on the connector.

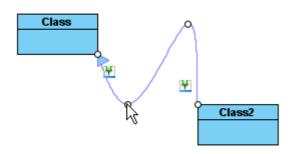


Figure 3.10 - Create a break point by drag on the line

#### **Round Oblique Connector Style**

The behavior of the Round Oblique connector is the same as that of the Oblique connector style. The only difference is the corners of the connector using Round Oblique style will appear rounded.

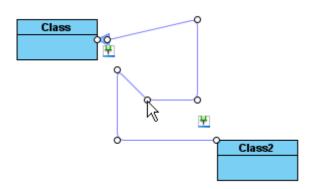


Figure 3.11 - Round Oblique Connector Style

#### **Round Rectilinear Connector Style**

The behavior of Round Rectilinear connector style is the same as that of Rectilinear connector style. The only difference is the corners of the connector using Round Rectilinear style will appear rounded.

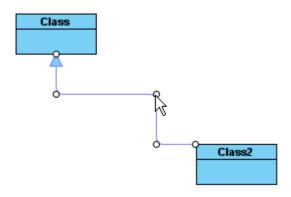


Figure 3.12 - Round Rectilinear Connector Style

#### Setting a Default Connector Style

Default connector style can be set from the Options. To set default connector style:

- 1. Select Modeling > Application Options...from main menu. This displays the Options dialog box.
- 2. Open the **Diagramming** category.
- 3. Select the **Environment** page.
- 4. From the row Connector Style, select either Rectilinear, Round Rectilinear, Oblique, Round Oblique or Curve.
- 5. Press **OK** button to confirm changes.

## Follow Diagram Connector Style

In SDE for Eckuose, with the Follow Diagram feature, you do not need to set connector style one by one if you want to change all connectors in the diagram. When you right-click on a diagram you can set its default connector style from its popup menu, so that once the diagram connector style is changed, all connectors whose connector style is set to 'Follow Diagram' will be updated to the new style.

# **Connection Point Style**

Each shape has a property called **Connection Point** that specifies how the connection points of the connectors should move if the shape is being moved. Unlike the connector style that is connector oriented, the connection point style is shape oriented.

## **Setting Connection Point Style**

To set the connection point style: Using popup menu:

- 1. Select one or more shapes and right-click on the selection.
- 2. Select the **Format > Connection Point...**from popup menu. This displays the **Select Connection Point Style** dialog box.

Select Connection Point Style			
The last connection point of the connector will move along the boundaries of the shape.	The last connection point of the connector will be determined by the center of the shape.		
O Round the shape	<ul> <li>Follow center</li> </ul>		
• Follow diagram (round the shape)			
Reset     Set as Default     OK     Cancel     Apply     Help			

Figure 3.13 - Select Connection Point Style Dialog

- 3. Select either 'Round the shape' or 'Follow center' for the connection point style. Upon selecting a style an animation will appear to emulate the effect of the selected connection point style.
- 4. Click **OK** to confirm the change.

Using the property table

- 1. Select a shape.
- 2. Select either 'Round the shape' or 'Follow center' from the Value field of the Connection point property.

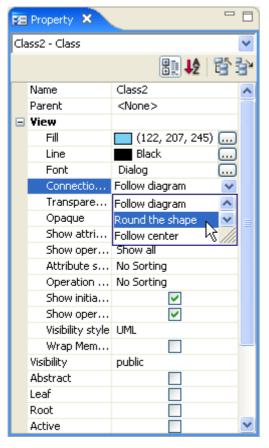


Figure 3.14 - Properties Table

#### **Round the Shape**

Upon selecting the 'Round the shape' connection point style, the last connect point of the connector will move along the bounds of the shape.

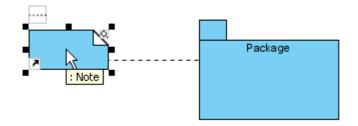


Figure 3.15 - Round the shape

#### **Follow Center**

Upon selecting the 'Follow center' connection point style, the last connect point of the connector will be determined by the center of the shape.

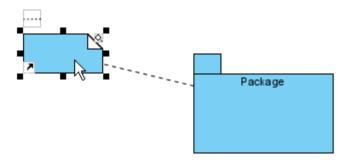


Figure 3.16 - Follow center

## **Pinning the Connection End Point**

Pinning a connection end point allows the pinned end point of a connector to be fixed, no matter how the connecting shapes are moved. In figure below, the connection end point linking the class **Bank** is pinned to the location of the **getAccount** operation.

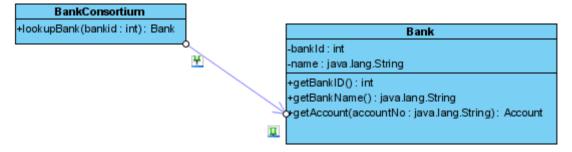


Figure 3.17 - Pin a connector point

In SDE for Eclipse a connecting end point is unpinned by default. If a connecting end point is unpinned, its location will be determined by the connection point style of the connecting shape.

#### To pin a connection and an end point: Using Resource-Centric Interface

- 1. Select the connector.
- 2. There is a "pin" resource for each connection end point. If the end point is currently pinned an icon will be displayed (a pin with shorter needle). If the end point is currently unpinned, an "unpinned" icon will be displayed (a pin with longer needle). In the figure below, the end point connecting the class **Bank** is pinned, while the end point connecting the class **BankConsortium** is unpinned.
- 3. Click once on the resource to toggle its pin state.

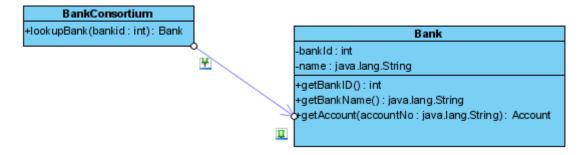


Figure 3.18 - Toggle the pin state

#### Using the popup menu

- 1. Right-click on the connector.
- 2. Select the **Pin** menu from the popup menu, the Pin sub-menu appears.
- 3. Select either From Point or To Point to pin/unpin the desired connection end point.

# **Fill Color**

All of the shapes have a fill color property, which allows you to select a solid fill color or a gradient fill color as well as define its transparency.

To format fill color for shapes, select the desired shapes and perform one of the following actions:

- Right-click on the selection and choose **Format** > **Fill...**from popup menu.
- From the property table, click on the ...button of the Fill property to invoke the Format Fill Color dialog box.

In both cases, the Format Fill Color dialog box will be displayed.

#### Format Fill Color Dialog Box

The **Format Fill Color** dialog box allows you to select the fill color type (solid or gradient) and you can create your own fill color by configuring the transparency, gradient style and colors.

Fill style:  Solid    Transparency:   (122, 207, 245)	
Color: (122, 207, 245)	]
Cyan Cyan Default Dark gray Gray Green Light gray Magenta Orange Pink Red Keset to Default Set as Default OK Cance	

Figure 3.19	Format Fill	Color Dialog
-------------	-------------	--------------

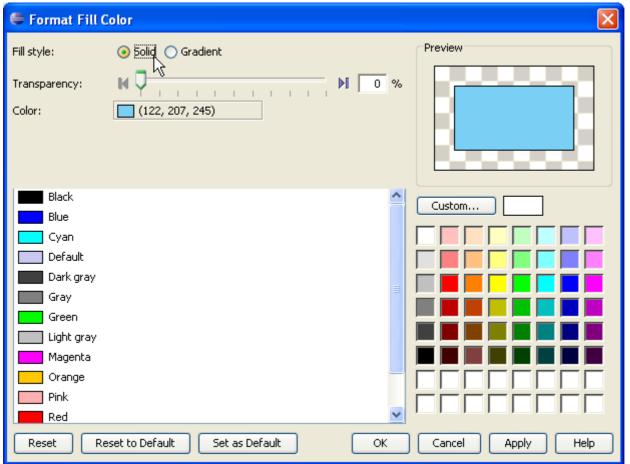
Field	Description
Fill Style	Select the fill style of the fill color. It can either be <b>Solid</b> (a single color) or <b>Gradient</b> (a fill color that is mixed

	by two colors).
Transparency	Specify the transparency of the fill color. The greater the value, the more transparent is the shape. 0 (zero) transparency makes the fill color completely opaque, while 100 (one hundred) transparency makes the fill color completely transparent. You can adjust the transparency by dragging the slider, or by typing the value in the text field. Alternatively, you can click the Opaque button to set the fill color to opaque, or click the Transparent button to set the fill color to transparent.
Preview	The Preview pane displays a rectangle that is filled with the editing fill color. The background is checked so that you can also preview the transparency of the fill color as well.
Save as Default	To save the current fill color as the default fill color for new shapes, click the Set as Default button.



#### Formatting a Solid Fill Color

Upon selecting **Solid** from the **Fill style** field, you will see the detail pane for formatting a solid fill color.



#### Figure 3.20 - Select Solid Fill Style

Field	Description
Color	This field displays the current selected color. It will display the color name if the selected color is a default color (Black, White, Yellow, etc); otherwise the RGB value of the selected color will be displayed.
Default Color List	The default color list displays a list of pre-defined colors. Each color is displayed with a color preview and a color name. You can view the RGB value of a color by moving the mouse pointer over the color.
Custom Color Pane	The custom color pane displays a wider range of colors that you can choose from, and you may define a new custom color by clicking on the <b>Custom</b> button. The new color will be added to the recent color list (located at the bottom two rows of the custom color pane) for later reuse.

#### Formatting a Gradient Fill Color

Upon selecting Gradient from the Fill style field you will see the detail pane for formatting a gradient fill color.

Fill style: Solid I Gradient   Transparency: I I I I I I I I I I I I I I I I I I I	🗲 Format Fill Co	olor		
Color 1: Orange Color 2: White Gradient Color Themes Brick Brick Grassland Khaki Maple Ocean Color 1: Orange Color 2: Orange Color 2: Orange Color 2: Orange Color 1: Orange Color 2: Orange C	Fill style;			Preview
Color 1: Orange   Color 2: White     Gradient Color Themes   Brick   Brick   Golden   Gradient Style     Gradient Style     Gradient Style     Gradient Style     Maple   Mint Blue   Ocean	Transparency:	ы 🖓	₩ 0 %	
Gradient Color Themes   Brick   Golden   Grassland   Khaki   Maple   Mint Blue   Ocean	Color 1:			
Brick   Golden   Golden   Grassland   Khaki   Maple   Mint Blue   Ocean	Color 2;	White		
Brick   Golden   Golden   Grassland   Khaki   Maple   Mint Blue   Ocean				
Golden   Grassland   Khaki   Maple   Mint Blue   Ocean	Gradient Color The	emes	-	Gradient Style
Grassland   Khaki   Maple   Mint Blue   Ocean	Brick	^	Add to Themes	
Grassland Khaki Maple Mint Blue Ocean	Golden	1 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Remove	
Khaki   Maple   Mint Blue   Ocean	Grassla	ind		
Mint Blue Ocean	Khaki		Rename	
Ocean	Maple			
	Mint Blu	Je		
	Ocean	~		
Reset Reset to Default Set as Default OK Cancel Apply Help	Reset Res	set to Default		

Figure 3.21 - Select Gradient Fill style

Field	Description
Color 1	You can select the first color of the gradient from the <b>Color 1</b> field. To select a color click the button or double-click on the color editor. A color chooser will appear for you to select a color.
Color 2	You can select the second color of the gradient from the <b>Color 2</b> field. To select a color click on thebutton or double-click on the color editor. A color chooser will appear for you to select a color.
Gradient Color Themes	The Gradient Color Themes pane displays a list of pre-defined gradient color themes. To add a new color theme select <b>Color 1</b> and <b>Color 2</b> then click the <b>Add to Themes</b> button. Please note that you must select a combination of colors that does not already exist in the color themes. To rename a theme click on the <b>Rename</b> button or double-click on the desired theme. An input dialog will appear for you to enter a new name. To remove a theme select the theme and click on the <b>Remove</b> button, or use the Delete key instead.
Gradient Style	The Gradient Style pane allows you to select the gradient style of the gradient fill color (the angle of how the gradient color is drawn). There are sixteen pre-defined gradient styles, which are shown as toggle buttons in the Gradient Style pane. To select a gradient style to use click on one of the styles.

Table 3.3

# **Line Format**

You can format the line of a shape so that you can adjust its stroke style, weight (thickness), color and transparency. To format the line of a shape, select the desired shape and perform one of the following actions:

- Right-click on the selection and choose **Format** > **Line...**from popup menu.
- From the property table, click on the ... button of the Line property to invoke the Format Line dialog box.

In both cases, the Format Line dialog box will be displayed.

## Format Line Dialog Box

The Format Line dialog box allows you to format the line of a shape.

🖨 Format Lin	e 🔀
Style: Weight:	1: Preview
Color: Transparency:	
Reset	Set as Default OK Cancel Apply Help

Figure 3.22 - Format Line Dialog

Field	Description	
Style	Select the style (stroke) of the line. You can select one of the 23 styles (including "None", which means no line) to apply in the combo box. A preview will be shown for each of the style items.	
Adjust the weight (thickness) of a line. The greater the value, the thicker the line. You c up/down button to increase/decrease the line weight, or you can type directly into the tex line weight ranges from 1 to 20.		
	Only integer values can be used for line weight. If you type 2.8 in the text field, 2 will be applied instead.	
Color	Specify the line color. Click on the button beside the <b>Color</b> field to select a color, either from the <b>Default</b> page (which shows predefined colors) or from the <b>Custom</b> page (which shows a larger variety of colors, and allows you to define any custom colors).	
Transparency	Specify the transparency of the line. The greater the value, the more transparent the line. 0 (zero) transparency makes the line completely opaque, while 100 transparency makes the line completely transparent. You can adjust the transparency either by dragging the slider, or by typing the value in the text	
	field. Alternatively you can click on the Opaque button to set the fill color to opaque, or click on the Transparent button to set the fill color to transparent.	
Preview	The Preview pane displays a rectangle surrounded by the line with the selected line format applied.	
Save as Default Line Format	To save the current line format as the default line format for new shapes click the <b>Set as Default</b> button.	

Table 3.4

# Font

You can change the font format such as color and size.

To format the font, select the desired shapes or text boxes and perform one of the following actions:

- Right-click on the selection and choose **Format** > **Font...** from the popup menu.
- From the property table, click on the ... button of the Font property to invoke the Select Font dialog box.

In both cases, the Select Font dialog box will be displayed.

# **Select Font Dialog Box**

🖨 Select Font		
Font Name:	Font Style:	Font Size
Dialog	Regular	11
Dialog 🔨	Regular	11 🔺
DialogInput	Italic	12
Dotum	Bold	14
DotumChe	Bold Italic	16
Franklin Gothic Medium		18
Georgia		20
Gulim		22
GulimChe		24 💌
Font Color : 📕 Black 🛄		
Preview		
Class2		
OK Cano	el	

The Select Font dialog box allows you to format the font of a shape or a textbox.

Figure 3.23 - Select Font dialog box

Field	Description
Font Name	Select different types of font. The number of fonts depends on the fonts available in your computer.
Font Style	Select the style of font. You can select one of the 4 styles, a preview will be shown for each of the style items.
Font Color	Specify the font color. Just click on the button beside the <b>Color</b> field to select a color either from the <b>Default</b> page (which shows predefined colors) or from the <b>Custom</b> page (which shows a larger variety of colors, and allows you to define any custom colors).
Font Size	Select the size of font. You may either click on the default sizes or enter the font size in the text field.
Preview	The Preview pane displays the selected font format.

Table 3.5

# **Format Copier**

Format copier enables you to copy the fill, line and font settings of one shape to another.

To copy format of a shape to another:

1. Select the source shape.

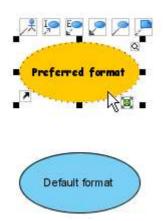


Figure 3.24 - Select the source shape

#### 2. Click **Format Copier** on the toolbar.

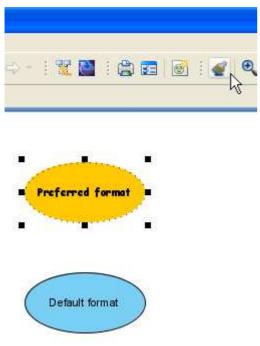


Figure 3.25 - Click Format Copier

3. Click on the targeted shape to apply the formatting.

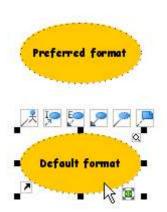


Figure 3.26 - Apply formatting

# **Stereotyped Element Appearance**

With the configurable stereotype appearance including fill, line and font, stereotyped elements can be easily distinguished and emphasized in the diagram.

Here, a stereotype of class is used as an example.

## **Configuring Stereotype Appearance**

1.Select main menu Modeling > Edit Stereotypes.... to open Configure Stereotypes dialog box.

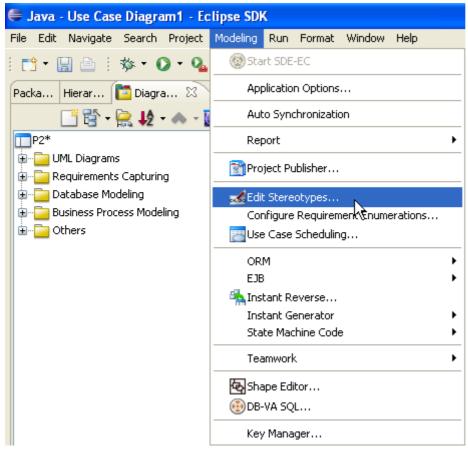


Figure 3.27 - Select Edit Stereotypes...

2. In the **Configure Stereotypes** dialog box, select a model type in **Model elements** and the target stereotype in **Stereotypes** (in this example we selected "Entity Bean" - a pre-defined stereotype of Class). Click the **Edit...** button.

Configure Stereotypes	
Configure Stereotypes  Model elements:  Core  Core  Class  Class  Class  Abstraction  Access  Association Class  Association End  Attribute Binding  Class  Merge Model Merge NARY	Stereotypes: Stereotypes: auxiliary boundary control Delegate entity Entity Bean Enum focus implementationClass Message Driven Bean
Operation Parameter Permission Usage Collaboration Collaboration Collaboration Compensat	<ul> <li>metaclass</li> <li>ORM Component</li> <li>ORM ID Generator</li> <li>ORM Persistable</li> <li>Apply changes to stereotypes in current project</li> <li>Add</li> <li>Edit, Remove</li> <li>OK Cancel Help</li> </ul>

Figure 3.28 - Configure Stereotypes dialog box

#### 3. The Stereotype Specification is shown.

E Stereotype Specification
General Tagged Value Definitions Constraints References Comments
Name: Entity Bean
Icon path:
Fill: Use (122, 207, 245)
Line: Use Black
Font: Use Dialog
Documentation: $$ HTML <b>B</b> $I$ $\underline{u}$ $\equiv$ $\equiv$ $\equiv$ $\stackrel{!}{\equiv}$ $\stackrel{!}{\equiv}$ $\stackrel{!}{=}$ $F$ $F_{F} \not \sim$ $f$ $\stackrel{!}{=}$
Abstract Leaf Root
Reset OK Cancel Apply Help

Figure 3.29 - Stereotype Specification

To apply fill color to stereotype: 1. select the **Use** checkbox and click the ... button of the **Fill** property.

Fill:	Use (122, 207, 245)	
Line:	Use Black	
Font:	Use Dialog	

Figure 3.30 - Check Use and edit Fill property

#### 2. Select a fill color in the Format Fill dialog box and click OK.

🗧 Format Fill			
Fill style: Transparency: Color 1: Color 2:	<ul> <li>Solid Gradient</li> <li>Gradient</li> <li>(195, 245, 122)</li> <li>(162, 224, 70)</li> </ul>	, , , , <b>)                             </b>	Preview
Gradient Color Th	emes		Gradient Style
Blue	-	Add to Themes	
Green Gray	Green	Remove	
Gray Y	'ellow	Rename	
Yellow			
Red			
Purple	~		
			OK Cancel

Figure 3.31 - Format Fill dialog box

To apply line style to stereotype:

1. Select the Use checkbox and click the ... button of the Line property.

Fill:	🗹 Use 📃	
Line:	Use Black	
Font:	Use Dialog	

Figure 3.32 - Check Use and edit Line property

2. Configure the line style in the **Format Line** dialog box and click **OK**.

🛢 Format Line		$\mathbf{X}$
Style:		Preview
Weight: Color:	2 Slack	
Transparency:	M 7 M 0 %	
	(	OK Cancel

Figure 3.33 - Format Line dialog box

To apply font to stereotype:

1. Select the Use checkbox and click the ... button of the Font property.

Fill:	🔽 Use		
Line:	🔽 Use	Black	
Font:	🔽 Use	Dialog	
Documenta	tion:		k

Figure 3.34 - Check Use and edit Font property

#### 2. Select a font in the Select Font dialog box and click OK.

🖨 Select Font		
Font Name:	Font Style:	Font Size
Comic Sans MS	Bold	14
BatangChe	Regular	11 🔥
Bitstream Vera Sans	Italic	12
Bitstream Vera Sans Mono 🚽	Bold	14
Bitstream Vera Serif	Bold Italic	16
Comic Sans MS		18
Courier New ん		20 💳
Dialog		22
DialogInput 💌		24 💌
Font Color : 📕 Black 🛄		
Preview		
4 11 4		
Ao Bb Cc		
OK Cano	-al	

Figure 3.35 - Select Font dialog box

After configuring stereotype appearance, click **OK** in the **Stereotype Specification**. Then, Click **OK** when returned to the **Configure Stereotypes** dialog box.

E Configure Stereotypes	X
Model elements:	Stereotypes:
Core Core Use Case Class Clas	Stereotypes.   Stereotypes. Envirue Envirue Envirue Envirue Envirue Envirue Focus Focu
Import Export	OK Cancel Help

Figure 3.36 - Stereotype appearance configured

## **Applying Stereotypes to Shape**

1. Right-click on a shape and select **Stereotypes > Stereotypes...** from the popup menu to open the Class Specification Dialog.

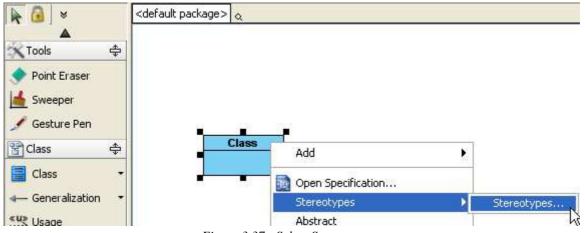


Figure 3.37 - Select Stereotypes...

2. Select a stereotype in the All list, click Add Selected to add it to the Selected list.

General Attributes Ope ORM Query Stereotypes	rations Relation	ons Templa Constraints	te Paramet	ers Class C References	ode Details Comments
ll:	ragged values	Selec		Kererences	Commence
auxiliary	~	Selec	leu;		- 0
boundary	( Charles )				
control					
🔜 Delegate					
🔜 entity					
🔜 Entity Bean					
🔜 Enum					
🚧 focus	ſ	> .			
🔜 implementationClass		1			
🔜 Interface		< Add Se	lected		~
🔜 Message Driven Bean		>>			
🔜 metaclass	ſ	<< ]			~
🔜 ORM Component					
🔤 ORM ID Generator					
🔜 ORM Persistable					
🖼 Session Bean					
struct					
🔜 type					
🔜 Typedef					
	~				
xxx XSDall	1				1.1
Edit Stereotypes					

Figure 3.38 - Add a stereotype to Selected list

3. Click **OK** in the specification dialog box. The stereotype is applied to the model, and the stereotype's appearance is applied to the shape.

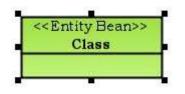


Figure 3.39 - Stereotype applied

### **Changing Stereotype Appearance**

1. Select main menu **Modeling** > **Edit Stereotypes...** to open the Configure Stereotype dialog box. Select a model type in **Model elements** and the target stereotype in **Stereotypes**. Click the **Edit...** button.

E Configure Stereotypes	
Model elements: Association End Attribute Binding Class Import Merge Model NARY Operation Parameter Permission Usage Collaboration State Collaboration Collaboration	Stereotypes: Stereotypes: auxiliary boundary control
Deployment     Composite Structure     Timing     Interaction Overview     Requirement     Import     Export	Apply changes to stereotypes in current project          Add       Edit       Remove         OK       Cancel       Help

Figure 3.40 - Select a model type and the target stereotype

2. We will modify the stereotype fill color in this example. Click the ... button of the Fill property.



Figure 3.41 - Modify the stereotype fill color

#### 3. Select orange as fill color, click **OK**.

🖨 Format Fill			
Fill style: Transparency: Color:	<ul> <li>Solid ○ Gradient</li> <li>M □</li> <li>I I I I I I I I I I I I I I I I I I I</li></ul>	%	Preview
Cyan Default Dark gray Gray Green Light gray Magenta Orange Pink Red White Yellow	∑ Orange (255, 200, 0)		Custom
			OK Cancel

Figure 3.42 - Select a fill color

4. When returned to the Stereotype Specification dialog box, ensure the **Apply changes to stereotypes in current project** option is selected, otherwise stereotypes already used in the current project will not be updated. After that, click **OK** to close the dialog box.

🖨 Configure Stereotypes		
Model elements:		Stereotypes:
Association Class	^	🖘 auxiliary
Attribute		🖘 boundary
Binding		control
Class		Res Delegate
Import		entity
Merge		
Model		ess Entity Bean
Operation		📾 Enum
Parameter		cos focus
Permission		🥁 implementationClass
Usage		kas Interface
		🦝 Message Driven Bean
Collaboration		kas metaclass
		_
		CRM Component
		CRM ID Generator
🗄 🔤 Composite Structure		Apply changes to stereotypes in current project
🗄 💽 Timing		
🗈 🔯 Interaction Overview		Add Edit Remove
🗄 🗠 💽 Requirement	<b>~</b>	
Import Export		OK Cancel Help

Figure 3.43 - Return to Configure Stereotypes

5. The appearances of shape that assigned the changed stereotype are updated.

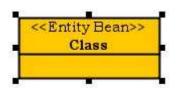


Figure 3.44 - Appearances of shape updated



# **Visual Modeling**

# **Chapter 4 - Visual Modeling**

This chapter will show you the features of performing UML modeling. In this chapter:

- Creating multiple views for model
- Finding and jumping in diagrams and projects
- Forming diagrams from models
- Controlling the visibility of compartment
- Creating and editing sub-diagrams, references and logical views.
- Customizing data types
- Using mouse gesture

# **Showing Model in Different Diagram**

A model is a specific collection of interconnected objects and their properties. A diagram element is the view associated with the model. In SDE for Eclipse, one model can have multiple views. Also, SDE for Eclipse supports sharing models to show the same model in different diagrams. This can help to avoid putting everything in a single giant diagram, leading to difficulties in modeling and understanding.

Here, a class model is used as an example.

To show the model in a different diagram:

1. Select a class model in the Model pane.

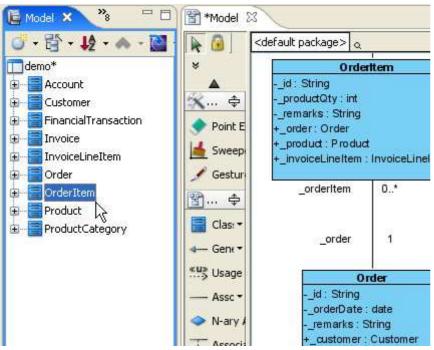


Figure 4.1 - Select a class model

2. Create a new class diagram, drag the model from model tree.

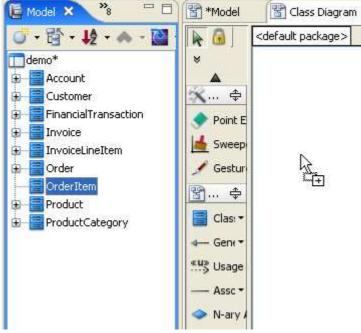
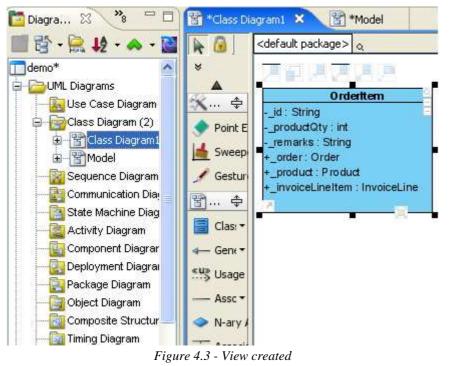


Figure 4.2 - Drag the model

3. A new view of the model is created.



# Form Diagram from Model

This feature can help you visualize a set of model and transfer it to a diagram with a few clicks. There are different options to form diagrams to fit different needs.

You can form a diagram with the selected models (classes/packages) in the Model pane and Class Repository pane.

- 1. Open/Activate the Model pane or Class Repository pane.
- 2. Select the classes and packages you would like to appear in the new Class Diagram.
- 3. Right-click on the selection and select Form Diagram from the popup menu.
- 4. Choose from one of the Form Diagram types (Customize..., Hierarchical, or Navigation) in the cascading menu.

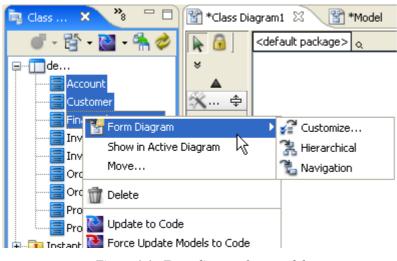


Figure 4.4 - Form diagram from model

Currently SDE for Eclipse allows you to form diagrams with only packages and classes.

#### **Customize Form Diagram Properties**

You can use the Form Diagram dialog box to customize form diagram properties. To open the Form Diagram dialog box:

1. Select more than one classes or packages in Model pane or Class Repository.

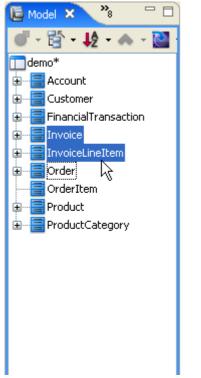


Figure 4.5 - Select models

2. Right click on them and select Customize... from the popup menu, the Form Diagram dialog box appears.

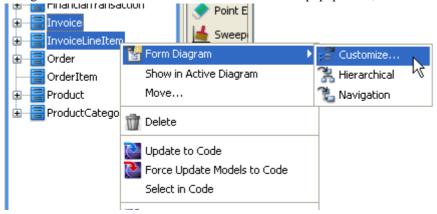


Figure 4.6 - Open Form Diagram dialog box

Select the relationships you want to show in the new diagram in the Form Diagram tab. The relationships can be between the diagram elements of the selected models and their related diagram elements.

🛢 Form Diagram	$\mathbf{X}$
Form Diagram Presentation Options	
Diagram Name:	1
Class Diagram1	
Generalization	
📕 🔽 Sugerclasses	
🖉 🗖 Subclasses	
Association	
📌 🔽 Navigable classes	
🖉 🗖 Non-Navigable classes	
Realization	Please move the mouse pointer
📲 🔽 Syppliers	over the items on the left to load
📲 🗖 Clients	preview.
Dependency	
🔎 🔽 Suppliers	
🔎 🔽 Clie <u>n</u> ts	
Containment	
📴 🔽 Containers	
🛅 🔽 Residents	
Show single level only	
${f C}$ Show <u>a</u> ll levels in single diagram	
C Show all levels in subdiagrams	
☐ Show as containment relationships	
	QK Cancel Help

Figure 4.7 - Form Diagram Dialog

A new diagram is created with the diagram elements of the selected models, the related diagram elements and the relationships between the diagram elements.

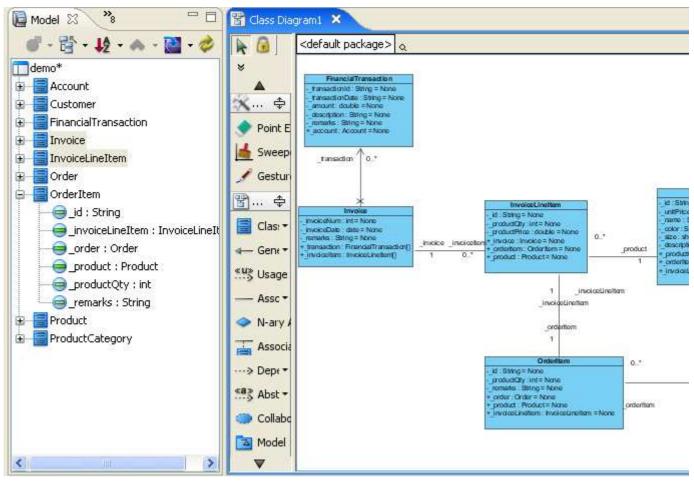


Figure 4.8 - The generated Class Diagram

In this case, the class model called "Invoice" and "InvoiceLineItem" are selected. The new diagram (on the right hand side) shows the relationships between the the two models and other models.

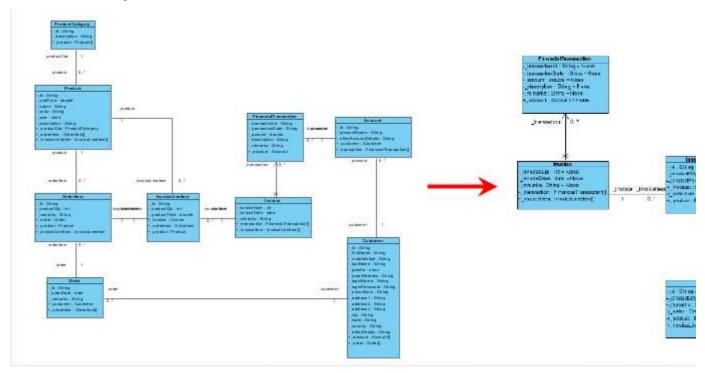


Figure 4.9 - The association of the selected classes are included in the new diagram

#### **Presentation Options**

Click the **Presentation Options tab** on the **Form Diagram** dialog box to set the presentation options for the classes in the new diagram.

🖨 Form Diagram		$\mathbf{X}$
Form Diagram       Presentation Option         Attribute Options <ul> <li>Show all</li> <li>Public only</li> <li>Hide all</li> <li>Show initial values</li> </ul> Operation Options <ul> <li>Show all</li> <li>Public only</li> <li>Hide all</li> <li>Show all</li> <li>Public only</li> <li>Hide all</li> <li>Show operation signatures</li> </ul> Type Options <ul> <li>Eully-qualified</li> <li>Mame only</li> <li>Relative</li> </ul>	Image: string         -orderLines: OrderLine[]         +NO_PREFIX: String         +getNo(): String         +getOrderLines(): OrderLine[]         #setNo()         +setOrderLines()    Show fully-qualified name of types	
Reset	OK <u>C</u> ancel <u>H</u> elp	

Figure 4.10 - The presentation options

## **Hierarchical Diagram**

If you selected Hierarchical in the cascading menu, a new diagram is created with the diagram elements of the selected models, the parents and children of the diagram elements and the general relationships between the diagram elements.

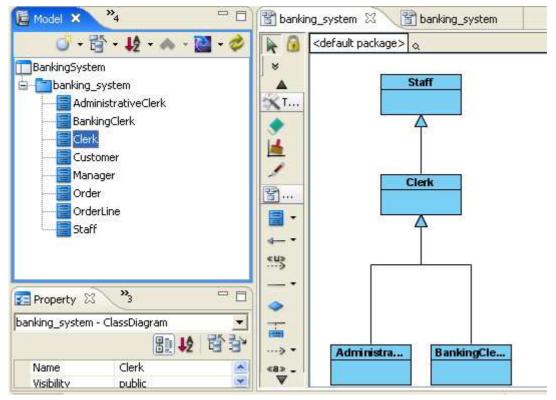


Figure 4.11 - Hierarchical Diagram

In this case, the class model called "Clerk" is selected. The new diagram (on the right hand side) shows the generalization relationships between the "Clerk" model and other related models.

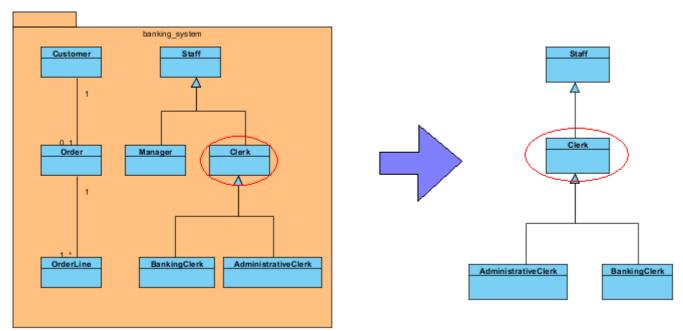


Figure 4.12 - Show the inheritance hierarchical in the new diagram

## **Navigation Diagram**

If you selected Navigation in the cascading menu, a new diagram is created with the diagram elements of the selected models, the sources (non-navigable diagram elements) and targets (navigable diagram elements) of the diagram elements and the association relationships between the diagram elements.

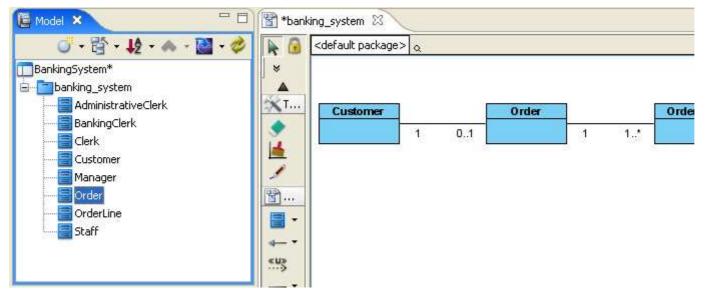


Figure 4.13 - Navigation Diagram

In this case, the class model called "Order" is selected. The new diagram (on the right hand side) shows the association relationships between the "Order" model and other related models.

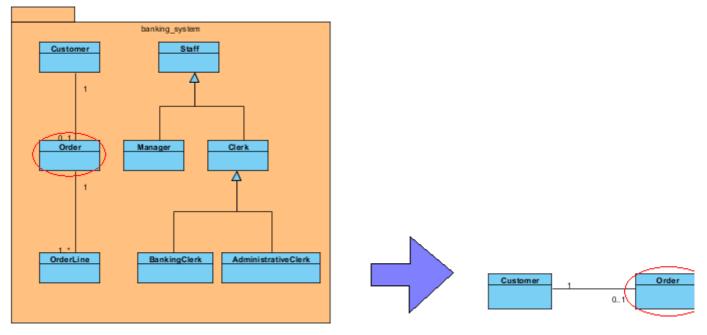


Figure 4.14 - show the navigation association of the selected classes.

# **Sub-Diagrams**

It is a known fact that elaboration is one of the common modeling techniques.

SDE for Eclipse supports sub-diagrams to facilitate elaboration. For example, we have a Use Case Diagram to elaborate each use case by a Sequence Diagram.

You can create new sub-diagram or associate with existing diagrams as a sub-diagram.

#### Creating a Sub-Diagram

To create a new sub-diagram for a model, perform one of the following actions:

- Right-click on the diagram element and choose Sub Diagrams from the popup menu to expand it. A list of • recommended sub-diagram types (according to the nature of the model) is shown. If the type of diagram you want to add is not one of the recommended types, select Other Diagrams to expand it. From the Sub Diagrams or Other **Diagrams** menu, select **%SUB_DIAGRAM_TYPE%** > **Create %SUB_DIAGRAM_TYPE%** (e.g. Sub Diagrams > Use Case Diagram > Create Use Case Diagram).
- Right-click on the diagram element and choose **Open Specification** from the popup menu. This displays the **Open** • Specification dialog box. From the dialog box, switch to the Diagrams tab and click Add. A list of recommended sub-diagram types (according to the nature of the model) is shown. If the type of diagram you want to add is not one of the recommended types, select Other Diagrams to expand it. From the root menu or Other Diagrams menu, select the desired type of sub-diagram to create it.

For example, here is a Use Case creating sequence diagram.

Schedu	Open Specification Des Case Details Use Case Scheduling Stereotypes	,		لے Accor	unt Admin	
	Abstract Sub Diagrams	🕨 🔯 Se	quence Diagram	• 🔛	Create Sequence Diagram	k
	Create Parent   Show Extension Point  Edit	Te	tivity Diagram xtual Analysis e Case Diagram	) ) )		-96-
	Cut Copy		ate Machine Diagram Id Existing Diagrams	•		
	Duplicate Delete	▶ _ Ot	her Diagrams	•		
	<ul> <li>Selectable</li> <li>Grouping</li> <li>Order</li> <li>Format</li> <li>Select in Tree</li> <li>Layout</li> </ul>	) ) )				
		Figure 4.15 - Cr	eate Sequence Diagra	m		

ıg

## Selecting Existing Diagrams as Sub-Diagrams

To select existing diagrams as sub-diagrams:

- Right-click on the diagram element for adding sub-diagrams and choose **Sub Diagrams > Add Existing Diagram...** from the popup menu.
- Right-click on the diagram element for adding sub-diagrams and choose **Open Specification...** from the popup menu. This displays the **Open Specification** dialog box for that model element. Switch to the **Diagrams** tab, press **Add** and select **Existing Diagrams...** from the popup menu.

Use Case Specification	X
General Extension Points Tagged Values Constraints Di	Relations Stereotypes agrams References Comments
Туре	Name
Reset Q	
	🔝 User Interface

Figure 4.16 - Add existing diagram to Sub-Diagram

#### In both cases, the Add Sub Diagrams Dialog will be displayed.

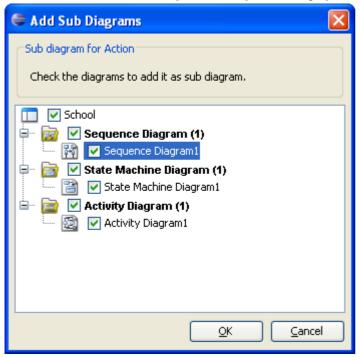


Figure 4.17 - Select the existing diagram

The **Add Sub Diagrams dialog** shows all the selectable diagrams. Selectable diagrams are all the diagrams in the project excluding the following:

- The parent diagram of the selected diagram element
- All diagrams which are sub-diagrams of any model

Select the diagrams to add as sub-diagrams, and then click **OK** to confirm.

## Viewing the List of Sub-Diagrams

To view sub-diagram from its parent model element:

• Right-click on the diagram element and choose **Open Specification...** from the popup menu. This displays the **Open Specification** dialog box. From the dialog box, switch to **Diagrams** tab. Sub-diagrams of that diagram element are shown in the table.

## **Opening Sub-Diagrams**

To open a sub-diagram from a parent diagram element, perform one of the following actions:

- Right-click on the diagram element and choose Sub Diagrams > %SUB_DIAGRAM_TYPE% > %SUB_DIAGRAM_NAME% from the popup menu.
- Select the sub-diagram from resource icon ⁴ of that diagram element:

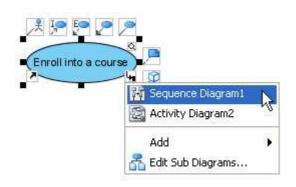


Figure 4.18 - Open Sub-diagram

#### **Removing Sub-Diagrams**

To remove a sub-diagram from its parent diagram element, perform one of the following actions:

- Right-click on the diagram element and choose **Open Specification...** from the popup menu. This displays the **Open Specification** dialog box. From the dialog box, switch to **the Diagrams** tab. Sub-diagrams of that diagram element are shown in the table. Select the sub-diagram that you want to remove and click **Remove** to remove it.
- Activate the **Diagram Navigator/Model** pane, expand the tree node of that diagram element, select the sub-diagrams that you want to remove and then right-click on them and select **Detach from Parent** from the popup menu.

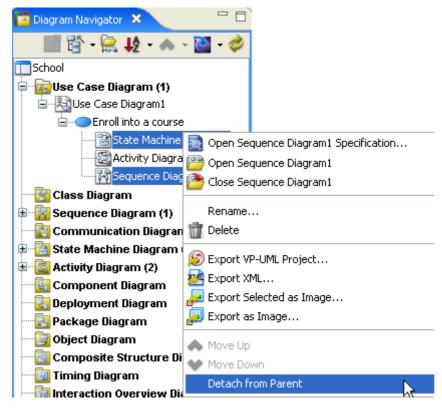


Figure 4.19 - Remove Sub-Diagram

# References

References can be added to a model to associate any kind of artifacts, including files, folders, URLs and diagrams with the model. After you have added the references, you can open them in the tool with the default application/web browser whenever you need them.

There are four kinds of reference you can add:

- File: Normal files like word documents
- Folder: Folders in the file system
- URL: Link of website
- Diagram: Diagrams in the current project

#### **Adding Referenced File**

To add a referenced file using the open specification dialog box:

- 1. Open the specification dialog box of the model, select the **References** tab.
- 2. Click the Add File... button, or right-click on the table and select Add File... from the popup menu.

Use Case Specification				X
	on Points raints	Rela Diagrams	tions   References	Stereotypes   Comments
Name Add File	Show Us	er Path Path		Descript
<	1111			>
Reset	<u>о</u> к	<u>C</u> ancel	Apply	Help

Figure 4.20 - Add Reference Files

To add a referenced file using the **References** resource:

1. Click on the **References** resource (located at the lower left corner of the shape, with a shortcut arrow icon).

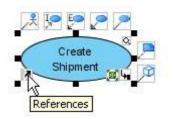


Figure 4.21 - Edit reference resource-centric

2. Select Add File... in the popup menu.

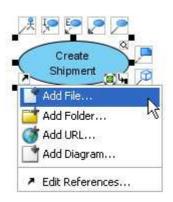


Figure 4.22 - Select Add File in the popup menu

Using either method, the reference details pane will be shown. Specify the file path in **Path** or browse by clicking the ... button. You may also optionally provide a description for the reference in **Description**.

Path	C:/Projects/design_spec.txt	
Description		

Figure 4.23 - Edit Reference

Adding folders, URLs and diagrams can be done by using a similar approach.

#### **Editing References**

To edit references:

Open the open specification dialog box of the model, select the **References** page. Alternatively click on the **References** resource of a shape and select **Edit References** from the popup menu.



Figure 4.24 - Open edit reference dialog

Right-click on a reference and select Edit from the popup menu.

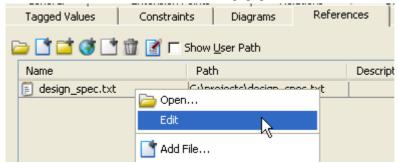


Figure 4.25 - Edit reference by clicking on popup menu

Alternatively, click the **Details** button to show the details pane if it is not already showing.

<b>⊳ ⊡ ⊡ ₫</b> 🖬 🖬	🛛 🔽 Show User Path
Name	Details Path
🗐 design_spec.txt	C:\Projects\design_

Figure 4.26 - Show reference details

Using either method, the reference details pane will be shown. You can then edit the path and description of the selected reference.

Path C:\Projects\design_spec.doc .			
Description	The design specification of this use case.		

Figure 4.27 - The reference details

#### **Reordering References**

To reorder references:

- 1. Open the specification dialog box of the model, select the **References** page.
- 2. Select one or more references in the table.
- 3. Click on the **Move up/Move down** button to move the selection upwards/downwards. Alternatively right-click on the selection and select **Move Up/Move Down** from the popup menu.

🗀 🖬 💣 🕼 🛍 📓 п	Show User Path	-	
Name	Path	Descript	
🔋 design_spec.txt	C:\Projects\design_spec.txt		
(3)	http://speedcourier.intra/desi		
			~~
			Move

Figure 4.28 - Re-ordering reference

### **Opening References**

To open references:

- 1. Open the specification dialog box of the model, select the **References** page.
- 2. Select one or more references in the table.
- 3. Click on the **Open...** button, or press the **Enter** key, or right-click on the selection and select **Open...** from the popup menu.

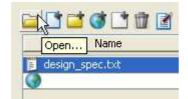


Figure 4.29 - Press Open button to open the selected references.

4. Alternatively, click on the **References** resource of a shape and select a reference from the popup menu.

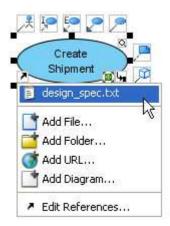


Figure 4.30 - Open reference by clicking on popup menu

5. The selected references will be opened by the default applications or web browser.

#### **Removing References**

To remove references:

- 1. Open the specification dialog box of the model, select the **References** page.
- 2. Select the unwanted references in the table. Click the **Remove** button, or press the **Delete** key, or right-click on the selection and select **Remove** from the popup menu.

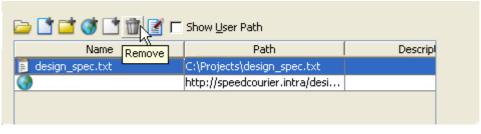


Figure 4.31 - Remove reference

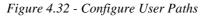
#### **User Path**

A user path is a variable that refers to a base path in a user's computer. You can add a reference to local file using a user path, so that the reference refers to a file relative to a user path, instead of an absolute path. This means you can move references files to a different location, or even to a different computer, and can still open them as long as the user path value is up-to-date.

#### **Configuring User Paths**

To configure user paths, select menu **Modeling > Application Options....** Select the **User Path** category in the **Options** dialog box.

General Diagramming	User Pa	th		
View Instant Reverse ORM	Show user pa	ath ecify user path		
State Code Engine	Name	Path		Add.
Office Exchange User Path Data Type & File Types Code Synchronization				Edit.



• To add a user path, click **Add...**, and then enter the name and path in the **Add User Path** dialog box.

🖨 Add User Path 🛛 🗙				
Name	projects_dir			
Path	C:\Projects			
		OK Cancel		

Figure 4.33 - Add User Path

- To edit a user path, select it in the table and click **Edit...**, and then edit the name and path in the **Edit User Path** dialog box.
- To remove user paths, select unwanted user paths in the table and click **Remove**.
- Show user path Select to show user paths in references, instead of displaying resolved absolute paths. A user path is displayed with its name enclosed by \${ }.

🖿 📑 📬	🎯 📑 🏛 🕑 🗆	Show <u>U</u> ser Path	
	Name	Path	Descripl
🔋 design_sp	bec.txt	<pre>\${projects_dir}\design_spec.txt http://speedcourier.intra/design</pre>	The design specific
			*
<		III	
Path	\${projects_dir}\des	ign_spec.txt	
Description			I

Figure 4.34 - Using User Path in the references

• **Prompt to specify user path** - Select to enable prompt for user path after adding a reference to file whose base path is not defined as a user path.

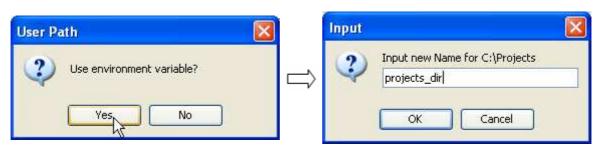


Figure 4.35 - Specify user path

# **Logical View**

The Logical View refers to a user's view of the way project is organized. It provides another view of creating, structuring and sharing the UML diagrams and models apart from the traditional Diagram Navigator, Model Tree View and Class Repository.

🔁 Logical View 🗙 📃 🗖
🛱 - 🚵 - 🤣 📔
School
🖨 🖓 🗁 Project Management
Textual Analysis1
🖮 🗁 Analysis
Communication Diagram1
ν۰

Figure 4.36 - Logical View Pane

#### **Creating a Logical View**

To create a view:

- 1. Right-click on the project node (top-most node of the **Logical View** pane) and choose **Add View** from the popup menu. This creates a new View under the project node.
- 2. Right-click on the new view and choose Rename...from the popup menu to provide a name for the view.
- 3. Enter the name in the displayed input box and click **OK** to confirm the changes.

## Creating Diagram(s) under View

To create a diagram under a view, right-click on the view that holds the new diagram and choose **Create Diagram > Create %DIAGRAM_TYPE%** from the popup menu. This creates a blank diagram of the selected type under the chosen view.

#### Moving Diagram(s) between Views

To move the diagram from one view to another, simply drag and drop it to the target view. The diagram will therefore transfer from original view to target view.

#### **Exporting and Importing View**

You can export the current Logical View structure as an XML file and apply it over and again on other projects. There are two options for importing a Logical View structure.

#### Append to existing structure

The imported structure will append to the current structure, no modification will be made on the existing one.

#### **Replace existing structure**

The imported structure will replace the current structure, predefined structure will be removed.

For any diagram in the current project that has the same name as any of the diagrams in the XML file, the diagram name will be displayed in the Logical View of the current project. Otherwise the name will not be shown in the imported structure.

# **Finding a Model Element**

Model elements can be searched in the project. To find a model element, you should first display the **Find** dialog box. To display the **Find** dialog box, select **Edit** > **Find** from main menu.

e	Find Find		×				
T	fext:		<				
	Scope						
	Find in diagram: Find in all diagrams						
	🔽 Find in model						
	Include documer	ntation of elements					
	Include tagged value	es: No 💌					
	Model Types						
	<ul> <li>All model types</li> </ul>	s					
	Selected model	si types <none></none>					
	.NET Attribute Cod .NET Class Code D .NET Generalization .NET Operation Co	Details on Code Details ode Details					
	.NET Parameter Co .NET Realization Co						
	Abstraction						
	Accept Event Actio	on 💽					
	Option						
	Case sensitive						
	Match whole words only						
		, 43 Only					
	Reset	Find Close Help					

Figure 4.37 - Find Model Element Dialog

Field	Description
Text	Enter the text for which you want to search. The text may be the name of the model element or part of the model documentation.
Scope	
Find in diagram	Select from drop-down menu any of the options to narrow the search in different ways: Find in All Diagrams - To search for views in all diagrams within the project. Find in Opened Diagrams - To search for views in all opened diagrams within the project. Find in active diagram only - To search for views in the active diagram. Do not find in diagrams - Not to search for views in any of the diagrams.
Find in model	Check/Uncheck to enable/disable searching for model elements from existing models within the project.
Include documentation of elements	Check/Uncheck to enable/disable searching not only for the name of the model, but also the documentation of the model.
Include tagged values	Select from the drop-down menu any of the options to include tagged values: No - Do not include tagged value during searching Name - Include Name of tagged value only during searching Value - Include Value of tagged value only during searching Name and Value - Include both Name and Value during searching
Model Types	
All model types	This option is available only when <b>Find in model</b> is checked. This enables to search model elements with all types.
Specified model types	This option is available only when <b>Find in model</b> is checked. This enables you to search model elements with the same model type as the one specified from the list beneath it.
Option	
Case Sensitive	Check/Uncheck to determine whether or not a case sensitive or insensitive search is to be performed.
Match whole words only	Accept models only if their name and/or documentation match exactly the word specified in <b>Text</b> field.
General commands	
Reset	Reset the changes made in the dialog box.
Find	Find model elements according to the scope specified from the Find dialog box.
Close	Close the Find dialog box without performing search.
Help	Display the Help content of Find dialog box.

Table 4.1

#### Search result will be displayed in the Find Results page of the Message pane.

🖻 Message 🗙				
E- A Find result for "Customer"				
- Model				
Customer				
CustomerID				
Custome Select All				
CustomerNa 🖺 Copy Selected Results 💦 🔪				
CustomerCu Copy All Results				
customer				
⊞…View III Remove Selected Results				
Clear Results				
Log Find Results				

Figure 4.38 - Find result

There are two types of results found. One is for displaying the model found and the other one is for displaying view found.

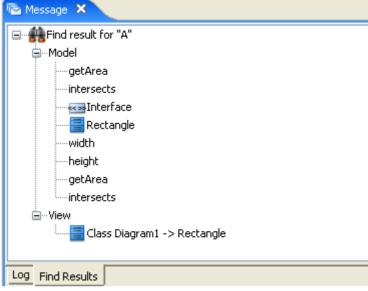


Figure 4.39 - Types of result found

You can copy, remove or clear result(s) by right-clicking on the result(s) and selecting the corresponding commands from the popup menu.

# **Jumping to Shape/Model**

In order to let you locate the desired shape/model easier and faster, the jump to shape/model facility is introduced. You can select either jump to a shape in the active diagram, or jump to any shape/model in the current project.

#### Jumping to Shape in Active Diagram

1. With a diagram active, select menu Edit > Jump to Element in Active Diagram..., or press the hotkey Ctrl + J.

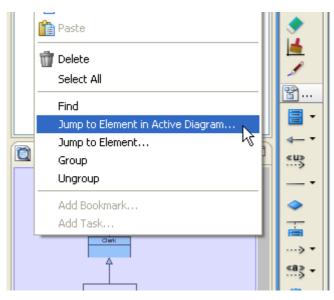


Figure 4.40 - Select Jump to shape in active diagram

2. The jump to shape pane is shown. If you are uncertain about the name of the shape to jump to, press the **Up/Down** arrow key to popup the shape list and browse for it there.

sy 🛎 Jump to Element	
-f. Jump:	
Archive memership	
Check order¶status	1
🖣 😤 Customer Service Assistant	2
Deliver goods	
Handle goods¶return	
Order goods	
😤 Order Process Clerk	
System	
—— (Order Process Clerk -> Order goods)	

*Figure 4.41 - Shape in the active diagram is shown* 

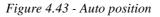
3. Upon the selection of an item in the list, extra information like the parent of the selected element is shown. If you keep selecting an item for one second, the corresponding element will be "spotlighted" in the diagram.

	🖨 Jump to Element	
ing_system 2	Jump:	
<default pack<="" th=""><th></th></default>		
	Archive memership	
	Check order¶status	
	😤 Customer Service Assistant	
	Deliver goods	
Handle goods freturn		
Order goods		
	🗶 Order Process Clerk	
	System	
	(Order Process Clerk -> Order goods)	
Order Proces	Clerk Order goods status	

*Figure 4.42 - Spotlight on the diagram when select the shape* 

4. When the spotlighting is in action, the jump to shape pane will reposition itself to avoid overlapping with the target shape if the **Auto position** option is selected.

🖨 Jump to Element	
Jump:	
☑ Auto position ☑ Active diagram only	1.



5. If you know the name of the shape to find, you can type all or part of its name to filter the items in the list to locate the shape faster. Wildcard characters * (all combination of characters) and ? (any one character) can also be used.

🖆 Jump to Element	X
Jump:	
*process	
The order Processing	
ᆽ Order Processing Clerk	0
Process order	24

Figure 4.44 - Filter the shapes

6. With the desired item in the list selected, press the Enter Key. The corresponding element will be selected and centered in the diagram.

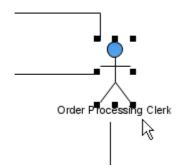
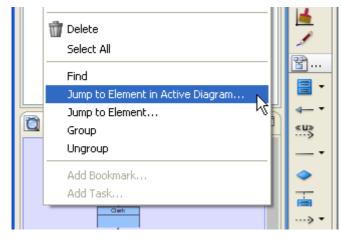


Figure 4.45 - Auto select the shape and centered in diagram

# **Jumping to Element in Project**



1. Select menu Edit > Jump to Element..., or press the hotkey *Ctrl* + *Shift* + *J*.

Figure 4.46 - Select Jump to element

2. The 'jump to element' pane is shown. Similar to 'jump to shape' in the active diagram, you can press the Up/Down arrow key to popup the list of elements, and type text to filter the list. But this time the list is filled with all shapes and models in the project, regardless of the diagram they reside in. To let you identify which diagram a selected element comes from, its diagram name is also displayed.

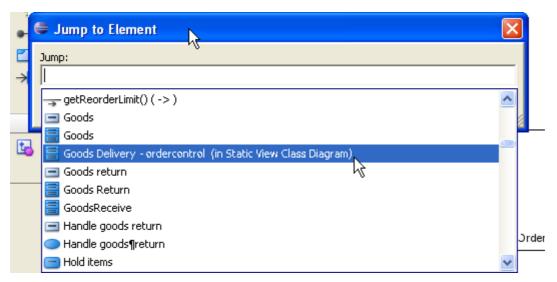


Figure 4.47 - Select the Element

3. If the selected item refers to an element in the active diagram, this element will be spotlighted in the diagram.

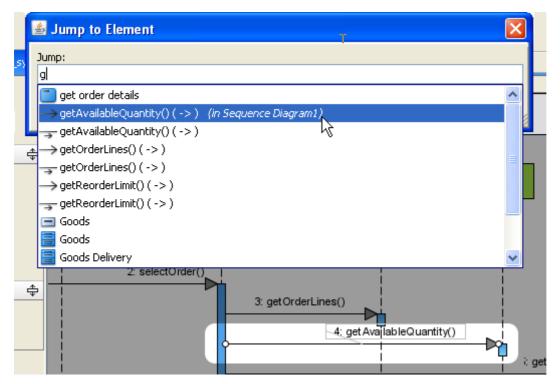


Figure 4.48 - Spotlight in the diagram

4. With the desired element in the list selected, press the Enter Key. If the selected element belongs to a diagram, this diagram will be opened, and the element will be selected and centered in the diagram. If the selected element is a model that does not have a view, it will be selected in the **Model** pane.



Figure 4.49 - Select in Model pane

### **Mouse Gesture**

Mouse gestures allow you to execute common commands and create UML models within the diagrams.

#### **Using Mouse Gesture in Windows**

To use mouse gestures in Windows, simply hold down the right mouse button and move the mouse to form the gesture (a blue path will be shown indicating your gesture). When you release the button, the gesture command will be executed.

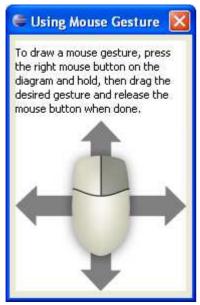


Figure 4.50 - Using mouse gesture in Windows

### Using Mouse Gesture in Linux

If you want to use mouse gestures in Linux, you can press the left mouse button on the diagram and drag the desired gesture while holding the Ctrl key, release the mouse button and key when done.

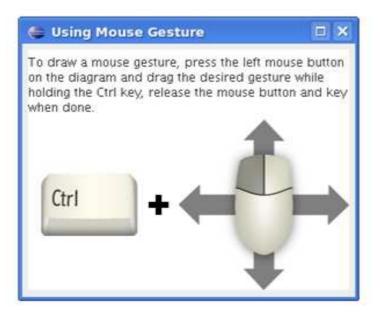


Figure 4.51 - Using mouse gesture in Linux

#### **General Features**

Gestures	Description	_	Gestures	Descriptions
L	Down V Right			Down V Left
	Clockwise Rectangle*			Counter Clockwise Rectangle*
Ъ	Folder Shape*		>	Right V Left#
V	Down V Up#		2	Right V Left V Right V Down V Left V Up*#
5	Left V Down V Right V Down V Left (squarish S)		6	Right V Down V Left V Up - Right

The following is the 11 basic gestures supported by SDE for Eclipse:

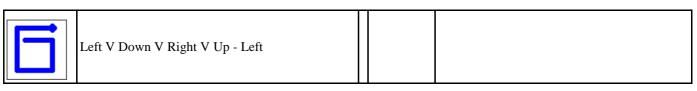


Table 4.2

The node is the start point of each gesture

* Start at any point

# Bi-directional

A full list of gesture commands can be found in the <u>Appendix C</u>.

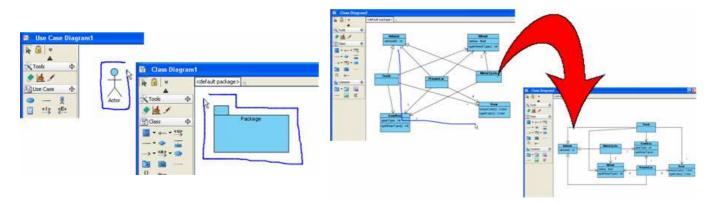


Figure 4.52 - Mouse Gesture Example

You can also draw with a Gesture Pen in the toolbar.



Figure 4.53 - Draw with gesture pen

#### **Gesture Start Point and Direction**

For the gestures marked as "Start at Any Point" like the Clock-wise Rectangle, start from any corner will give you the same result. And for the gestures marked as "Bi-directional" like "Right-Left", start from right or left will also give you the same results.

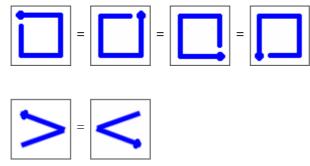


Figure 4.54 - Gesture Start Point and Direction

#### **Initial State and Final State**

The initial state and final state use the same gestures. The gesture will create an initial state if an initial state is not exist in the diagram, and a final state will be created if there is an initial state but no final state. If the diagram has both initial state and final state, the gesture will do nothing.

#### **Connecting Shapes using Mouse Gesture**

Right-click on a shape and then drag over another shape, release the mouse until you see the blue gesture path drawn between them. A connector will be created between the shapes, whose turning points are determined by the gesture path you dragged.

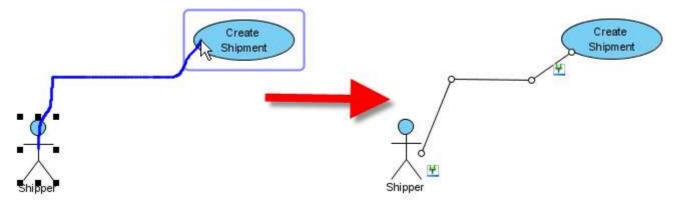


Figure 4.55 - Create association

If you drag the mouse gesture from a shape but release it over empty space of the diagram, a popup menu will appear for you to select a connector-shape pair. After selected a pair, a new shape together with a new connector of the selected types are created.

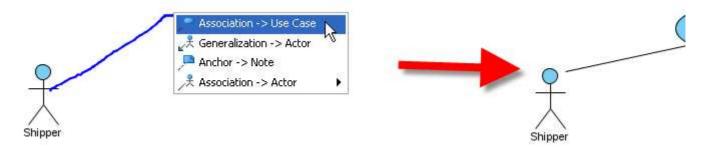


Figure 4.56 - Create Use Case with Association

#### **Creating Class Members using Mouse Gesture**

#### **Creating Attribute**

Right-click on a class, drag to the left and release the mouse until you see the blue gesture line, an attribute will be created.

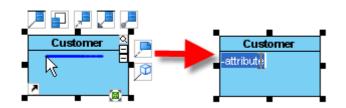


Figure 4.57 - Create attribute

Note that if you release the mouse OUTSIDE the class, the created attribute will be stereotyped as Property, and with its **Setter** and **Getter** properties automatically set to true.



Figure 4.58 - Attribute created with getter and setter

#### **Creating Operation**

Right-click on a class, drag to the right and release the mouse until you see the blue gesture line, an operation will be created.

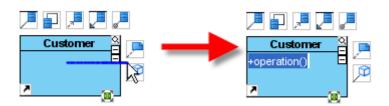


Figure 4.59 - Create operation

Note that if you release the mouse INSIDE the class, the created operation will have its visibility set to protected instead of public.

### Sweeper

A **sweeper** allows you to create space for placing shapes. To use sweeper:

1. Click on the icon on the diagram toolbar.

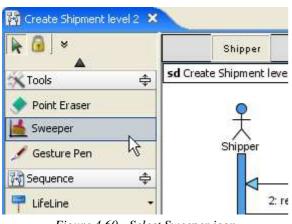
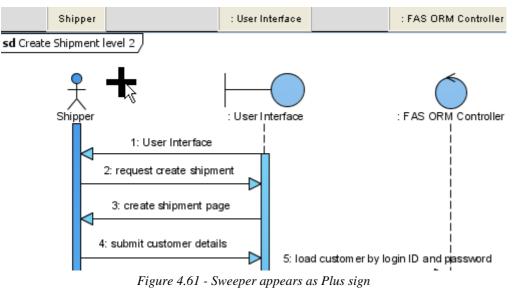
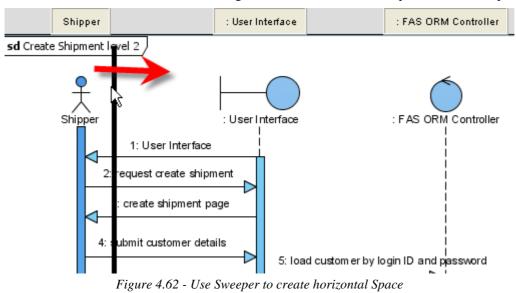


Figure 4.60 - Select Sweeper icon

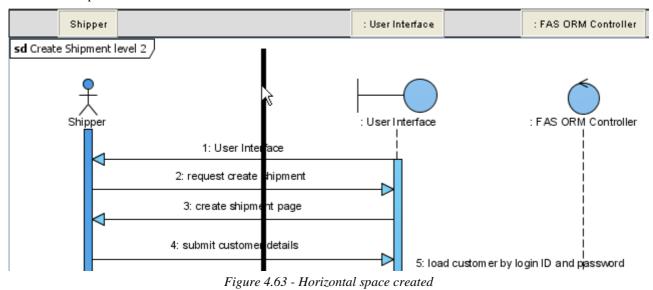
2. Click anywhere on the diagram while holding your left click, a plus sign will appear in the diagram.



3. You can then move the mouse left and right to create some horizontal spaces between shapes.



#### 4. Horizontal space created.



Similarly, you can move the mouse up and down to create some vertical spaces between shapes.

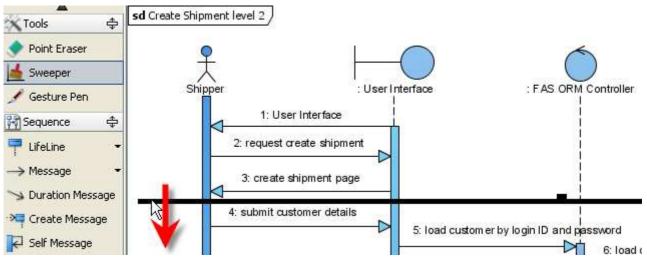
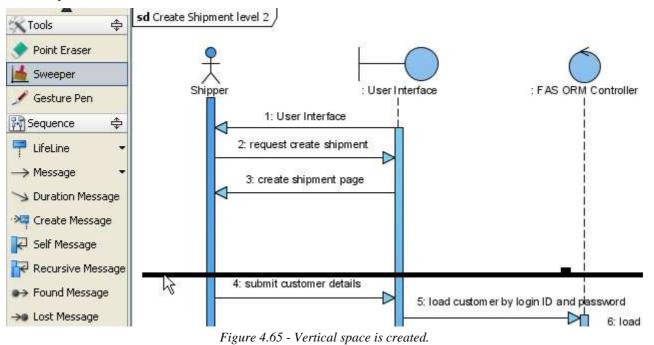


Figure 4.64 - Use Sweeper to create vertical space

#### Vertical space is created.



### **Customizing Data Types**

You can choose a programming language that your UML project is based on. By default, there are six types of languages. They are:

- Java
- XML Schema
- C++
- Visual Basic
- C#
- UML

Also, you can assign data type to attributes, operations (as return type) and parameters. Furthermore, new languages and data types can be added.

#### **Configuring Project Programming Language**

1. Right-click on the project root node under **Diagram Navigator** / **Model** pane / **Class Repository** and then select **Configure Programming Language...** from the popup menu.

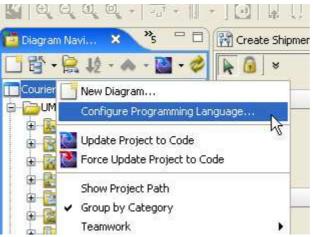


Figure 4.66 - Select Configure Programming Language button

2. Select the language to switch to.

🖨 Programming Language 🛛 🛛 🔀		
	uage of this project. After the programming language is bes' name will be changed to match the language.	
Language: Java 🗸 🗸		
Data Type	Name	
double C++	double	
char Visual Basic N	char	
byte C#	byte	
	void	
short	short	
float	float	
int	int	
boolean	boolean	
long	long	
String	String	
	Add Delete OK Cancel	

Figure 4.67 - Select language to switch to

3. The language is changed. The data type will be changed to match the language.

🖨 Programming Language 🛛 🔀		
Programming Language Change the programming language of this changed, the default Data Types' name wi Language: Visual Basic V	project. After the programming language is II be changed to match the language.	
Data Type	Name	
void	Void	
float	Single	
int	Integer	
short	Short	
double	Double	
boolean	Boolean	
byte	Byte	
char	Char	
long	Long	
Date	Date	
Decimal	Decimal	
Object	Object	
String	String	
	Add Delete	

Figure 4.68 - Language changed

#### Adding Languages and Data Types

1. Select Modeling > Application Options... from the main menu.

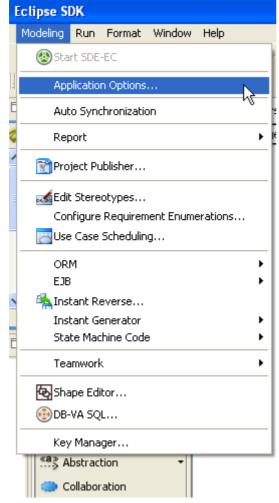


Figure 4.69 - Select Option button from main menu

#### 2. Open the **Data Type** page.

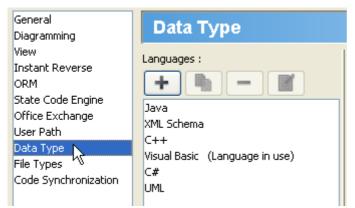


Figure 4.70 - Open the Data Type page

3. Press on the plus sign and enter its name to add a language.

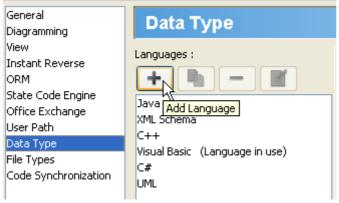


Figure 4.71 - Add a language

4. Press Add... and enter its name to add a data-type to the chosen language.

Data types :	
	Add
	Remove
	Edit

Figure 4.72 - Add a data type

5. A new language with data-type is added.

Data Type		
Languages :	Data types :	
+ 🖣 - 👔	xs:string	Add
Java		Remove
XML Schema		Edit
C++		
Visual Basic (Language in use)		
C#		
UML		
XSD		

Figure 4.73 - A new language with data-type is added



# **Automatic Diagrams Layout**

# **Chapter 5 - Automatic Diagrams Layout**

SDE for Eclipse provides a layout facility for arranging diagram elements in diagrams. It re-layouts the diagram elements so that they do not overlap, and the relationship links are arranged so that they will not cross over one another. Different layout styles and configurable options are provided, which allows for very flexible and sophisticated layouts to be adopted for diagrams.

In this chapter:

- Using diagram layout facility
- Setting the diagram layout options

### **Auto Layout**

Auto Layout can arrange the shapes by selecting the most suitable layout automatically. It is best for arranging the shapes when user has no special preference in choosing a specific layout.

To apply **Auto Layout** to the diagram, right-click on the diagram and select **Layout** > **Auto Layout** from the popup menu.

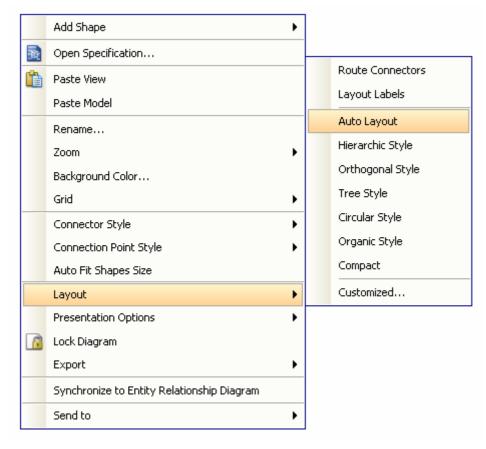


Figure 5.1 - Select Auto Layout

#### **Class Diagram**

#### Hierarchy base (Factory class diagram)

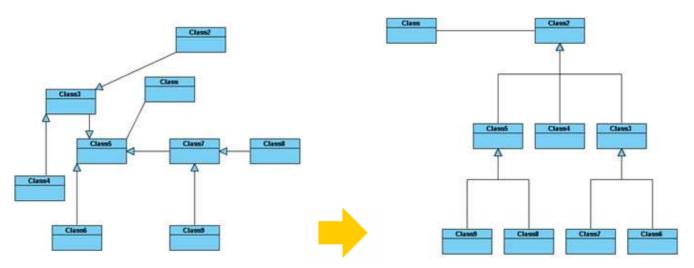


Figure 5.2 - Hierarchy base (Factory class diagram)

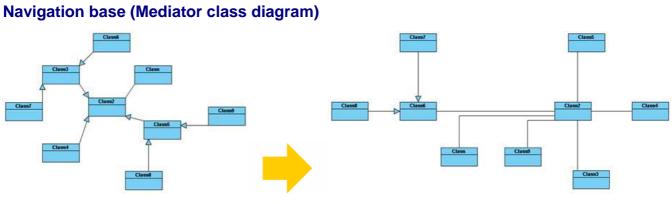


Figure 5.3 - Navigation base (Mediator class diagram)

### **Activity Diagram**

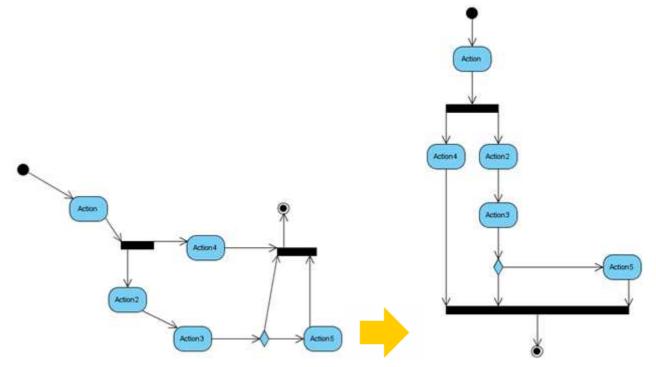


Figure 5.4 - Auto layout of activity diagram

#### **State Machine Diagram**

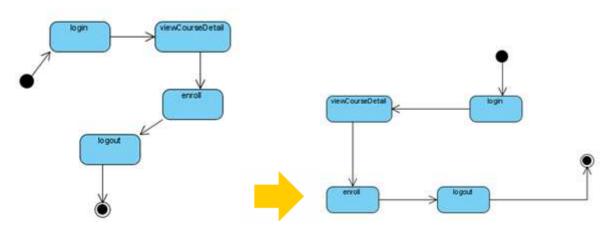
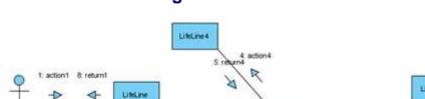


Figure 5.5 - Auto layout of state machine diagram



return2

R

2 acti

#### **Communication Diagram**

**Other Diagrams** 

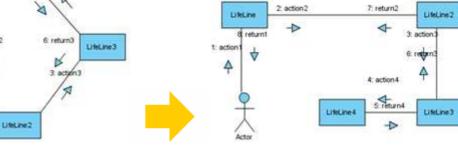


Figure 5.6 - Auto layout of communication diagram

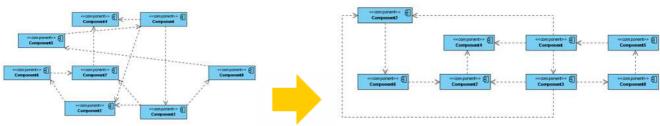


Figure 5.7 - Auto layout of other diagrams

## **Performing Layout**

- To layout all the diagram elements in the diagram, right-click on the diagram and select **Layout** from the popup menu.
- To layout the selected diagram elements, right-click on the selection and select **Layout** from the popup menu (make sure there are more than one diagram elements selected).

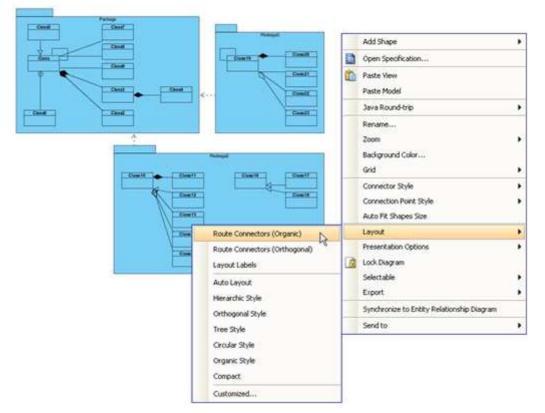


Figure 5.8 - Performing layout

## **Orthogonal Layout**

Orthogonal Layout arranges shapes based on the topology-shape-metrics approach. It is best for arranging shapes and connectors in Class Diagrams. It is the default layout in SDE for Eclipse. Every time you drag the models from the **Model Tree** to a diagram, the orthogonal layout will be applied to arrange the newly created shapes in the Class Diagram.

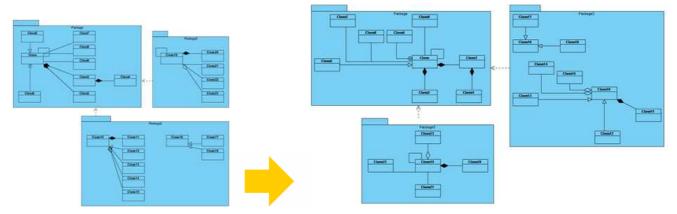


Figure 5.9 - Orthogonal Layout

Layout Grid Size: the virtual grid size for layout. Each shape will be placed in a way so that its center point lays on a virtual grid point.

🖨 Layout	
Tree Circular Organic Edge Router Orthogonal Hierarchic	
Orthogonal Layout	
Layout Grid Size 67 📚	
Reset OK	Cancel Help

Figure 5.10 - Orthogonal Layout setting

### **Hierarchic Layout**

Hierarchic Layout arranges shapes in a flow. It is best for arranging shapes that have hierarchical relationships such as generalization relationships and realization relationships.

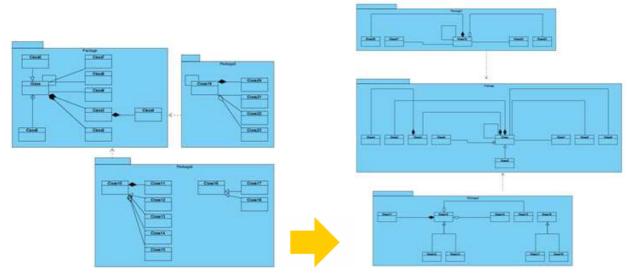


Figure 5.11 - Hierarchic Layout

Min. Layer Distance: the minimal horizontal distance between the shapes

Min. Shape Distance: the minimal vertical distance between the shapes

Min. Connector Distance: the minimal vertical distance of the connector segments

**Orientation**: the layout direction for arranging nodes and connectors -top to bottom, left to right, bottom to top, and right to left

**Shape Placement**: affects the horizontal spacing between shapes, and the number of bends of the connectors -pendulum, linear segments, polyline, tree, simplex

Connector Style: the style of the connectors -polyline style or orthogonal style

🖨 Layout		
Eayout  Tree Circular Organic Orthogonal  Hierarchic Layout  Min. Layer Distance Min. Shape Distance Orientation Shape Placement Connector Style	Edae Router Hierarchic 60 20 50 Top To Bottom Linear Segments Polyline	
Reset	OK	Cancel Help

Figure 5.12 - Hierarchic Layout setting

### **Directed Tree Layout**

Directed Tree Layout is one of the tree layouts in SDE for Eclipse. It can arrange shapes in a tree structure. It is best for arranging shapes except those which have hierarchical relationships such as generalization relationships and realization relationships.

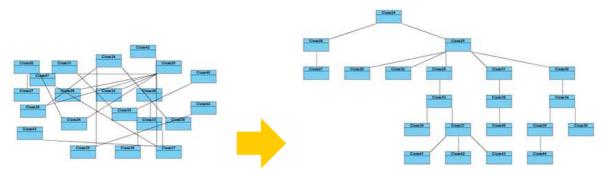


Figure 5.13 - Directed Tree Layout

Min. Layer Distance: the minimal horizontal distance between the shapes

Min. Shape Distance: the minimal vertical distance between the shapes

**Orientation**: the layout direction for arranging nodes and connectors - top to bottom, left to right, bottom to top, and right to left

**Connector End Point Style**: how the connector end points will be placed - shape centered, border centered, border distributed **Orthogonal Connector**: whether the connectors will be arranged in orthogonal style

🖨 Layout	
Orthogonal       Hierarchic         Tree       Circular       Organic       Edge Router         Layout       Directed       Image: Circular       Directed       Image: Circular         Directed       Tree       Layout       Image: Circular       Image: Circular       Image: Circular       Image: Circular       Image: Circular         Directed       Tree       Directed       Image: Circular       Image: C	
Reset OK	Cancel Help

Figure 5.14 - Directed Tree Layout Setting

### **Balloon Tree Layout**

Balloon Tree Layout is one of the tree layouts in SDE for Eclipse. It can arrange shapes in a tree structure in a radial fashion. It is best for arranging large trees.

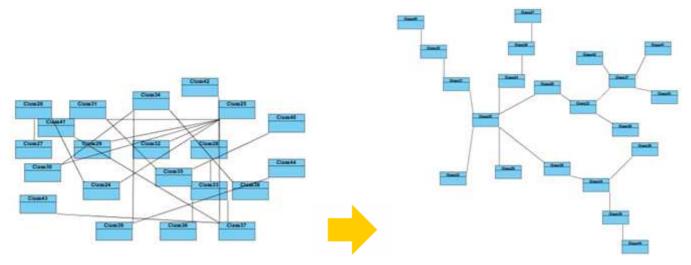


Figure 5.15 - Balloon Tree Layout

Min. Connector Length: the minimal distance between the connectors and shapes

Preferred Child Wedge: the angle at which the child node will be placed around its parent node

Preferred Root Wedge: the angle at which a node will be placed around the root node

Root Node Policy: determines which node is chosen as the tree root node for layout - directed root, center root, and weighted center root

🖨 Layout	×
Orthogonal Hierarchic   Tree Circular Organic Edge Router     Layout   Tree Type Balloon   Balloon Tree Layout   Min. Connector Length   Preferred Child Wedge   Preferred Root Wedge   Root Node Policy   Weighted Center	
Reset	Cancel Help

Figure 5.16 - Balloon Tree Layout Setting

### **Compact Tree Layout**

Compact Tree Layout is one of the tree layouts in SDE for Eclipse. It can arrange shapes in a tree structure. You can set the aspect ratio (relation of tree width to tree height) of the resultant tree.

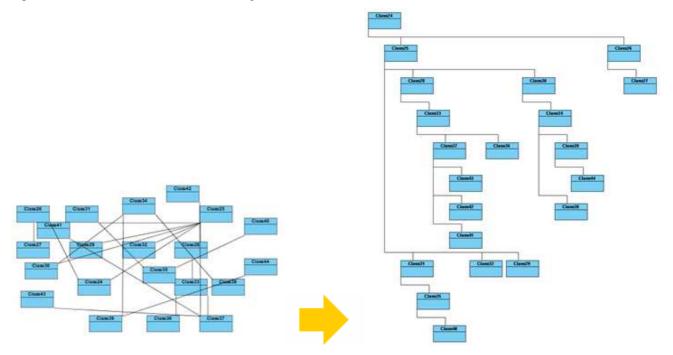


Figure 5.17 - Compact Tree Layout

Horizontal Spacing: the horizontal spacing between the shapesVertical Spacing: the vertical spacing between the shapesMin. Connector Length: the vertical distance of the connector segmentsAspect Ratio: the relation of the tree width to the tree height

🖨 Layout		
Compact Tree Layout Tree Type Compact Tree Layout Horizontal Spacing Vertical Spacing Min. Connector Length Aspect Ratio	Hierarchic nic Edge Router Compact ✓ 10 🗘 20 💸 1.41 💸	
Reset	ОК	Cancel Help

Figure 5.18 - Compact Tree Layout Setting

### **Horizontal-Vertical Tree Layout**

Horizontal-Vertical Tree Layout is one of the tree layouts in SDE for Eclipse. It can arrange shapes in a tree structure horizontally and vertically.

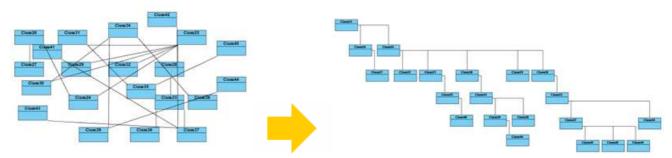


Figure 5.19 - Horizontal-Vertical Tree Layout

**Horizontal Spacing**: the horizontal spacing between the shapes **Vertical Spacing**: the vertical spacing between the shapes

🖨 Layout	
Horizontal-Vertical Tree Layou Horizontal Spacing Vertical Spacing	
Reset	OK Cancel Help

Figure 5.20 - Horizontal-Vertical Tree Layout Setting

### **BBC Compact Circular Layout**

BBC Compact Circular Layout is one of the circular layouts in SDE for Eclipse. It can arrange shapes in a radial tree structure. The detected group is laid out on the separate circles. It is best for arranging shapes that belongs to more than one group with a ring structure.

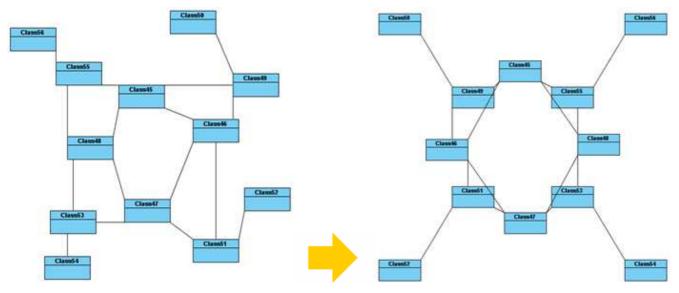


Figure 5.21 - BBC Compact Circular Layout

Maximal Deviation Angle: the maximal angle of deviation

Preferred Child Wedge: the angle at which the child node will be placed around its parent node

Minimal Edge Length: the minimal distance between the shapes

**Compactness Factor:** the parameter that affects the length of connector. The smaller the compactness factor, the length of connectors will be shorter and the layout will be more compact.

Allow Overlaps: whether the shape can be overlapped

	· · · · · · · · · · · · · · · · · · ·
Minimal Edge Length	outer 90 ♀ 40 ♀ 15 ♀
Reset	OK Cancel Help

Figure 5.22 - BBC Compact Circular Layout Setting

### **BBC Isolated Circular Layout**

BBC Isolated Circular Layout is one of the circular layouts in SDE for Eclipse. It can arrange shapes into many isolated ring structures. It is best for arranging shapes that belong to one group with ring structure.

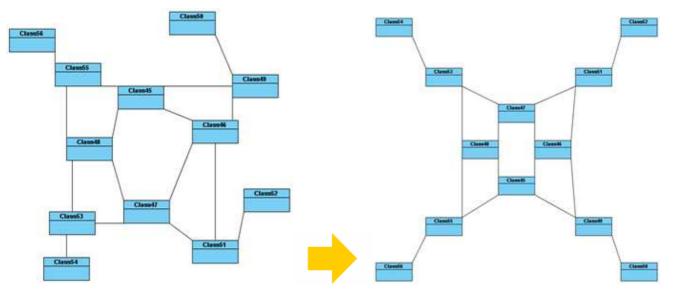


Figure 5.23 - BBC Isolated Circular Layout

The attributes of this layout is the same as BBC Compact Circular Layout.

### Single Cycle Circular Layout

Single Cycle Layout is one of the circular layouts in SDE for Eclipse. It can arrange shapes in circular structure in single circle.

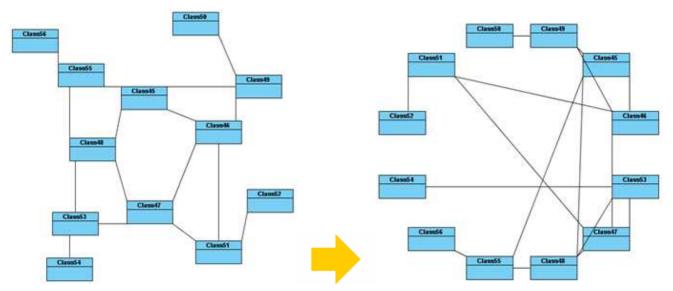


Figure 5.24 - Single Cycle Circular Layout

**Choose radius automatically:** determine the radius of circular structure automatically or manually **Minimal Node Distance:** the minimal distance between the nodes **Fixed radius:** the radius of circular structure

🖨 Layout	
Orthogonal Hierarchic   Tree Circular   Organic Edge Router     Circular Layout   Layout Style   Single Cycle   Maximal Deviation Angle   90   Cycle Arrangement Options   Choose radius automatically   Minimal Node Distance   30   Fixed radius	
Reset OK	Cancel Help

Figure 5.25 - Single Cycle Circular Layout Setting

### **Organic Layout**

Organic Layout is one of the organic layouts in SDE for Eclipse. It can arrange shapes in a star or ring structure. It is best for arranging the shapes that have highly connectivity relationship.

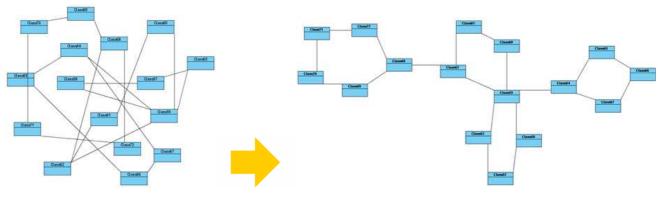


Figure 5.26 - Organic Layout

Activate Deterministic Mode: whether the layouter is in deterministic mode

Activate Tree Beautifier: whether or not to activate the subtree beautifier

Attraction: the degree of the attraction between shapes

Final Temperature: the factor that affects the distance between shapes

Gravity Factor: the factor that affects the distance between shapes and the center

Initial Placement: the initial value of placement

Initial Temperature: the initial value of temperature

Iteration Factor: the degree of iteration

Maximum Duration: the maximum degree of duration

**Obey Node Size:** the size of obey shapes

**Preferred Edge Length:** the preferred length between the nodes

Repulsion: the factor that affects the distance between shapes which belong to the same ring or star structure

🖨 Layout		
Orthogonal Tree Circular Organ Organic Layout Organic Type Organic Layout Activate Deterministic Mode		
Activate Tree Beautifier Attraction Final Temperature Gravity Factor Initial Placement Initial Temperature	1 \$ 1 \$ 0 \$ Zero \$	
Iteration Factor Maximum Duration Obey Node Size Preferred Edge Length Repulsion	3 \$ 300,000 \$ V 80 \$ 1 \$	
Reset	ОК	Cancel Help

Figure 5.27 - Organic Layout Setting

### **Smart Organic Layout**

Smart Organic Layout is one of the organic layouts in SDE for Eclipse. It is a variant of the Organic Layout. It can set the ratio of the quality : producing time of layout and controls the compactness of layout.

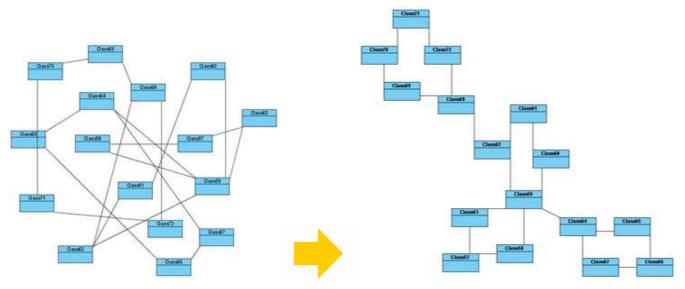


Figure 5.28 - Smart Organic Layout

Compactness: the factor that sets less/more compact layout. Deterministic: whether the layouter is in deterministic mode Minimal Node Distance: the minimal distance between nodes Node Overlaps Allowed: whether the node can be overlapped Node Size Aware: whether the node size can be aware Preferred Minimal Node Distance: the preferred minimal distance between the nodes Quality Time Ratio: the ratio of the quality of layout to the producing time of layout

🖨 Layout		
Orthogonal Tree Circular Organ	Hierarchic Fic Edge Router	
Organic Layout		
Organic Type Smart Organic Layout	Smart Organic 💌	<mark>╸<mark>╛</mark>╶┨╴┟╴╸<mark>┍</mark>╴</mark>
Compactness	0.5 💠	
Deterministic		
Maximum Duration	300,000 🗢	
Minimal Node Distance	40 😂	
Node Overlaps Allowed		
Node Size Aware		
Preferred Edge Length	40 📚	
Preferred Minimal Node Distance	40 😂	
Quality Time Ratio	0.6 🗢	
Reset	ОК	Cancel Help

Figure 5.29 - Smart Organic Layout Setting

### **Organic Edge Route Layout**

Organic Edge Route Layout is one of the edge route layouts in SDE for Eclipse. It can arrange the connectors without affecting the location of shapes. It can ensure that the shapes will not overlap and keep a specific minimal distance.

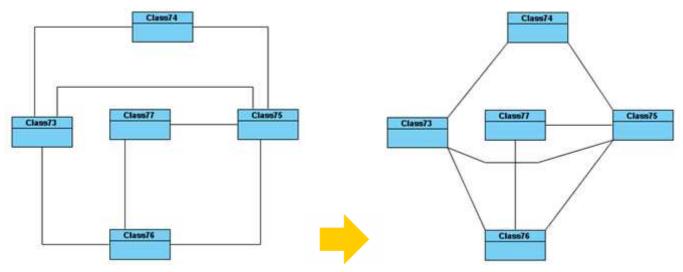


Figure 5.30 - Organic Edge Route Layout

Minimal Distance: the minimal distance of the connectors Route All: whether all the connectors will be routed Use Existing Bends: whether using existing bends

🖨 Layout	
► Layout          Orthogonal       Hierarchic         Tree       Circular       Organic         Edge Router       Organic       ●         Organic Edge Router       10       ●         Ninimal Distance       10       ●         Route All       □       □         Use Existing Bends       □       ●	
Reset OK	Cancel Help

Figure 5.31 - Organic Edge Route Layout setting

### **Orthogonal Edge Route Layout**

Route Connectors can arrange the connectors using vertical and horizontal line segments only. It is best for arranging the connectors that have complicated route.

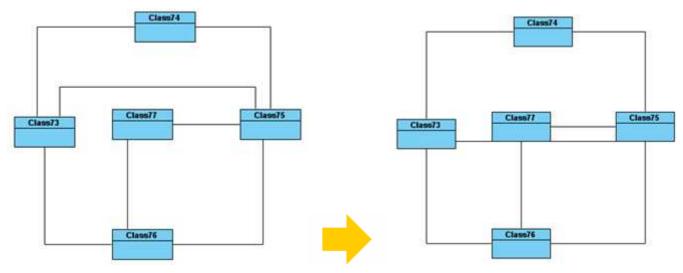


Figure 5.32 - Orthogonal Edge Route Layout

Center to space ratio: the ratio of center to the distance between center and nodes

Coupled distances: the distance between coupled nodes

**Crossing cost:** the cost of crossing connector

Custom border capacity: the capacity of the border

**Local crossing minimization:** whether the local crossing of connectors will be minimized **Minimum distance:** the minimum distance of connectors

Minimum distance to node: the minimum distance between the shapes

Rerouting: whether the connector that has many crossings will be rerouted

Routing style: the style of routing

🖨 Layout 🛛 🗙
Orthogonal   Tree   Circular   Organic   Edge Router   Organic Layout   Router Type   Orthogonal Edge Router   Orthogonal Edge Router   Center to space ratio   Coupled distances   Custom border capacity
Minimum distance     2 Image: Compare the second seco
Reset OK Cancel Help

Figure 5.33 - Orthogonal Edge Route Layout setting



# **Generating Documentation**

# **Chapter 6 - Generating Documentation**

SDE for Eclipse provides several report generation facilities for documenting your the project. Report Writer streamlines your work by keeping the project and document in sync. HTML/PDF report generation facility outputs your project as web pages and PDF documents, portable to different platforms and environments. Word report generation outputs reports in MS Word format. Project Publisher exports the project into interactive web pages that can be read in any web browsers with no additional plug-in required. Report Writer can extract data from models. Features of sorting elements allow you to prepare a systematic report.

In this chapter:

- PDF Report Generation
- Word Report Generation
- HTML Report Generation
- Project Publisher
- Report Writer
- Sorting Element in Report

A report is generated by converting project or diagrams in SDE for Eclipse to other types of document, such as HTML and PDF.

With report, users without SDE for Eclipse can still read the project and diagrams. For example, if the user has installed a browser, he can read the SDE for Eclipse project if the project is converted to HTML report.

Although both HTML report generation and Project Publisher can generate web pages, they are different. For HTML report, it is a document-like presentation. All the content is shown in one page. On the other hand, for project publisher, it acts like a viewer, allowing reader to browse the project content. There are 3 views - Diagram, Model, Class. Each one is a perspective of the project.

### **PDF Report Generation**



#### The Generate PDF Dialog Box

The **Generate PDF** dialog box provides a set of options for changing the report style. To display the dialog box, perform one of the following actions:

• Select Modeling > Report > PDF... from main menu.

eneral Cover Page Header/Footer Document	into	510	
Diagram Page		<u>×</u> L	Launch viewe
Options         Y Generate table of contents         Y Generate table of figures         Y Generate diagrams         Y Generate diagram properties         Y Generate diagram properties         Y Generate diagram summary         Y Generate reference (file/URL) link         Y Generate reference (file/URL) link         Y Generate reference (file/URL) link         Y Generate models/diagrams link         Shape type style :         Sort element by :         Automatic         Y Children         Y References         Y Members         Y Doperties         Y Rejationships         Y Comments         Anth-alasing         Y Graphics         Y Text         Encoding:         English	Diagrams	Use Case Scheduling	*

Figure 6.1 - Generate PDF Dialog

Field	Description
Output path	To select the destination file for the generated report. You can type the path in the text field or you can browse the location by clicking on thebutton.
Launch viewer	If this option is selected, the default browser of the system will be opened automatically to show the generated document.
Generate table of contents	If this option is selected, table of content for this document will be generated to the report
Generate table of figures	If this option is selected, table of figures for this document will be generated to the report
Generate diagrams	If this option is selected, the image of the selected diagrams will be generated to the report.
Generate diagram properties	If this option is selected, the properties of the selected diagrams will be generated to the report.
Generate diagram summary	If the option is selected, the summary of the selected diagrams will be generated to the report.
Generate reference (file/URL) link	Select to generate links for referenced files/URLs defined in models.

Generate models/diagrams link	Select to generate links for navigating to related models and diagrams.
Shape type style	Icon - using Icon to represent the type of shape and diagram elements Text - using text to represent the type of shape and diagram elements
Sort element by	Automatic - sorting elements by listing them in the most logical order, which is to follow most users' understanding of that kind of diagram Follow tree - sorting elements by following the sort order of the diagram tree in the tool id or name - sorting elements by their ID or names You can refer to the section 'Sorting Elements in Report'.
Details	
Children	Select to generate children of model
Members	Select to generate members of model
Properties	Select to generate properties of model
Relationships	Select to generate relationships of model
References	Select to generate references of model
Sub-diagrams	Select to generate sub-diagrams of model
Tagged values	Select to generate tagged values of model
Comments	Select to generate comments of model
Anti-aliasing	
Graphics	To enable/disable the graphic anti-aliasing of the diagram images.
Text	To enable/disable the text anti-aliasing of the diagram images.

Table 6.1

## **Generating a PDF Report**

To generate a PDF Report:

- 1. Open the Generate PDF dialog box.
- 2. Enter the destination location of the generated document in the **Output path** field.
- 3. Select the report options, such as Generate diagrams, Generate reference (file/URL) link, etc...if necessary.
- 4. Select the details field such as Children, Members.
- 5. Define the page settings for the report.
- 6. Define advanced report information such as Header/Footer and Document Info if necessary.
- 7. Select the diagrams to generate in the report.
- 8. Click **Generate** to start generating the report.

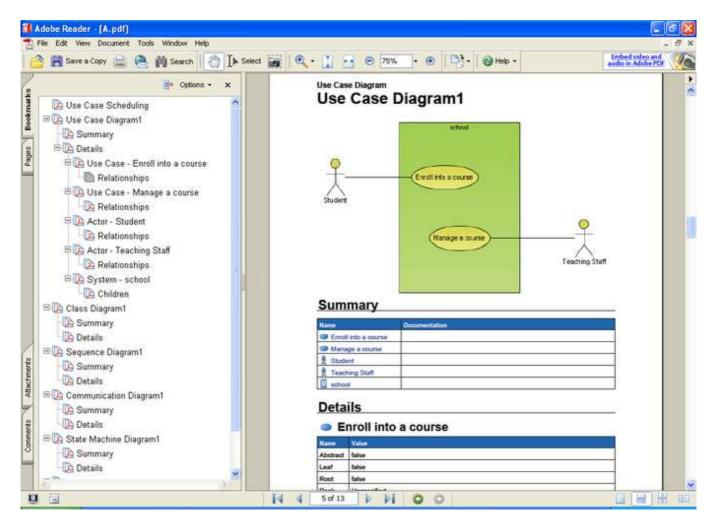


Figure 6.2 - PDF Report

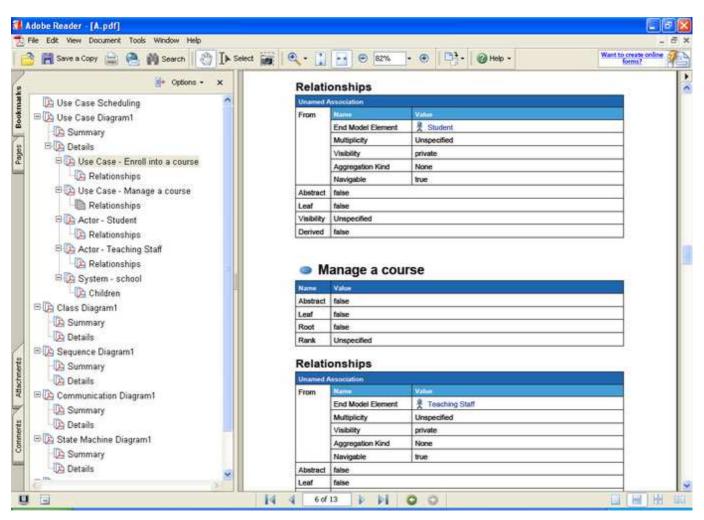


Figure 6.3 - The Generated PDF Report

## **Configuring Image Quality**

There are two image quality options for the PDF Report: Anti-aliasing for Graphic and Text.

As the dimension of the paper limits the size of the image in the PDF report, SDE for Eclipse provides an extra image quality option in the PDF report to control how the output image will be displayed in the report.

To change the diagram quality option, select the Anti-aliasing option.

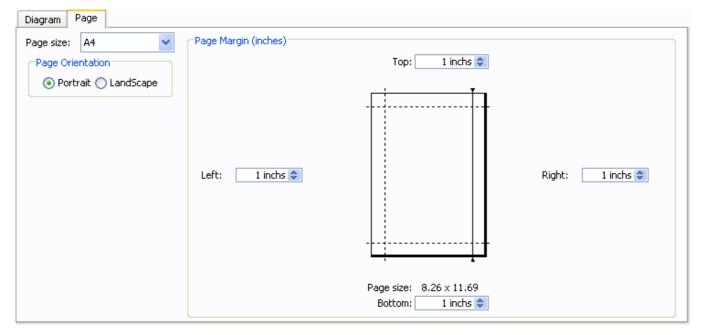
Anti-aliasing	
✓ Graphics ✓ <u>T</u> ext	

Figure 6.4 - Define image quality

# Configuring the page information

This option allows the user to define the page settings, such as the paper size and orientation of the report. To configure the page settings:

- 1. Open the Generate PDF Report dialog box.
- 2. Select the Page tab.



#### Figure 6.5 - Page setup

Field	Description
Page size	To select the paper size of the generated report.
Page Orientation	This option is used to select the orientation of the report (portrait/landscape).
Page Margin	To specify the page margins of the report.

Table 6.2

#### Selecting the Page size

SDE for Eclipse supports a wide range of page sizes for PDF report generation. Different paper sizes can be selected in the **Page size** drop-down menu.



Figure 6.6 - Select the Page Size

#### Selecting the Page Orientation

To select the page orientation for the output report, select the desired orientation option in the Page Orientation section.



Figure 6.7 - Select the Page Orientation

#### **Adjusting the Page Margins**

To adjust the page margins enter the value in the text box at the margin side you want to adjust, or drag the margin in the preview page.

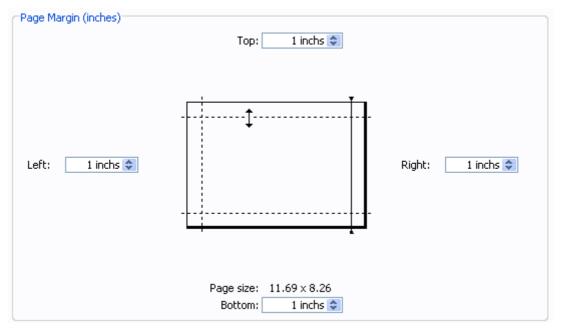


Figure 6.8 - Adjust the page margin

### **Defining a Header/Footer**

To define the Header/Footer of the document:

- 1. Open the **Generate PDF** Report dialog box.
- 2. Select the **Header/Footer** tab.
- 3. Insert text or picture in header or footer section to include header/footer in the report.

ieneral Cover Page Header/Footer	Document Info	
Header Left Section	Center Section	
Left Section	Center Section	Right Section
Show header separator		
	т 📮 🖻 🗊 🖸 🗖 🏝 💄	
Footer		
Show footer separator		
Left Section	Center Section	Right Section
(F)		

Figure 6.9 - Define a Header/Footer

Three sections, Left Section, Center Section and Right Section, are predefined for users to insert text, or even pictures, page numbers, time, etc to the report Header and Footer. A separator can be added to the report in order to separate the region between Header, Content and Footer.

#### **Defining the Header/Footer Style**

SDE for Eclipse supports several types of header/footer style for the PDF report. They are described in the table below:

Header/Footer Style	Description
Т	To format text style, such as font style, size and color.
	To insert an image to the header or footer
#	Insert page number
++	Insert page count
3	Insert date
•	Insert time
	Insert project name
	Insert report file name
2	Insert user name

### **Defining Document Info**

To define the document info:

- 1. Open the Generate PDF dialog box.
- 2. Select the **Document Info** page.

eneral Cover Page	Header/Footer	Document Info	
tle:	1		
thor:			
ibject:			
eywords:			
/ the day			
o header:			
o header content:			
1999/1 <del>7</del> 9/1993/1999			
Allow modify			

### Figure 6.10 - Define Document Info

Field	Description
Title	The title of the report.
Author	The author of the report.
Subject	The subject of the report.
Keywords	The keywords of the report.
Info header	The info header of the report.
Info header content	The info header content of the report.
Allow modify	Select to allow modification on the report.

Table 6.4

locument Properties	Document Properties
Description Security Fonts Advanced	Description Security Fonts Advanced
Description	Document Security
Fée: A.pdf	The document's Security Method restricts what can be done to the document.
Title:	Security Method: No Security Show Data Mu
Author:	Can be Opened by: All versions of Acrobat
Subject:	Carlie Operatory. He remote a Hotela
Keywords:	
	Document Restructions Summary
	Preting: Alloved
Created: 11/20/2006 9:22:50 PM	Document Assembly: Not Allowed
Modified: 11/20/2006 9122:58 PM	Content Copying or Extraction: Allowed
Application:	Content Extraction for Accessibility: Allowed
Advanced	Commenting: Not Allowed
PDP Producer: (fext 1.4 (by lowage.com)	Filling of form fields: Allowed
PDF Version: 1.4 (Acrobat 5.3)	Signing: Not Allowed
Location: C1Documents and Settings(Demo)	Greation of Template Pages: Not Allowed
File Size: 50.89 KB (S2,110 Bytes)	Submitting Forms: Not Allowed
Page Sze: 8.26 x 11.69 in Number of Pages: 13	
Tagged FDF: No Fast Web View: No	
Heb	Cancel Help OK Cancel

Figure 6.11 - The generated PDF Document Info

# **Defining a Cover Page**

To define the Cover Page

- 1. Open the Generate PDF Report dialog box.
- Select the Cover Page tab.
   Check the Generate Cover Page checkbox to include Cover Page in the report.
- 4. Enter information such as Logo image path for the background, Report Title, Organization name and Author Name.

Generate PDF		
ieneral Cover Page	Header/Footer Document Info	
Generate cover page		Cover Page Preview
Logo mage path :	C:lLogo.png	Card Card Card Card Card Card Card Card
TRIO :	Mid-Year Report	P
Organization name :	Visual Paradigm	Visual Paradigm
Author name :		
construction of the state		Mid-War Report
		The Strength

Figure 6.12 - Define the cover page

# **Word Report Generation**



# The Generate Word Dialog Box

The **Generate Word** dialog box provides a set of options for changing the report style. To display the dialog box, perform one of the following actions:

• Select Modeling > Report > Word... from main menu.

neral Cover Page Header/Footer Document In	fo		
utput path:		¥	Launch viewe
Diagram Page			
Options	Diagrams		]
Image: Second state of contents       Image: Second state of figures         Image: Second state of figures       Image: Second state of figures         Image: Second state of figures       Image: Second state of figures         Image: Second state of figures       Image: Second state of figures         Image: Second state of figures       Image: Second state of figures         Image: Second state of figures       Image: Second state of figures         Image: Second state of figures       Image: Second state of figures         Image: Second state of figures       Image: Second state of figures         Image: Second state of figures       Image: Second state of figures         Image: Second state of figures       Image: Second state of figures         Image: Second state of figures       Image: Second state of figures         Image: Second state of figures       Image: Second state of figures         Image: Second state of figures       Image: Second state of figures         Image: Second state of figures       Image: Second state of figures         Image: Second state of figures       Image: Second state of figures         Image: Second state of figures       Image: Second state of figures         Image: Second state of figures       Image: Second state of figures         Image: Second state of figures       Image: Second state of figures         Image: Second st	Polygon     Vise Case Scheduling     Vise Case Scheduling     Stereotype     O UNL Diagrams     O Class Diagram (1)	. Use Case Scheduling	
Shape type style : Icon  Sort element by : Automatic  Details			~
Children     Image: References       Image: Members     Image: Sub-diagrams       Image: Properties     Image: Tagged values       Image: Relationships     Image: Comments			
Anti-alasing Graphics Text			

Figure 6.13 - Generate Word Dialog

Field	Description
Output path	To select the destination path for the generated report. You can type the path in the text field or you can browse the location by clicking on thebutton.
Launch viewer	If this option is selected, the default application of the system will be opened automatically to show the generated document.
Generate table of contents	If this option is selected, table of content for this document will be generated to the report
Generate table of figures	If this option is selected, table of figures for this document will be generated to the report
Generate diagrams	If this option is selected, the image of the selected diagrams will be generated to the report.
Generate diagram properties	If this option is selected, the properties of the selected diagrams will be generated to the report.
Generate diagram summary	If the option is selected, the summary of the selected diagrams will be generated to the report.
Generate reference (file/URL) link	Select to generate links for referenced files/URLs defined in models.
Generate models/diagrams link	Select to generate links for navigating to related models and diagrams.

Shape type style	Icon - using Icon to represent the type of shape and diagram elements Text - using text to represent the type of shape and diagram elements
Sort element by	Automatic - sorting elements by listing them in the most logical order, which is to follow most readers' understanding to that kind of diagram Follow tree - sorting elements by following the sort order of the diagram tree in the tool id or name - sorting elements by their id or names You can refer to the section 'Sorting Elements in Report'.
Details	
Children	Select to generate children of model.
Members	Select to generate members of model.
Properties	Select to generate properties of model.
Relationships	Select to generate relationships of model.
References	Select to generate references of model.
Sub-diagrams	Select to generate sub-diagrams of model.
Tagged values	Select to generate tagged values of model.
Comments	Select to generate comments of model.
Anti-aliasing	
Graphics	To enable/disable the graphic anti-aliasing of the diagram images.
Text	To enable/disable the text anti-aliasing of the diagram images.

Table 6.5

# **Generating a Word Report**

To generate a Word Report:

- 1. Open the Generate Word dialog box.
- 2. Enter the destination location of the generated document in the Output path field.
- 3. Select the report options, such as Generate diagrams, Generate reference (file/URL) link, etc...if necessary.
- 4. Select the details field such as Children, Members.
- 5. Define the page settings for the report.
- 6. Define advanced report information such as Header/Footer and Document Info if necessary.
- 7. Select the diagrams to generate in the report.
- 8. Click **Generate** to start generating the report.

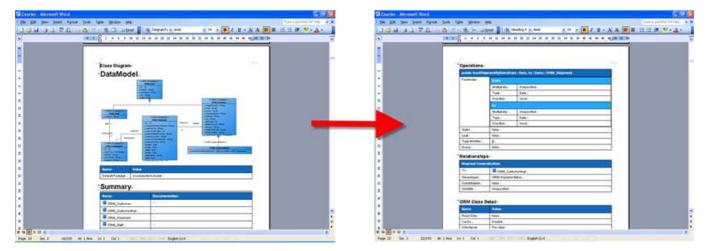


Figure 6.14 - The Generated Word Report

# **Configuring Image Quality**

There are two image quality options for the Word Report: Anti-aliasing for Graphic and Text.

Since the dimension of the paper limits the size of the image in the Word report, SDE for Eclipse provides an extra image quality option in the Word report to control how the output image will be displayed in the report.

To change the diagram quality option, select the Anti-aliasing option.

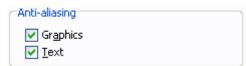


Figure 6.15 - Define image quality

# Configuring the page information

This option allows the user to define the page settings, such as the paper size and orientation of the report. To configure the page settings:

- 1. Open the Generate Word Report dialog box.
- 2. Select the Page tab.

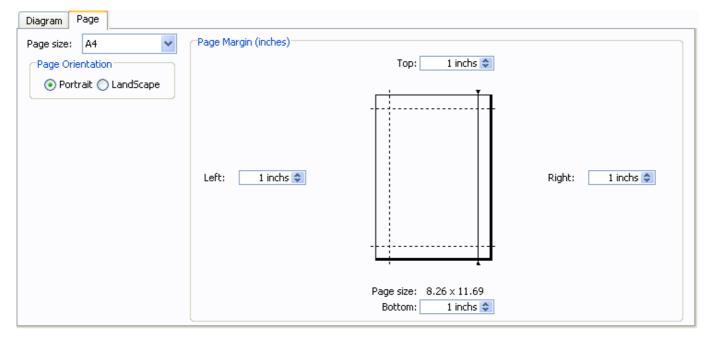


Figure 6.16 - Page setup

Field	Description
Page size	To select the paper size of the generated report.
Page Orientation	This option is used to select the orientation of the report (portrait/landscape).
Page Margin	To specify the page margins of the report.

Table 6.6

#### Selecting the Page size

SDE for Eclipse supports a wide range of page sizes for Word report generation. Different paper sizes can be selected in the **Page size** drop-down menu.



Figure 6.17 - Select the Page Size

#### **Selecting the Page Orientation**

To select the page orientation for the output report, select the desired orientation option in the Page Orientation section.



Figure 6.18 - Select the Page Orientation

#### **Adjusting the Page Margins**

To adjust the page margins enter the value in the text box at the margin side you want to adjust, or drag the margin in the preview page.

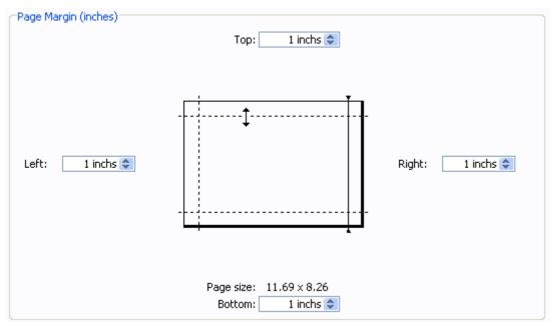


Figure 6.19 - Adjust the page margin

### **Defining a Header/Footer**

To define the Header/Footer of the document:

- 1. Open the Generate Word Report dialog box.
- 2. Select the **Header/Footer** tab.
- 3. Insert text or picture in header or footer section to include a header/footer in the report.

Genera	ite Word											
ieneral	Cover Page	Header/Footer	Document Info									
Header												
Show	header separ	ator										
			ΤĒ	 150	125	EN E	1 (2)		an.			
				 1	(#)	<u>u</u> u		-				
ooter Til show	footer separa											
13.04	nooter separe											

Figure 6.20 - Define a Header/Footer

Here, a separator can be added to the report to separate the region between Header, Content and Footer.

### **Defining the Header/Footer Style**

SDE for Eclipse supports several types of header/footer style for the Word report. They are described in the table below:

Header/Footer Style	Description
Т	To format text style, such as font style, size and color.
liil	To align content to left.
	To align content to center.
Ind	To align content to right.
	To insert an image to the header or footer
#	Insert page number
++	Insert page count
3	Insert date
*	Insert time
	Insert project name

2	Insert report file name
1	Insert user name

Table 6.7

# **Defining Document Info**

To define the document info:

- Open the Generate Word dialog box.
   Select the Document Info page.

Generate Word	
General Cover Page Header/Footer Document Info	
Title:	
Author:	
Subject:	
Keywords:	
A contract of the second se	
Reset Reset to Default Set as Default Generate Cancel	Apply Help

### Figure 6.21 - Define Document Info

Field	Description
Title	The title of the report.
Author	The author of the report.
Subject	The subject of the report.
Keywords	The keywords of the report.

Table 6.8

# **Defining a Cover Page**

To define the Cover Page

- 1. Open the Generate Word Report dialog box.
- 2. Select the **Cover Page** tab.
- 3. Check the Generate Cover Page checkbox to include Cover Page in the report.
- 4. Enter information such as Logo image path, Title, Organization name and Author Name.

neral Cover Page	Header/Footer Document Info	
Generate cover page	P	Cover Page Preview
Logo image path :	C:\Logo.png	
Title :	Mid-Year Report	P
Organization name :	Visual Paradigm	Visual Paradigm
Author name :		
		Mid-Year Report
		Visit Parties
		yaarbaaya.
		vias finaige
		Visit Parity

Figure 6.22 - Define the cover page

# **HTML Report Generation**

Edit Yew Favorites Iools Help			
) 5ach - 🕥 - 💌 🗟 🏠 🔎 Search 👷 Favo	rites 🧭	3.8	1
755 🖗 C:\Documentation\index.html	~		Link
			-
able of Contents			
Use Case Diagram1			
Domain Model			
Enroll into a course			
Maintain a course			
<ul> <li>System Level Sequence Diagram</li> </ul>			
<u>Activity Diagram1</u>			
<u>Component Diagram1</u>			
<ul> <li>Entity Relationship Diagram1</li> </ul>			
able of Figures • Use Case Diagram1 • Domain Model • Enroll into a course • Maintain a course • System Level Sequence Diagram • Activity Diagram1			
Use Case Diagram1     Domain Model     Enroll into a course     Maintain a course     System Level Sequence Diagram     Activity Diagram1     Component Diagram1			
Use Case Diagram1     Domain Mode!     Enroll into a course     Maintain a course     System Level Sequence Diagram     Activity Diagram1			

Figure 6.23 - HTML Report



# The Generate HTML Dialog Box

The **Generate HTML** dialog box provides a set of options for changing the report style. To display the dialog box, perform one of the following actions:

• Select Modeling > Report > HTML... from main menu.

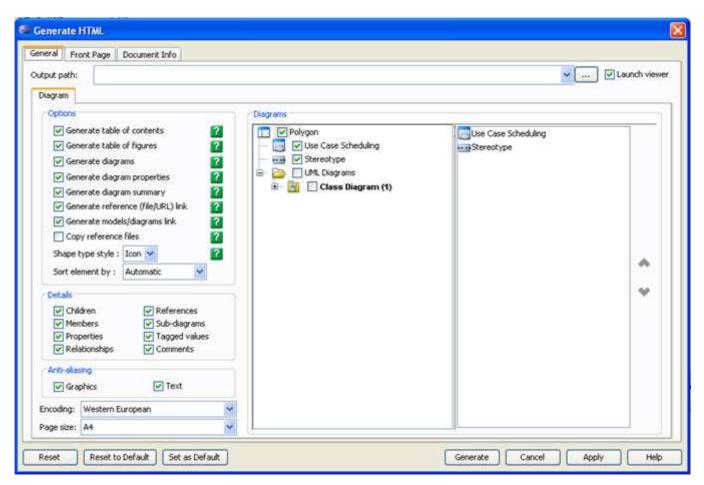


Figure 6.24 - Generate HTML dialog

Field	Description
Output path	To select the destination file for the generated report. You can type in the path in the text field or you can browse the location by clicking on the button.
Launch viewer	If this option is selected, the default browser of the system will be open automatically to show the generated report.
Generate table of contents	If this option is selected, table of contents for this document will be generated to the report.
Generate table of figures	If this option is selected, table of figures for this document will be generated to the report.
Generate diagrams	If this option is selected, the image of the selected diagrams will be generated to the report.
Generate diagram properties	If this option is selected, the properties of the selected diagrams will be generated to the report.
Generate diagram summary	If the option is selected, the summary of the selected diagrams will be generated to the report.
Generate reference (file/URL) link	Select to generate links for referenced files/URLs defined in models.
Generate models/diagrams link	Select to generate links for navigating to related models and diagrams.
Copy reference files	Select to copy referenced files defined in models to the report output directory.
Shape type style	Icon - using Icon to represent the type of shape and diagram elements

	Text - using text to represent the type of shape and diagram elements
Sort element by	Automatic - sorting elements by listing them in the most logical order, following most readers' understanding of that kind of diagram Follow tree - sorting elements by following the sort order of the diagram tree in the tool id or name - sorting elements by their id or names You can refer to the section 'Sorting Elements in Report' near the bottom of this chapter.
Details	
Children	Select to generate children of model.
Members	Select to generate members of model.
Properties	Select to generate properties of model.
Relationships	Select to generate relationships of model.
References	Select to generate references of model.
Sub-diagrams	Select to generate sub-diagrams of model.
Tagged values	Select to generate tagged values of model.
Comments	Select to generate comments of model.
Anti-aliasing	
Graphics	To enable/disable the graphic anti-aliasing of the diagram images.
Text	To enable/disable the text anti-aliasing of the diagram images.
Print Diagrams	To select which diagram will be generated in the report.

Table 6.9

# **Generating an HTML Report**

To generate an HTML Report:

- 1. Open the Generate HTML dialog box.
- 2. Specify the destination location of the report in the **Output path** field.
- 3. Configure the report properties, such as Generate diagrams, Generate reference (file/URL) link, etc...if necessary.
- 4. Select the template of the report that will be generated.
- 5. Select the diagram's image quality if Generate diagrams is selected.
- 6. Define advanced report information such as Front Page and Document Info if necessary.
- 7. Select the diagram to generate in the report.
- 8. Click Generate to start generating the report.



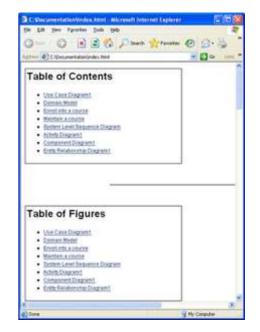


Figure 6.25 - Generating HTML report

Figure 6.26 - The generated HTML report

## **Configuring Image Quality**

There are two image quality options for the HTML Report: graphics and text anti-aliasing. To enable/disable the anti-aliasing options, check/uncheck the anti-aliasing options checkbox. The below two images show the difference in graphics with anti-aliasing enabled (left) and graphics with anti-aliasing disabled (right).



Figure 6.27 - Images with anti-aliasing



Figure 6.28 - Images without anti-aliasing

# **Configuring the Document Info**

To define the document info:

- 1. Open the Generate HTML dialog.
- 2. Select the **Document Info** tab.

Generat	e HTML							
General	Front Page	Document Info						
Tįtle: A <u>u</u> thor: Keywords:								
Reset	Reset to	Default St	et as Default	Gener	ate Can	cel 🛛	Apply	Help

### Figure 6.29 - Define the Document Info

Field	Description			
Title	Specify the title of the HTML report.			
Author	Specify the author of the HTML report.			
Keywords	Specify the keywords meta-tag of the HTML report.			

Table 6.10

### **Defining a Front Page**

To define the Front Page

- 1. Open the **Generate HTML** Report dialog box.
- 2. Select the **Front Page** tab.
- 3. Check the Generate front page checkbox to include a Cover Page in the report.
- 4. Enter information such as a Logo image path for the background, Title, Organization name, Author Name etc.

Generate HTML			
General Front Page	Document Info		
Generate front page			
Logo image path :	C:\logo.jpg		۰
Title :	Mid-Year Report		
Organization name :	Visual Paradigm		
Author name :			
Reset Reset to	Default Set as Default	Generate Cancel Apply	Help

Figure 6.30 - Define the front page

# **Project Publisher**

Ge Ge Ge **Se De** Ge

The Project Publisher is a tool that exports the project, including detailed information in diagrams and models, into interactive and well-organized web pages. The generated web pages can be read in any web browser with no additional plug-in required, so collaborative partners may see the published product even if they do not have Visual Paradigm products installed.

### Launching Project Publisher

To launch Project Publisher, perform one of the following actions:

• Select Modeling > Project Publisher... from main menu.

The Project Publisher dialog box appears.

# **Using Project Publisher**

To publish the project, you need to enter the **Output directory** where the published files will be saved to. You may select the **Launch viewer** option so the default web browser on your computer will open the index page of the published project when the process is completed.

🖶 Project Publisher 🛛 🔀
Select target folder
Select a folder to publish the project documentation to.
Output directory: C:\Published Projects\Courier
Options       Image Preserve image size     ?
Copy reference files
✓ Launch viewer
OK Cancel

Figure 6.31 - Project Publisher

Click **OK** to start publishing. The progress dialog box will appear while generating the content and a **'Project publishing complete'** message will show once it is done.

# **Using the Published Project**

Go to the output directory of the published project and open the file 'index.html' with a web browser. The web page is organized in frames, namely the Navigator Pane, Menu Pane and Content Pane.

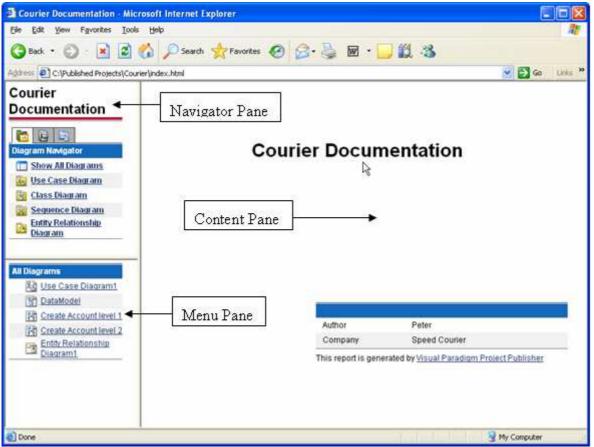


Figure 6.32 - Published project

### **Navigator Pane**

It comprises of the Diagram Navigator, Model Navigator and Class Navigator.

• **Diagram Navigator** shows the categories of diagrams in the project. You can click on a category to view its diagrams in the Menu Pane, or click **Show All Diagrams** to view all diagrams.



Figure 6.33 - Diagram Navigator

• **Model Navigator** shows the Package models in the project. You can click on a Package to view its child models in the Menu Pane, or click **Show All Models** to view all model elements.

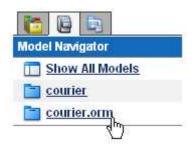


Figure 6.34 - Model Navigator

• Class Navigator shows the Package models in the project. You can click on a Package to view its child packages/classes in the Menu Pane, or click Show All Models to view all packages/classes.

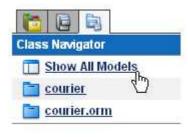


Figure 6.35 - Class Navigator

### Menu Pane

It shows the sub-menus of the Navigator pane. The contents shown in this pane varies with the link you clicked in the Navigator Pane. For more details about the possible contents please refer to the Navigator Pane section. To view the details of an item (diagram, model or package/class), click on its link in the Menu Pane and its details will be shown in the Content Pane.



Figure 6.36 - Menu Navigator

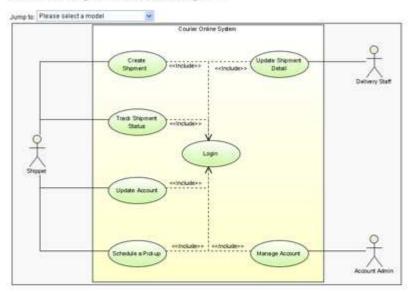
### **Content Pane**

It shows the details of the item (diagram, model or package/class) you clicked in the Menu Pane or Content Pane.

#### **Diagram Content**

Courier Documentation

#### Use Case Diagram - Use Case Diagram1



#### Models

Nan		Documentation	
릇	Shipper: Actor		
*	Account Admin : Actor		
*	Delivery Staff: Actor		
۵	Courier Online Seistem : System		
0	Track Shipment Status: Use Case		
	Manage Account : Use Case		
0	Schedule a Pickup : Use Case		
	Update Shipment Detail: Use Case		
	Update Account : Use Case		
•	Logit_Use.Case		
0	Create Shippment: Use Case		

**Courier Documentation** 

#### Figure 6.37 - The Diagram Content

The diagram type, name, description, together with a full size image of the diagram are shown in the Content Pane. The image is mapped to different clickable regions for each shape, so you can click on a shape in the image to view its details.

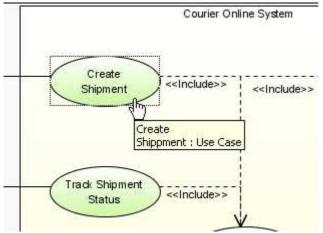


Figure 6.38 - Shape link to the descriptions

#### Using Jump to

The **Jump to** combo box in the diagram content page lists all shapes in the diagram, you can select a shape to jump to. The content page will scroll to the selected shape and the shape will be highlighted by a red border.

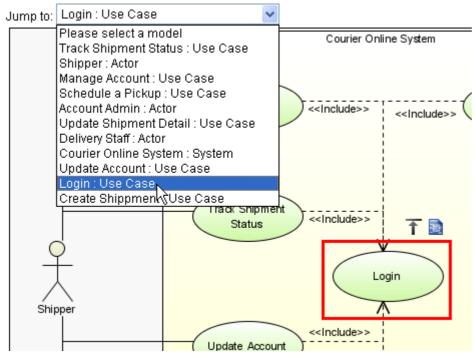


Figure 6.39 - Jump to an element

Besides, there will be two shortcut buttons above the selected shape.

• The **Back to top** button brings you to the top of the page.

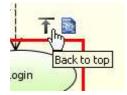


Figure 6.40 - Back to top button

• The **Open specification** button brings you to the details page of the shape.

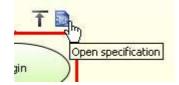


Figure 6.41 - Open Specification button

#### Models

The **Models** section of the diagram content page shows the name, type and documentation of the models of all shapes in the diagram. You can click on the link of a model to view its details.

### Models

Nan	ne	Documentation
옷	Shipper : Actor	
옷	Account Admin : Actor	
옷	Delivery Staff : Actor	
	Courier Online System : System	
0	Track Shipment Status : Use Case	
	<u>Manage Account : Use Case</u>	
	<u>Schedule a Pickup : Use Case</u>	
	<u>Update Shipment Detail : Use Case</u>	
	Update Account : Use Case	
	Login : Use Case	
0	Create Shipment : Use Case	

Figure 6.42 - Model list

### **Model Content**

courier : Package .	orm : Package	
Class - ORM	_Customerimpi	
Properties		
Name	Value	
Activo	false	
Visibility	public	
Abstract	false	
Leaf	falce	
Root	Talse	
Operations Ove	erview	
Visibility	Return Type	Name
public	CGM Shament	loadShipmentByDate
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Name	Begin ORM Customer: Class	
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Kime + .Generalization Operations Det Name Type Modifier Visitue Return Type Visituity Scope	Begin OEM Customer: Class all Value IsadDisprientByDate E true OEM Stroment public instance	
Kime + .Generalization Operations Det Name Type Modifier Visible Return Type Visible Scope Query	Begin OFM Customer: Class all Vatue IoadDhipmentByDate B Ioa Child Stipment public instance bite taise	
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Figure 6.43 - The Model Content

The type, name and general model properties of a model are shown in the content page.

#### **Parent Hierarchy**

The parent hierarchy is shown as a list of models on top of the page. You can click on a parent in the hierarchy to view its details.

# Class - ORM_CustomerImpl

Figure 6.44 - Parent Hierarchy

#### Relationships

The summary of the relationships of the model is shown in the **Relationships Summary** section. Click on a relationship and it will take you to the **Relationships Detail** section.

# **Relationships Summary**

Name	Begin	End
← Generalization	ORM_Customer : Class	ORM CustomerImpl : Class

# **Relationships Detail**

Name	Value
Туре	Generalization
From	ORM Customer: Class
То	ORM CustomerImpl : Class
Visibility	Unspecified

Figure 6.45 - Relationship summary

### **Other Model Details**

Certain types of model have their own properties, for example, attributes and operations of class, or columns of ERD table. They are also included in the content page as custom sections. For instance, the **Operations Overview** and the **Operations Detail** sections show the overview and details of the operations of a class respectively.

# **Operations Overview**

Visibility	Return Type	Name
public	ORM Shipment	loadShipmentByDate

# **Operations Detail**

Name	Value
Name	loadShipmentByDate
Type Modifier	0
Visible	true
Return Type	ORM Shipment
Visibility	public
Scope	instance
Query	false
Abstract	false

Figure 6.46 - Other Class details

# **Report Writer**



The Report Writer is a sophisticated tool for report creation. Users can output the existing project as reports by documenting their project within SDE for Eclipse. SDE for Eclipse offers seamless integration of UML modeling tool with word processors to provide a unified documenting environment. By dragging the models from SDE for Eclipse to Report Writer, data is extracted from models and content is created in Report Writer.

Retaining the conformance between documentation and design is a tedious task. Report Writer maintains the consistency between them. If you create a new model, the content will be appended to the existing one. If you remove a model, the generated element will be removed. If you re-edit the models, the content will be refreshed.

Users can also apply their own style for the generated element, to the Report Writer more flexible.

### Launching Report Writer

To launch Report Writer, perform one of the following actions:

• Select Modeling > Report > Writer... from main menu.

### **Installing Report Engine**

If it is the first time you have started the Report Writer, the **Report Engine Installation** dialog box will be displayed asking for the installation of Report Engine.

🖶 Report Engine Installation 🛛 💽	<
The Report Engine is not yet installed on your computer. Please either download it from the Internet now, or import an existing Report Engine (the Report Engine can be downloaded directly by clicking on "Download with browser" button below).	
<ul> <li>Download from internet</li> </ul>	
URL : http://www.visual-paradigm.com/downloads/Re Proxy Setting	]
◯ Select in local file system	
File :	
Download with browser OK Cancel	

Figure 6.47 - Report Engine Installation Dialog

To install Report Engine, perform one of the following actions:

- Choose from the **Report Engine Installation** dialog box the option **Download from Internet** and click **OK**. This downloads the Report Engine from the Internet and automatically proceeds with Report Engine installation once the download has been completed.
- Choose from the **Report Engine Installation** dialog box the option 'Select in local file system', locate the report engine and then click **OK** to start the Report Engine installation. The Report Engine can be obtained by clicking 'Download with browser'. You can enter the path directly into the text field or click ... to locate the file from the file chooser.

### **Entering Report Information**

Upon launching Report Writer for the first time, the **Template** dialog box will be displayed and ask for the information of the new report. Enter the report information and select a desired report theme for the report, preview of the selected theme is shown on the preview pane. Click **OK** to start Report Writer when everything is ready.

Templates					×
Company Name :	MyCompany				
<u>R</u> eport Name :	MyReport				
Repor <u>t</u> Type :	Use Case Report				
Object Name :	<object name=""></object>				
<u>I</u> ssue No. :	000001				
Blank	Basic template	Report Cargo	Waterfall	Preview     Constraints	
Report Ink	Aurora	Lotus	Aqua	Copport year Count Times	••
Pea					
			<u>o</u> k		<u>H</u> elp

Figure 6.48 - Templates Dialog

# Panes

When Report Writer is launched you are taken to the Report Writer environment where you can create and edit your reports. Three distinct panes are presented on the screen: the **Project Explorer**, **Template Pane** and the **Writer Pane**.

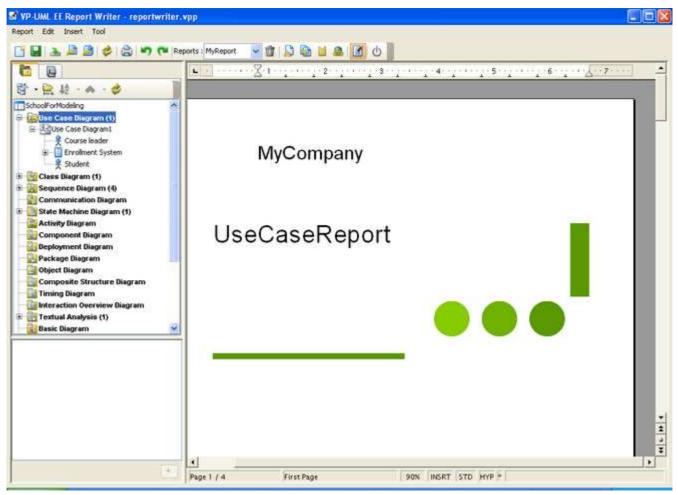


Figure 6.49 - Report Writer

### **Diagram Navigator**

The **Diagram Navigator** displays all diagrams within the project in a form of a project tree and organizes them by their diagram type. Through the use of a folding tree structure you can browse the names of these diagrams by either expanding or collapsing the folders and perform sorting by diagram type and name.

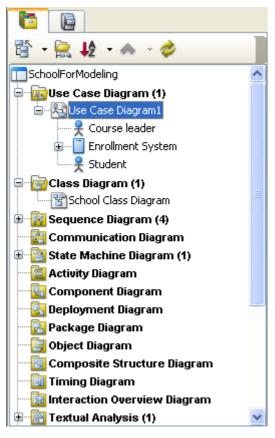


Figure 6.50 - Diagram Navigator

Button	Icon	Description
Collapse		To collapse all the nodes within the project tree.
Expand	ŝ	To expand all the nodes within the project tree.
Show Diagram View		To show only diagrams but not models in the tree.
Sort by Name	₽	To sort diagrams within the project tree by alphabetical order of their names
Sort by Type	18	To sort diagrams within the project tree by their diagram type.
Move Selected Model Up	<b>~</b>	To move selected models upwards.
Move Selected Model Down	*	To move selected models downwards.
Refresh	$\gg$	To refresh the project tree within the Diagram Pane.

Table 6.11

### **Model Tree**

The Model Pane displays models within the project in a form of a project tree. Notice that not all the model elements are displayed, and only the elements that are available for generating report content are shown.

😚 + 📴 + 🐟 - 🤣	
SchoolForModeling	
sch	
InitialNode	
🔁 viewCourseDetail	
FinalState	

### Figure 6.51 - Model Tree

Button	Icon	Description	
Collapse		To collapse all the nodes within the project tree.	
Expand	â.	To expand all the nodes within the project tree.	
No Sorting		To display the models within the project without sorting. Ordering of models will be based or their order of creation.	
Sort by Name	₽₽	To sort models within the project tree by alphabetical order of their names	
Sort by Type	1	To sort models within the project tree by their model type.	
Move Selected Model Up	To move the selected models upwards.		
Move Selected Model Down	el V To move the selected models downwards.		
Refresh	2	To refresh the project tree within the Model Pane.	

*Table* 6.12

### **Template Pane**

The Template Pane displays all the templates available for the model or diagram selected in Property Pane.

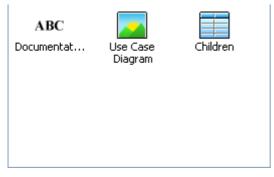


Figure 6.52 - Template Pane

Each template represents the corresponding report content of a particular model or diagram. By dragging a template into the **Writer Pane**, the report content will be printed on the report. There are three types of template: **Text**, **Image** and **Table**. Each of them has its own appearance in the report content.

Туре	Icon	Description			
Text	ABC	The generated element block is mainly composed of text. It is mainly used in the documentation template of elements.			
Image		The generated element block is mainly composed of images. It is used in the diagram template for UML Diagrams.			
Table		The generated element block is mainly composed of tables. Most of the content-related templates use this of template.			

Table 6.13

### Writer Pane

Writer Pane embeds a word processor to provide a report editing environment.

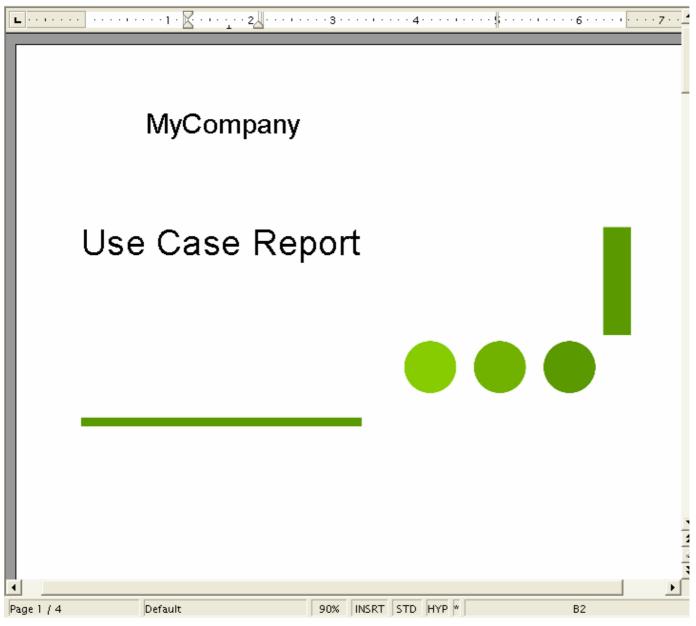


Figure 6.53 - Writer Pane

# Toolbar

Toolbar is the horizontal bars placed below the menu bar. They store all the frequently used commands that appear as a row of buttons.

Icon	Button	Function
	New Report	To create a new report.
	Save Report	To save modified reports.
æ	Import Report	To import an external document (either an .sxw or a .doc file) as a report.
<u>,</u>	Export Report	To export the current report as an .sxw or .doc file.
2	Export All Reports	To export all the reports within the current project.
<b>2</b>	Update from Model	To update the content within the current report from the SDE for Eclipse models.
٢	Print Report	To print the current report by supplying the printer name.
•7	Undo	To undo the last action you performed.
<b>~</b>	Redo	To redo the last action you performed.
Reports : *Use Case Report 💙	Select Report	To select a report from the current project for editing.
1 1	Remove Report	To remove the existing report(s).
	Click to Show Stylist	To display the stylist dialog box for modifying the style.
	Copy Style to Current Report	To copy the style settings defined in another report.
	Click to Show Bookmarks	To display bookmarks that outlines the boundary for each generated element.
<b>@</b>	Insert Hyperlink	To insert a hyperlink.
	Click to Generate Model Documentation	To include documentation of model when generating content.
<del></del>	Close Report Dialog	To close Report Writer and go back to SDE for Eclipse.

Table 6.14

# **Constructing a Report**

### **Creating a Generated Element**

The term "Generated element" here means a block of report content generated by Report Writer and consists of details of a particular diagram or model element.

To create a generated element block:

- 1. Click to select the desired model element from either the **Diagram Navigator** or **Mode Tree** for content generation.
- 2. The supported templates for the selected model element are shown on the **Template Pane**. Each template represents a way in presenting the selected model element on the report. For example, "Children" template of a System represents a list of children placed inside a particular System.

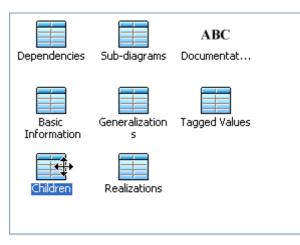


Figure 6.54 - Template Pane

3. Drag the desired template from the **Template Pane** and drop it onto the report.



Figure 6.55 - Drag the template from template pane and drop it onto report

4. When the cursor drags over the **Writer Pane**, a tiny straight line will appear in the report indicating the position of the expected position of the generated element. Once you've dropped the template onto the report, corresponding content will be generated element to the dropped position.

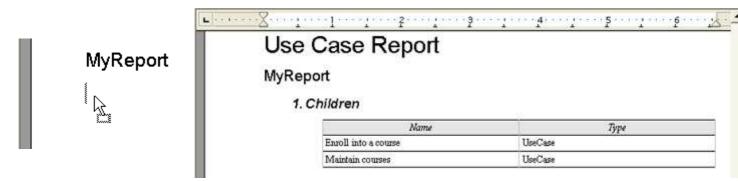


Figure 6.56 - Drag the template to report

The update process will replace ALL the contents within each generated element without notification. Therefore please insert the content carefully and ensure that it is not located inside the scope of any generated elements.

To create a new report, select from main menu Report > New Report...or click on the New Report...button on the toolbar.

### Showing the Bookmarks

Creating a new generated element within the boundary of an existing one is dangerous because the content may be messed up during a report update process. To avoid this, you can display bookmarks to indicate the start and end position of each generated element, and to prevent dropping a new one within the scope of the existing generated element.

1. start-of-generated-elementChildren			
Name Type			
Enroll into a course	UseCase		
Maintain courses UseCase			
end-of-generated-element			

Figure 6.57 - Showing bookmarks

To show/hide bookmarks:

- Check/Uncheck Tool > Show Indicator from main menu to show/hide bookmarks.
- Select/Deselect Click to Show Bookmarks/Click to Hide Bookmark on the toolbar to show/hide bookmarks.

# **Applying Style to Report**

A style in Report Writer is a collection of formatting attributes that describe the nature of paragraphs. The generated element highly adopts the predefined styles in Report Writer therefore users can customize the related styles to bring consistency to the whole document. There are two ways for applying style to report.

### **Style configuration**

The Stylist dialog box allows you to configure the pre-defined styles. To display the Stylist dialog box:

- Select Tool > Show Stylist from main menu.
- Click the Click to Show Stylist button 🐱 on the toolbar.

In both cases, the Stylist dialog box display.

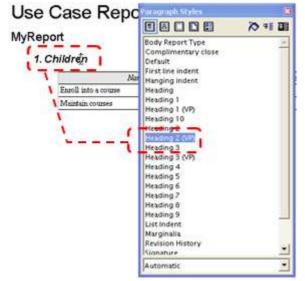


Figure 6.58 - Stylist

To edit the style, right-click on the highlighted style and choose **Modify...** from the popup menu. This displays the dialog box for the selected style. You can now adjust it with your own preference. When everything is ready, please click **OK** to commit the settings and exit the dialog.

🗾 Paragraph Style	: Heading 2 (V	/P)						
Numbering	Tabs	Drop Ca	os	E	Backgro	und	B	orders
Organizer Inder	nts & Spacing	Alignment	Text	Flow	Font	Font Ef	fects	Position
<u>U</u> nderlining Single	Colo	or Blue 6	•		ffects (Withou	t)		•
Stri <u>k</u> ethrough (Without)		ndividual <u>w</u> ord	Is		elief Emboss	ed		•
Font <u>c</u> olor Red 7								
				Г	<u>B</u> linki	ing		
<u>Comic Sans MS</u>								
OK Cancel <u>H</u> elp <u>R</u> eset <u>S</u> tandard								

Figure 6.59 - Edit Paragraph Style

The changes will take effect immediately and you will notice the style is applied to those generated elements using the same style.

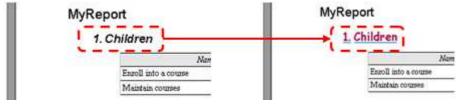


Figure 6.60 - Style Change

### Loading Style from Other Report

The Copy Style dialog box allows you to copy the style from existing report. To display the Copy Style dialog box:

- Select **Tool** > **Copy Style** from main menu.
- Click the Copy Style to Current Report button 壇 on the toolbar.

In both cases, the **Stylist** dialog box display.

🛃 Copy Style		
Author Demo	Report Name *Empty Report	Report Description
Demo	i Empty Report	
	opy Style Car	
	opy Style Car	ncel Help

Figure 6.61 - Copy Style Dialog

Select a desired report for getting the style configuration and click **Copy Style**. The style configuration in the current report is replaced by the style configuration of the selected report. All the predefined styles will be overwritten.

### **Updating Table of Contents**

There is a predefined Table of Contents in each of the report template. Here is the pre-built Table of Contents structure:

Level	Paragraph Style
0	Heading 1 (VP)
1	Heading 2 (VP)
2	Heading 3 (VP)
3 - 9	None

Table 6.15

To update the Table of Contents, right-click on the caption **Table of Contents** and select **Update Index/Table** from popup menu.

### **Exporting a report**

You can export report as file and edit it outside SDE for Eclipse. Supported format includes Microsoft Word 97/2000/XP document (with extension .doc) and OpenOffice.org 1.0 Text Document (with extension .sxw).

### Exporting current report

- 1. Click on the **Export Report...**button is on the toolbar or select **Report > Export Report...**from main menu. This display the **Save** dialog box.
- 2. In the **Save** dialog box, enter the file name and select **OpenOffice.org 1.0 Text Document (.sxw)** format or **Microsoft Word 97/2000/XP (.doc)** format for exporting.
- 3. When everything is ready, click Save to export the report.

### Exporting all report(s)

- 1. Click the **Export All Reports...**button in the toolbar or select **Report > Export All Reports...**from main menu. This display the **Save** dialog box.
- 2. In the **Save** dialog box, enter the directory for storing the reports in the **File name** field and select either **OpenOffice.org 1.0 Documents** or **Microsoft Word Documents** for the **Document Type**.
- 3. When everything is ready, click **Save** to export the report(s).

### **Importing a Report**

You can import a document back into Report Writer for data updating. To import a report:

- 1. Click the **Import Report...**button in the toolbar or select **Report > Import Report...**from main menu. This displays the **Open** dialog box.
- In the Open dialog box, select either OpenOffice.org 1.0 Text Document (.sxw) format or Microsoft Word 97/2000XP (.doc) format for importing. Select a file and click Open to import the selected document into Report Writer.
- 3. If the document has previously been exported from Report Writer, a dialog will appear and ask for overwriting the existing one or not.

		X
?	Do you want to overwr	ite Report 1
	Yes	lo

Figure 6.62 - Confirm overwrite existing report

If you click **Yes**, the existing report will be replaced by the imported one. If you click **No**, the imported report will be stored into Report

### **Updating a Report**

In reality, software design keeps evolving from time to time. Originally, users needed to modify the related documents manually to ensure that it is fully conformed to the latest design. Report Writer binds closely with the SDE for Eclipse project, and hence generated elements can then be updated without affecting the user-defined content.

To update a report, choose the desired report for updating from the drop-down menu and click the Update from Model

button *from the toolbar or select* **Report** > **Update from Model** from main menu.

Update process will start automatically. Data will be extracted from project and replace with the content within the existing generated element.



Please do not click on the Writer Pane while the update process is undergoing, as it may affect the accuracy of the content. It can also damage the generated element, so that updating cannot be performed anymore unless the damaged block is removed manually.



The update process will replace ALL the contents within each generated element without notification. Therefore please insert your content wisely and ensure that it is not located inside the scope of any generated element.

### **Printing a report**

There are two ways for printing the reports. The first one is to print the currently opened report and another one is to print all the reports within the project. The following steps demonstrate how you can print reports in Report Writer.

- 1. Click the **Print Report...** button and the toolbar or select **Report > Print Report...** from main menu. This displays the **Print** dialog box asking for the printer name.
- 2. Select the printer for printing the document from the drop down menu.
- 3. To print the currently opened report, click Print Current... To print all reports, click Print All...

Do not click on the Writer Pane while the printing process is undergoing, it may affect the print job.

# **Sorting Elements in Report**

Sorting out the elements in the report helps to prepare a report which is well-organized.

There are three ways of sorting in a report:

- Automatic
- Follow tree
- Sort by id or name

We will use a PDF report as an example.

To set the sorting option:

1. Select **Modeling > Report > PDF...** from the main menu.

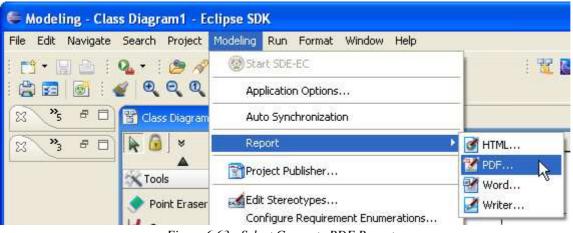


Figure 6.63 - Select Generate PDF Report...

#### 2. This shows the Generate PDF dialog box.

Seneral Cover Page Header/Footer Document Info	5	• [	] 🕑 Launch viewe
Diagram Page	Chagrans Pecreation Club Cube Case Scheduling Sequence Diagram (1) Reservation System	Use Case Scheduling	*

Figure 6.64 - Generate PDF dialog box

3. Select how elements will be sorted from the **Sort element by** drop-down menu.

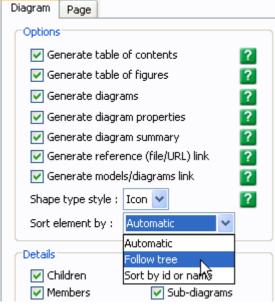


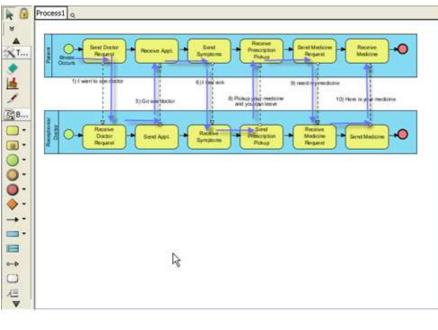
Figure 6.65 - Select way of sorting

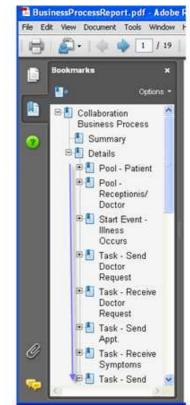
4. Press the Generate button.

#### Different ways of sorting

• Automatic

The report generated is sorted by listing elements in the most logical order, following most users' understanding of that kind of diagram.





*Figure* 6.66 - *Sorting by Automatic* 

• Follow tree

The report generated is sorted by following the sort order of the **Diagram Navigator** in the tool.

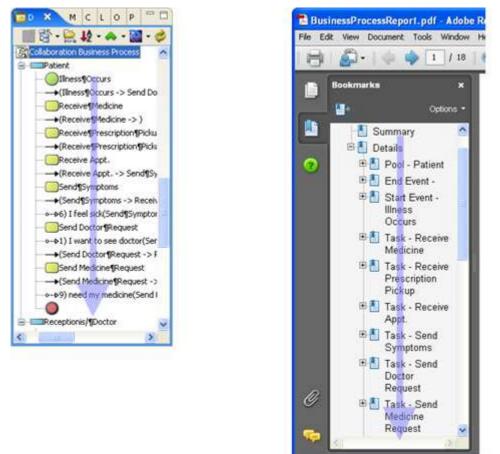


Figure 6.67 - Sort by Follow tree

• Sort by id or name

The report generated is sorted by name or ID of the element.

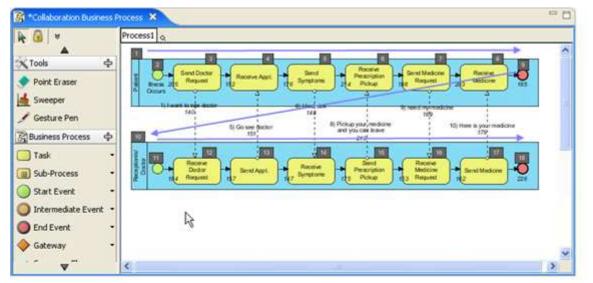


Figure 6.68 - Sort by id or name



# **Chapter 7 - Export and Import**

SDE for Eclipse facilitates excellent interoperability by allowing exchange of UML diagrams and models via XMI. Apart from this, you also can import models created previously from IBM Rational Rose.

This chapter guides you through the process of importing and exporting a SDE for Eclipse project, an XML file or an XMI file. You can also learn how to export a SDE for Eclipse project as an image and how to import a IBM Rational Rose Project. In this chapter:

- Image Exporter
- SDE for Eclipse Project Importer and Exporter
- XML Importer and Exporter
- XMI Importer and Exporter
- Rose Importer
- ERwin modeler project file Importer
- Oracle workflow engine BPEL generator
- JBoss workflow engine BPEL generator

# **Exporting Diagram as Images**



The images exported can be inserted to external documents for easier distribution. Here are the types of image SDE for Eclipse support exporting:

- JPG
- PNG with background
- PNG without background
- SVG
- EMF
- PDF (diagram per page)
- PDF (diagram per file)

### Exporting the Active Diagram as an Image

This feature exports the active diagram as an image file. To export the active diagram as an image file, perform one of the following actions:

• Select File > SDE-EC Export > Active Diagram as Image... from main menu.

File chooser dialog box will appear where you can specify the output of the image file.

### **Exporting Diagrams as Images**

This feature exports one or more diagrams as images. To export the active diagram as image file, perform one of the following actions:

• Select File > SDE-EC Export > Diagrams as Image... from main menu.

The **Diagram Exporter** dialog box will be displayed. You can specify which diagrams to export, and preview the exported image. After you have configured the export settings click **Export** to export the diagrams.

🛢 Diagram Expor	ter	
Qutput destination: Export type:	C:\ImageRepository JPG	V Auto overwrite existing files
Elas Elas Elas Elas Elas Elas Elas Elas	Case Diagram (1) s Diagram (1) ichool Model uence Diagram (3) <i>v</i> ity Diagram (1) uponent Diagram (1) y Relationship Diagram (1)	Preview         Show preview         Image: String         NickName: String         Address: String         O.*         O.*         Ourse Dode : String         Image: String         School         Image: String         School         Image: String         School         Image: String         Image: String <tr< td=""></tr<>
Inditibel of selected	Diagranis, 2	Export Cancel Help
		CThose Cauces Gab

#### Figure 7.1 - Diagram exporter

Field	Description	
Output destination	The <b>Output destination</b> is the directory where all the exported images are saved to. You can enter the path in he text field directly, or you can click on the button to browse for the directory.	
Export type	To select the image format of the exported image click on the pull-down box beside the <b>Export type</b> field and select the format you want to use.	
Diagrams	The <b>Diagrams</b> pane shows the diagrams in the current project. Check the checkbox beside the diagram you want to export. The number of selected diagrams is displayed at the bottom of the Diagram pane. The Preview pane also allows you to <b>preview</b> the exported image of the selected diagram.	

Preview	The <b>Preview</b> pane shows the preview of the exported image of the selected diagram in the Diagrams pane. You can check/uncheck the <b>Show preview</b> checkbox to enable/disable the preview. You can select the size of the preview image by selecting from the pull-down box beside the <b>Preview mode</b> field. Selecting <b>Stretch</b> will show the image in scaled size that fits to the preview area, while selecting <b>Real</b> size will show the image in its actual size.
Anti-aliasing	Anti-aliasing is a method which handles the staircase pixels of slanted lines and curves to make them look smoother. You can apply anti-aliasing to the exported images. To apply anti-aliasing to graphics, check the Graphics Anti-aliasing checkbox in the Anti-aliasing pane. Likewise, you can check the Text checkbox in the Anti-aliasing pane to apply anti-aliasing to text.
Auto overwrite existing files	You can check the 'Auto overwrite existing files' checkbox to allow overwriting of files in the export process.
Max. Size	Maximum size of exported images. If the diagram size is larger than the max. size, it will be resized.

Table 7.1

### **Slice diagrams**

User can slice a large diagram into pieces(number of files), as well as restrict the size of the exported diagram.

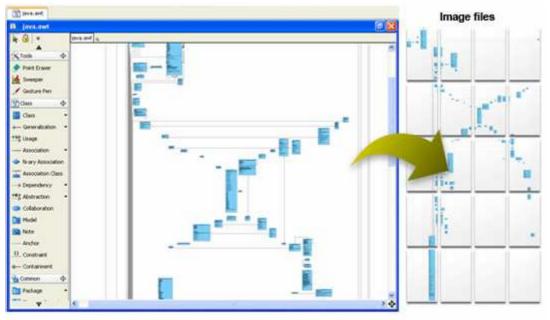


Figure 7.2 - Slice diagrams

There are three slicing strategies. They are **Fixed Slice**, **Free Slicing** and **Fixed Ratio**.

Slicing strategies	Description
Fixed Slice	<b>Fixed Slice</b> is a simple strategy which slices exported diagram into pieces of the same size. The user specifies the number of columns and rows to slice and then the exported diagram will be sliced into specific pieces.
Free Slicing	Users can customize how to slice the exported diagram by specifying the position of vertical slices and horizontal slices. It is particularly useful to prevent a shape from being sliced into pieces.
Fixed Ratio	<b>Fixed Ratio</b> gains the benefits of Fixed Slice and Free Slicing. The width and height of pieces are the same but for the last row and column. Users can also customize the width and height of sliced pieces. Like Free Slicing, Fixed Ratio is size oriented. User modifies the size of pieces and Diagram Slicer calculates the number of row and column to slice.

### **Exporting Diagrams to PDF format**

You can export SDE for Eclipse diagram to native PDF format. Since the exported PDF is of a small size, it can save a lot of space. Also, because the diagram in PDF is a vector, it is scalable. There are two different options when you export:

• PDF(diagram per page)

All the diagrams selected will be exported in the same PDF file. Each diagram will occupy one page.

• PDF(diagram per file)

Each diagram selected will be exported in one new PDF file.

Edit Navigate Search Project N	1odeling Format Ru	in Window Help
New	Alt+Shift+N	🎽 😫 🖬 💽 🖌 🍳
Open File		hipment level 2
Close	Ctrl+F4	E and a second s
Close All	Ctrl+Shift+F4	lefault package> 🔍
Save	Ctrl+S	banki
Save As		
Save All	Ctrl+Shift+S	Customer
Save SDE-EC Project		
Revert		_
Move		Order Manager
Rename	F2	
Refresh	F5	
Convert Line Delimiters To	3	
Print	Ctrl+P	OrderLine
Print SDE-EC Diagrams		
Switch Workspace		
Import		
Export		
SDE-EC Import		•
SDE-EC Export		🛂 😰 UML Model
Properties	Alt+Enter	🕺 XMI
SDE-EC Project Properties		🚧 XML
1 banking_system1.vpclassd [BankingSy]		📮 Active Diagram as Image 💦
2 Create Shipment level 2.vpseqd [Ban	📕 Diagrams as Image	
3 BankingSystem yng [BankingSystem/ 1		Harrison Carrow Constraint Carrow
4 Sequence Diagram11.vpseqd [Banking5]		Selection as Image
	125001010	

Figure 7.3 - Select Diagrams as Image...

#### 2. Diagram Exporter dialog box is displayed. Select the PDF format you want.

🖶 Diagram Expo	rter	
Output destination:	C:\projects\	V Auto overwrite existing files
	PDF (diagram per file)	Preview  Show preview
	Create Shipment level 2 State Machine Diagram (1) Order State Machine	Preview mode: Stretch
	Activity Diagram (2) Activity Diagram1 Create Shipment Component Diagram (1) Component Diagram1	Export images options  Graphics Antialiasing  Max. Size  Wi
Number of selected	Diagrams: 0	Sice Diagrams Clice All Diagrams

Figure 7.4 - Select PDF format

3. Select ... to select the output destination or type it in the text box. If you select PDF(diagram per page) as the export type, you should type in a file name with .pdf as extension.

🖶 Diagram Exporter		
	e tana antara data add	
Output destination:	C:\projects\model.pdf  ]	
Export type:	PDF (diagram per page) 💟	
Diagrams		
Courier	<u>^</u>	
🖨 🦾 🛄 UML (	Diagrams	
	se Case Diagram (1)	
	Use Case Diagram1	
	lass Diagram (3) DataModel	
- B (	couriersystem	
	anna 75. Tura in Outrut destingtion	

Figure 7.5 - Type in Output destination

#### 4. Select the diagram(s) you want to export and click Export to generate.

🖶 Diagram Expor	rter	
Output destination:	C:\projects\model.pdf	
Export type:	PDF (dagram per page)	
Diagrams		Preview
	Diagrams Use Case Diagram (1) Use Case Diagram (2) DataMode Couriersystem.model Sequence Diagram (5) Create Shipment level 1 Create Shipment level 2 Sequence Diagram (1) Create Shipment level 2 State Machine Diagram (1) Create Shipment level 2 State Machine Diagram (1) Create Shipment level 3 St	Show preview   Final State S
1		Export Cancel Help

Figure 7.6 - Select diagrams to export

5. Then, a dialog box is displayed telling you the diagram is exported. You may choose from the options **Open File**, **Open Folder**, **Copy Path** or **Finish**. Choose Open File to see the exported file.

Open Exported File	×
Diagram "DataModel" is exported to "C:\projects\model.pdf" Do you want to open exported image file?	
This dialog can be turned off in Option > General > Project > Open exported image file	
Open File Open Folder Copy Path Finish	

Figure 7.7 - Export finished

#### 6. Only one file is created. In the exported file, you will find all the diagrams you have selected.

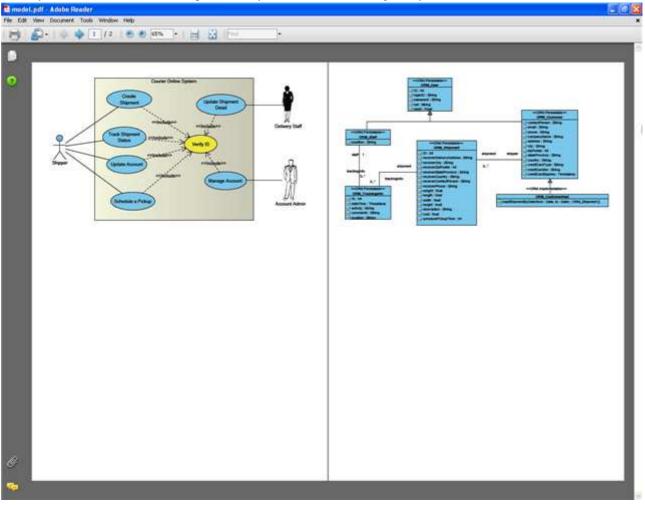


Figure 7.8 - Exported file

If you select PDF(diagram per file), you should type in a directory where the files should be saved in. After selecting the diagrams to export, click **Export**.

🖨 Diagram Expor	ter			
Output destination:	C:\projects\exportfile.dir  ]			
Export type:	PDF (diagram per file)			
Diagrams				
Courier	<u>~</u>	1		
🚊 🕞 🔽 UML Diagrams				
🍦 📴 🗹 Use Case Diagram (1)				
🛄 🌄 🔽 Use Case Diagram1				
🖨 📴 🔽 Class Diagram (3)				
🔤 🗹 DataModel 🔤				
🖹 🗌 couriersystem				
🔤 🔄 couriersystem.model				
	Figure 7.09 - Type in a directory			

After exporting, you may select **Open Folder** to open the directory holding the exported file.



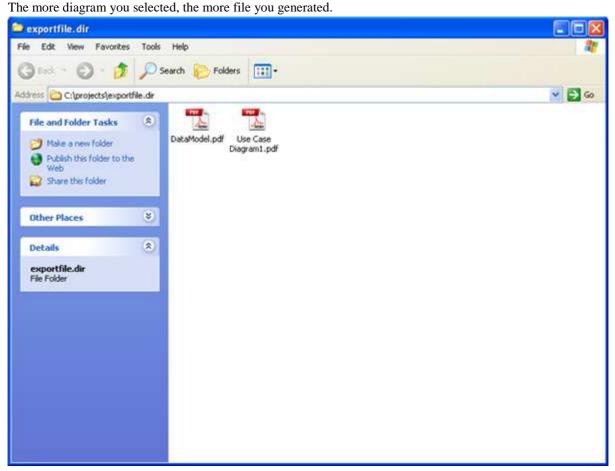


Figure 7.11 - Exported files in the designated directory

#### Each file exported will only contain one diagram.

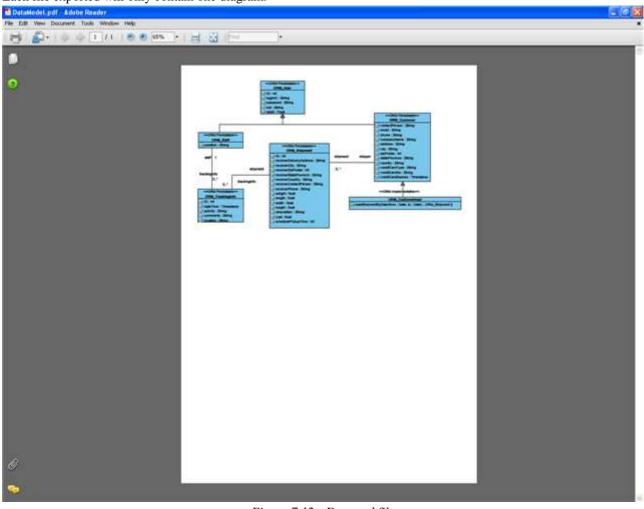


Figure 7.12 - Exported file

# **Exporting and Importing SDE for Eclipse Project File**

### **Exporting SDE for Eclipse Project File**

Many hands make simple work. Exporting a SDE for Eclipse project file lets you split up a single large project into smaller sections, e.g. a few diagrams and focus on modifying and improving one section without affecting other components. The exported files will then be the same as a normal SDE for Eclipse project. This means different sections can be worked on at the same time, and when all the sections are complete Importing the modified files back to the master project will merge the changes into the project.

ile Edit Navigate Search Project	Modeling Format Run Window He	elp
New	Alt+Shift+N 🕨 💽 🛛 😭	🖂 🞯 🖌 🜒
Open File		
Close	Ctrl+F4	
Close All	Ctrl+Shift+F4	je> q
Save	Ctrl+5	
Save As		banki
🗋 Save All		
Save SDE-EC Project		
Revert		
Move		
Rename	F2 Order	Manager
Refresh	F5	
Convert Line Delimiters To	•	
Print	Ctrl+P Order Line	B
Switch Workspace		
🔄 Import		
👍 Export		
SDE-EC Import	• <u> </u>	
SDE-EC Export	🕨 🔊 UML Mode	el
Properties	Alt+Enter 🏼 🕺 XMI	43
🔁 SDE-EC Project Properties	🚧 ХМЦ	
1 banking_system1.vpclassd [Bankin	35y] 🔑 Active Dia	igram as Image
2 Create Shipment level 2.vpseqd [B	an] 📕 🚂 Diagrams	as Image

7-11

#### 2. Export Project dialog box is displayed. Type in the Output destination.

🗲 Export Project		
Output destination: C:\projects\exportfile.dir\project.vpp	I	
Diagrams	Preview	
	Show preview	
<ul> <li>UML Diagrams</li> <li>Use Case Diagram (1)</li> <li>Kase Diagram (1)</li> </ul>		
🖨 📄 🗌 Class Diagram (3)		
📸 📄 DataModel		
🛐 🔲 couriersystem.model 🔯 🔲 Sequence Diagram (5)		
Create Shipment level 1		
🔤 🔛 Create Shipment level 2		
Sequence Diagram1		
Number of selected Diagrams: 0	Preview mode: Stretch	~
	Export Cancel	Help

Figure 7.14 - Export Project dialog box

#### 3. Select the diagram you want to export.

🖨 Export Project	
Output destination: C:\projects\exportfile.dir\project.vpp	
Diagrams	Preview
Courier	Show preview
<ul> <li>UML Diagrams</li> <li>Use Case Diagram (1)</li> <li>Use Case Diagram (3)</li> <li>Class Diagram (3)</li> <li>Class Diagram (3)</li> <li>Class Diagram (3)</li> <li>Class Diagram (5)</li> <li>Create Shipment level 1</li> <li>Create Shipment level 2</li> <li>Sequence Diagram (3)</li> </ul>	
	Preview mode: Stretch
Number of selected Diagrams: 2	Export Cancel Help

Figure 7.15 - Select diagram to export

4. Open the project exported. The project only contains the diagram you selected in the Diagram Navigator.

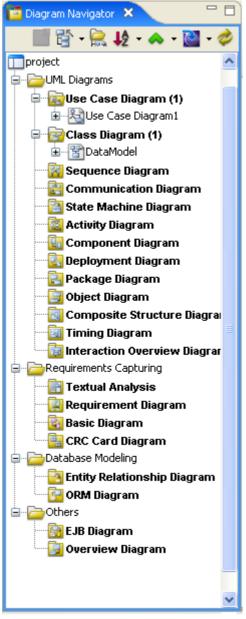


Figure 7.16 - Diagram Navigator of exported project

# Importing SDE for Eclipse Project File

After you have edited the exported file, you can import it back to the master project. The modifications will then be merged to the master project.

1. Open the master project. Select File > SDE-EC Import > UML Model... in the main menu.

		- 1
Move		Order Ma
Rename	F2	
Refresh	F5	
Convert Line Delimiters To		
📤 Print	Ctrl+P	Order Line
🚔 Print SDE-EC Diagrams		
Switch Workspace		
🚵 Import		
🛃 Export		
SDE-EC Import		🕨 🌀 UML Model 💦 💦
SDE-EC Export		🕨 🍓 Rose Project 😽
Properties	Alt+Enter	🕺 XMI
🔁 SDE-EC Project Properties		🙀 XML
1 banking_system1.vpclassd [BankingSy]		🖹 ERwin Project (XML)
2 Create Shipment level 2.vpseqd [Ban]		🐔 MS Word to Use Case Mode
3 BankingSystem.vpp [BankingSystem/]		
4 Sequence Diagram11.vpseqd [Banking5	.]	
Exit		
EJB Diagram		
Figure 7.17 - In	nport UML Mod	lel

#### 2. Select the project to be imported.

😂 Open				
Look in:	exportfile.dir	×	00 🕫 💴 🖃	
My Recent Documents	in project.vpp			
Desktop				
My Documents				
My Computer				
	File name:	project.vpp	~	Open
My Network	Files of type:	VP-UML Project (*.vpp)	~	Cancel

Figure 7.18 - Select a project to import

Diagram in the master project before import.

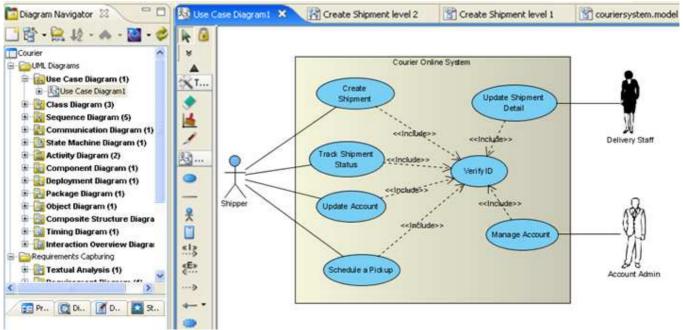


Figure 7.19 - Diagram before import

#### Diagram in the master project after import. The color of the use case 'Verify ID' has been changed.

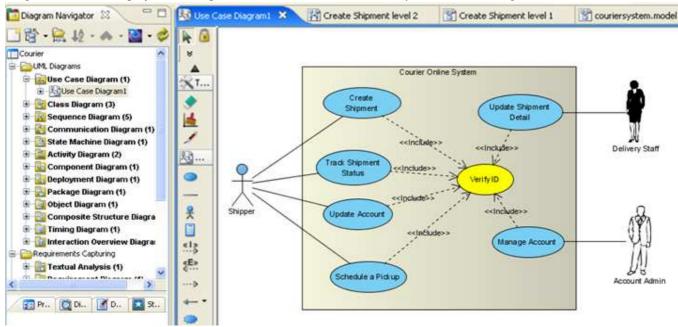


Figure 7.20 - Diagram after import

# **Exporting and Importing XML**

XML is a widely used standard for exchanging data. You can export the whole SDE for Eclipse Project or just part of it to XML. After exporting, you can run your own application to read and update it. You can also import the XML file back to SDE for Eclipse Project to reflect your changes.

### **Exporting XML**

Го export a project to XML: 1.Select <b>File</b> > <b>SDE-EC Export</b> > <b>XML</b>	in the main man	
Save All	Ctrl+Shift+S	u. Package
🛅 Save SDE-EC Project		
Revert		
Move		
Rename	F2	(UseCase)
Refresh	F5	
Convert Line Delimiters To		•
🖹 Print	Ctrl+P	
🚔 Print SDE-EC Diagrams		
Switch Workspace		
🚵 Import		
🛃 Export		
SDE-EC Import		•
SDE-EC Export		🕨 🌀 UML Model
Properties	Alt+Enter	🌌 XMI
🛜 SDE-EC Project Properties		📈 XML
1 Use Case Diagram11.vpucd [BankingS	δγ]	الات Active Diagram as Imag الم
2 Create Shipment level 2.vpseqd [Ban	]	Diagrams as Image
3 BankingSystem.vpp [BankingSystem/.	]	Participation as Image
4 Sequence Diagram11.vpsegd [Banking		Belección as miage
Figure 7.	21 - Export XML	

#### 2. The Export to XML dialog box is displayed.

Export to XML	
Select a workspace Please specify a directory for export project to XML.	
Output destination:	<b>~</b> )
Diagrams	Preview
Courier UML Diagrams Use Case Diagram (1) Use Case Diagram (1) Class Diagram (3) Class Diagram (3) Class Diagram (3) Class Diagram (6) Couriersystem Couriersystem.model Sequence Diagram (6) Create Shipment level 1 Create Shipment level 2 Sequence Diagram1	Show preview
Number of selected Diagrams; 0	Preview mode: Stretch
	Export Cancel

Figure 7.22 - XML dialog box displayed

3. Type in or select the output destination. The destination should be a directory because not only a XML file will be generated, but also some of the project file, such as image, will be generated.

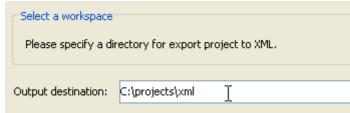


Figure 7.23 - Text box for Output destination

4.Select the diagram needed to export and click **Export** to generate. If you want to export the whole project, you can check the check box **Export project**.

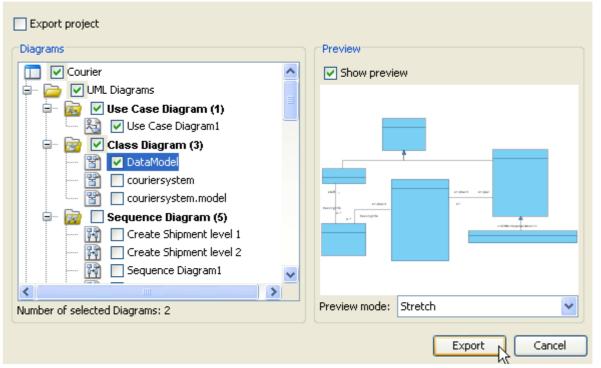


Figure 7.24 - Select Export

5. The XML file is generated.

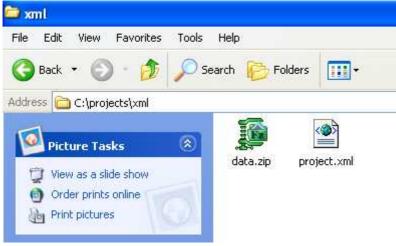


Figure 7.25 - XML file is generated

## **Modifying XML**

When you modify the XML of a project, the project will change accordingly. You can edit the XML file based on XML schema bundled. The XML schema in **{installation folder}\bundled\project.xsd**.



#### To edit XML:

1. Open the XML file in an editing program.

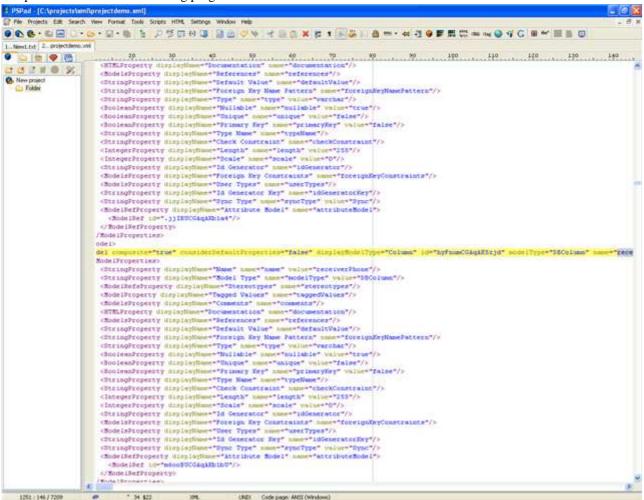


Figure 7.27 - Open XML file

#### 2. Directly edit the file.



Figure 7.28 - Edit the file

### **Importing XML**

You can import the modified XML to update your project. To import XML: 1. Select File > SDE-EC Import > XML... from the main menu. Rename... E2 F5 Refresh Convert Line Delimiters To ۲ 👜 Print... Ctrl+P 🚔 Print SDE-EC Diagrams... Switch Workspace... 🚵 Import... 🛃 Export... SDE-EC Import Þ 🔄 UML Model... SDE-EC Export b 🍓 Rose Project... Alt+Enter 🔬 XMI... Properties 📰 SDE-EC Project Properties... 🙀 XML... 🔁 ERwin Project (XML)... 1 Use Case Diagram11.vpucd [BankingSy...] 2 Create Shipment level 2.vpseqd [Ban...] 🐔 MS Word to Use Case Mode 3 BankingSystem.vpp [BankingSystem/...] 4 Sequence Diagram11.vpseqd [BankingS...] Exit 🚍 🗁 Business Process Modeling 🕞 Business Process Diagram  $\nabla$ Property 🛛 Documentation 2 Figure 7.29 - Import XML file

2.Specify the import file path by selecting ... or typing the path in the text box. The import path should be path of a file. This is because the importer will search for the data.zip automatically.

🖨 Import XML	
Import XML	]
Please specify the path of file to import.	
Import file : C:\projects\xml\project.xml	<b>~</b>
	OK Cancel

Figure 7.30 - Specify the file path

3. The import of XML has completed.

mport XML	2
XML Import Complete	

Figure 7.31 - Import completed

# **Exporting and Importing XMI**

XMI (Metadata Interchange) is the standard way for exchanging data between CASE tool. SDE for Eclipse can cover most of the XMI versions and standards.

Here are the versions and standards we support: Exporting:

- XMI 1.0
- XMI 1.2
- XMI 2.1
- XMI 2.1 (for UML2)

Importing:

- XMI 1.0
- XMI 1.2
- XMI 2.1
- XMI 2.1 (for UML2)

### **Exporting XMI**

If the SDE for Eclipse project is exported to XMI, users without SDE for Eclipse can use other CASE tools to open the XMI to get the content of the project. To export XMI:

I. Select File > SDE-EC Export > X Close Close All	K <b>MI</b> in main menu. Ctrl+F4 Ctrl+Shift+F4	Diagram1 🗙 皆 Create
🕌 Save	Ctrl+S	-
🔚 Save As		
院 Save All	Ctrl+Shift+S	
🔟 Save SDE-EC Project		
Revert		
Move		
Rename	F2	
Refresh	F5	
Convert Line Delimiters To	•	
👜 Print	Ctrl+P	
🚔 Print SDE-EC Diagrams		
Switch Workspace		
🔁 Import		
🛃 Export		
SDE-EC Import	+	
SDE-EC Export	•	💯 UML Model
Properties	Alt+Enter	🕺 ХМІ
🚰 SDE-EC Project Properties		🚧 XML 년

Figure 7.32 - Export XMI

2. Export XMI dialog box is displayed. You can choose the XMI Version of the export XMI.

🖨 Export XMI		
Export		
Please specify th	ne path of the file to export.	
File path :		◄
XMI Version		
🚫 XMI 1.0	🚫 XMI 1.2	💿 XMI 2.1
		Export for UML2
	ОК	Cancel Help

Figure 7.33 - Export XMI dialog box

3. Specify the output file path by typing in the text box or select ... .If the file path does not have the extension *.xmi*, the exporter will append the extension to the path. Then, click **OK** to confirm.

Export	ХМІ		
Export Please :	specify the path of the file to e	xport.	
File path :	C:\projects\XMI\project.xmi	I	✓ …
XMI Vers	ion		
🔘 XMI 1	1.0 🔿 XMI 1.	2 💿 XMI 2	.1
		Expor	t for UML2
		OK Cancel	Help

Figure 7.34 - Specify the export file path

#### 4. The XMI is generated.

PSPad - [C:\projects\xmi\pro	ject.xmi]				
File Projects Edit Search View	w Format Tools Scripts HTML Settings	Window Help			1.2
🖲 🚯 • 🕼 🔤 🗋 • 🗁 •	· · · · · · · · · · · · · · · · · · ·	1 2 2 4 3 3	图 合 × 招 1	IS 🕉 🗉 6	) en - 4
1 project.xmi					
CARD vol       CARD vol	10 20 30 Interventions of the second	<pre>l="http://schema Visual Paradigm for al Paradigm for y" value=""/&gt; "/&gt; ption"/&gt; g.UCGAqECNAt6"/&gt; oxqn"/&gt; "OVbnwHiGAqAKdAE! isLeaf="false" visual Paradigm for alse"/&gt; :id="null_Include isLeaf="false"</pre>	.omg.org/spec/1 for UML" xmi:E: UML"> b"> name="Shipper" for UML"> e_id" xmi:type="1	JHL/2.0" xm xporterVers visibility "uml:Stereot	="public otype"/>

Figure 7.35 - XMI file created

### **Importing XMI**

You can import the XMI file which is modified by other users or other CASE tools, in order to update your project. To import XMI:

Save As Save All Ctrl+Shift+S Save SDE-EC Project Revert Move Rename F2 Refresh F5 Convert Line Delimiters To • Print Ctrl+P Print SDE-EC Diagrams Switch Workspace Import Switch Workspace SDE-EC Import SDE-EC Import SDE-EC Export • Properties Alt+Enter	Select File > SDE-EC Import > 2 Close Close All	Ctrl+F4 Ctrl+Shift+F4	Diagram1 🗙 🖹 🕻
Save SDE-EC Project Revert Move Rename Rename F2 Refresh F5 Convert Line Delimiters To Print Print SDE-EC Diagrams Switch Workspace Import SDE-EC Import SDE-EC Import SDE-EC Export Properties Alt+Enter	Save	Ctrl+S	-
Save SDE-EC Project   Revert   Move   Rename   Refresh   F2   Refresh   Convert Line Delimiters To   Print   Print   Print SDE-EC Diagrams   Switch Workspace   Import   SpE-EC Import   SDE-EC Export   Properties   Alt+Enter	Save As		
Revert   Move   Rename   Refresh   F2   Refresh   P5   Convert Line Delimiters To   Print   Print SDE-EC Diagrams   Switch Workspace   Import   Switch Workspace   Import   Export   SDE-EC Import   SDE-EC Import   SDE-EC Export   Properties   Alt+Enter	Save All	Ctrl+Shift+S	
Move       F2         Rename       F2         Refresh       F5         Convert Line Delimiters To       •         Print       Ctrl+P         Print SDE-EC Diagrams       Ctrl+P         Switch Workspace       •         Import       Export         SDE-EC Import       •         SDE-EC Export       •         Properties       Alt+Enter	Save SDE-EC Project		
Rename F2   Refresh F5   Convert Line Delimiters To •   Print Ctrl+P   Print SDE-EC Diagrams •   Switch Workspace •   Import •   SDE-EC Import •   SDE-EC Import •   SDE-EC Export •   Properties Alt+Enter	Revert		
Refresh F5   Convert Line Delimiters To •   Print Ctrl+P   Print SDE-EC Diagrams •   Switch Workspace •   Import •   SDE-EC Import •   SDE-EC Import •   SDE-EC Export •   Properties Alt+Enter	Move		
Convert Line Delimiters To   Print   Print SDE-EC Diagrams   Switch Workspace   Import   Import   Export   SDE-EC Import   SDE-EC Export   Properties   Alt+Enter	Rename	F2	
Print Ctrl+P   Print SDE-EC Diagrams   Switch Workspace   Import   Import   Export   SDE-EC Import   SDE-EC Export   Properties   Alt+Enter	Refresh	F5	
Print SDE-EC Diagrams   Switch Workspace   Import   Import   Export   SDE-EC Import   SDE-EC Export   Properties   Alt+Enter	Convert Line Delimiters To	•	
Switch Workspace  Import Export SDE-EC Import SDE-EC Export Properties Alt+Enter XMI	Print	Ctrl+P	
Import Export SDE-EC Import SDE-EC Export Properties Alt+Enter MXMI	🕽 Print SDE-EC Diagrams		
SDE-EC Import       Import         SDE-EC Export       Import         Properties       Alt+Enter	Switch Workspace		-
SDE-EC Import       Import         SDE-EC Export       Import model         Properties       Alt+Enter	🔄 Import		-
SDE-EC Export     Rose Project       Properties     Alt+Enter	👍 Export		
Properties Alt+Enter	SDE-EC Import	► E	🛐 UML Model
	SDE-EC Export	•	🂐 Rose Project
SDE-EC Project Properties 😽 🙀	Properties	Alt+Enter	🏘 XMI
	😑 SDE-EC Project Properties		🙀 XML 🧏

Figure 7.36 - Import XMI

2. **Import XMI** dialog box is displayed. Specify the import file's path by typing in the text box or select ... and click **OK** to confirm.

🖨 Import XMI	×
Import	
Please specify the path of the file to import.	
File path : C:\projects\xmi\project_modified.xmi	•
OK Cancel H	Help

Figure 7.37 - Specify import file's path

# **Exporting and Importing EMF-based UML2**

### **Exporting to UML2**

EMF stands for Eclipse Modeling Framework. In SDE for Eclipse, we can support importing and exporting Eclipse XMI Standard. You can directly import and export the exported file to Eclipse UML2. To export EMF-based UML2:

1. Select File > SDE-EC Export > XMI... in main menu. Export XMI dialog box is displayed.

Close	Ctrl+F4 Ctrl+Shift+F4	Diagram1 🗙 🖹 Create
J Save	Ctrl+S	
Save As		
a Save All	Ctrl+Shift+S	
Save SDE-EC Project		
Revert		
Move		
Rename	F2	
Refresh	F5	
Convert Line Delimiters To	•	
Print	Ctrl+P	
🕽 Print SDE-EC Diagrams		
Switch Workspace		
Import		
🗄 Export		
SDE-EC Import	)	•
SDE-EC Export	)	🍯 😥 UML Model
Properties	Alt+Enter	🔊 хмі
SDE-EC Project Properties		24 XML K

Figure 7.38 - Export EMF-based UML2

2. Check the **Export for UML2** check box. You can see the extension of export file path is *.xmi.uml*. Then specify the file path and click OK to confirm.

Export XA	и	×
Export		
Please spec	fy the path of the file to expor	t.
File path : C:\te	st\eclipse 3.2 uml2\workspace\	Project\project.xmi.uml 🛛 🖌 🔜
XMI Version		
🚫 XMI 1.0	🚫 XMI 1.2	⊙ XMI 2.1
		Export for UML2
		OK Cancel Help

Figure 7.39 - Check Export for UML2 and specify file path

### Importing to Eclipse UML2 Model

You can modify the exported file using Eclipse UML2. To import the file:

1. Copy the exported XMI file to the eclipse project's directory or directly export the file there in the previous steps.

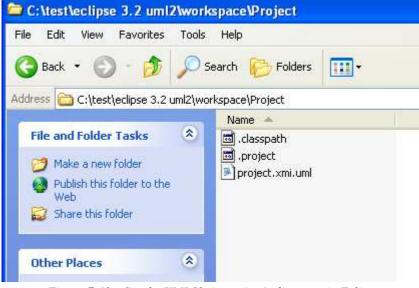


Figure 7.40 - Get the XMI file in project's directory in Eclipse

2. Select **File** > **Refresh** in main menu of Eclipse.

🖨 Jav	/a -	Eclipse	SDK		
File E	dit	Source	Refactor	Navigate	Sear
New Alt+Shift+N			•		
Op	en Fil	e			
Clo	se			Ctrl+W	
Clo	se Al			Ctrl+Shift+V	/
R Sav	/e			Ctrl+S	
📓 Sav	/e As				
ि Sav	/e All			Ctrl+Shift+S	
Rev	vert				
Mor	ve				
	name			F2	
	resh			F5	
Cor	nvert	Line Del	imiters To		
👜 Prin	nt			Ctrl+P	
Swi	itch V	Vorkspac	:e		
迠 Imp	oort				
🛃 Exp	oort				
Pro	perti	es		Alt+Enter	
Exi	t				

Figure 7.41 - Refresh eclipse

3. The Package Explorer is refreshed and the XMI file is imported.

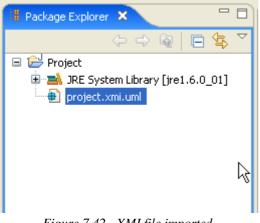


Figure 7.42 - XMI file imported

### Modifying UML2 XMI

After exporting, you may edit the XMI file in Eclipse. Here, changing the name of a class is used as an example. 1. Expand the project tree and select the class which you want to change it's name.

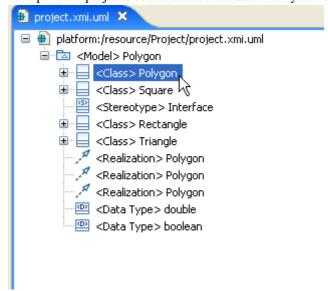


Figure 7.43 - Select the class to modify

2. Select Show Properties View in the popup menu.

🔁 project.xmi.uml 🗙 🔪	
project.xmi.um x          platform:/resource/Proje         Addels         Polygon         Class         Polygon         Class         Polygon         Class         Polygon         Polygon	New Child New Sibling
	v

Figure 7.44 - Select Show Properties View

3. Select the property you want to edit. Here, select Name and click on the Value column.

Problems Javadoc Declaration 💷 Properties 🗙	
Property	Value
Classifier Behavior	
Client Dependency	
Is Abstract	🙀 false
Is Active	🙀 false
Is Leaf	🏎 false 🔔
Name	Polygon
Owned Port	

Figure 7.46 - Select the property to edit

4. Change the Name and save the project.

Problems Javadoc Declaration 💷 Properties 🗙	
Property	Value
Classifier Behavior	
Client Dependency	
Is Abstract	🖳 false
Is Active	🖳 false
Is Leaf	🖳 🔤 🛄
Name	Ľ≣Shape∫
Owned Port	

Figure 7.45 - Change the property

### **Importing UML2 XMI**

After modifying in Eclipse UML2, you can import back the file to update your project. The process of importing is the same as importing XMI file.

To import XMI:

. Select File > SDE-EC Import > XI Close	MI in the main menu. ⊂trl+F4	
Close All	Ctrl+Shift+F4	gram1 🗙 🖹
Save	Ctrl+S	
Save As		
🗟 Save All	Ctrl+Shift+S	
🔲 Save SDE-EC Project		
Revert		
Move		
Rename	F2	
Refresh	F5	
Convert Line Delimiters To	+	
🖻 Print	Ctrl+P	
🚔 Print SDE-EC Diagrams		
Switch Workspace		
🔁 Import		
🛃 Export		
SDE-EC Import	N ( 🖓	UML Model
SDE-EC Export		Rose Project
Properties	Alt+Enter	ХМІ
📰 SDE-EC Project Properties	×	XML K

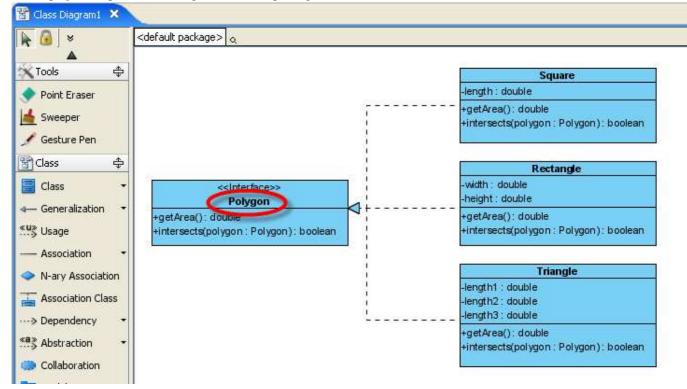
Figure 7.46 - Import XMI

2. Import XMI dialog box is displayed. Specify the import file's path by typing in the text box or select ... and click OK to confirm.

🖨 Import XMI
Import
Please specify the path of the file to import.
File path : C:\test\eclipse 3.2 uml2\workspace\Project\project.xmi.uml
OK Cancel Help

Figure 7.47 - Specify import file's path

#### 3. The project is updated. The diagram before importing.



#### Figure 7.48 - The diagram before importing

The diagram after importing. The name of class Polygon has been changed into Shape.

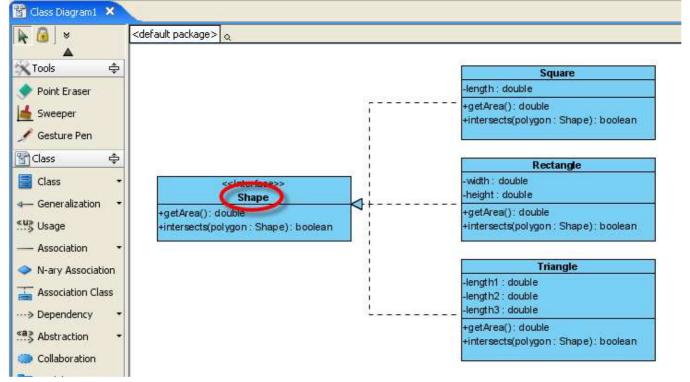


Figure 7.49 - The diagram after importing

## **Importing Rational Rose Project File**



Rational Rose® is one of the most widely used UML CASE tool in 90's.

SDE for Eclipse supports the importing of Rational Rose file. As a result, you can import your Rational Rose project into SDE for Eclipse and retain all the information in the project, including color and position.

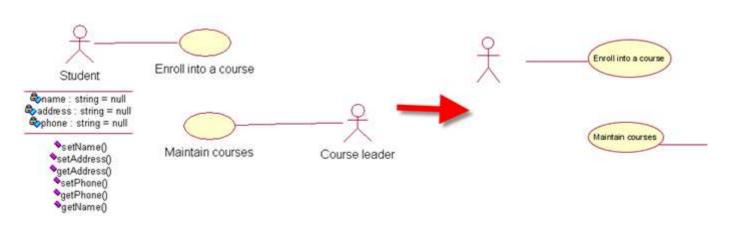


Figure 7.50 - Import from Rational Rose®

#### To import a Rose project into SDE for Eclipse:

1. Select **File** > **SDE-EC Import** > **Rose Project...** from main menu. This displays the **Import Rose Option** dialog box.

🔛 Save	Ctrl+S	>
🗟 Save As		
🕅 Save All	Ctrl+Shift+S	
🔟 Save SDE-EC Project		
Revert		
Move		2
Rename	F2	
Refresh	F5	-
Convert Line Delimiters To		•
🖹 Print	Ctrl+P	-
🚔 Print SDE-EC Diagrams		
Switch Workspace		
🔁 Import		•
🛃 Export		-
SDE-EC Import		🕨 🌀 UML Model
SDE-EC Export		🎽 🍣 Rose Project 📐
Properties	Alt+Enter	🙀 хмі 🗟
🛜 SDE-EC Project Properties		🙀 XML

Figure 7.51 - Import a Rose Project

2. Type in the path of Rational Rose file in the File path. You may also select ... to select the file.

🖨 Import Rose C	Pption 🔀
Import Please specify th	e path of the file to import.
File path:	C:\projects\SchoolForRose.mdl 🛛 🔽 🔽 🛄
Import mode:	Model and diagram
	OK Cancel Help

Figure 7.52 - Specify the file path

3. Select the mode of importing from the drop down menu of **Import mode**. You can choose to import **Model only** or both **Model and diagram**. Then, click **OK** to start importing the MDL file.

🖨 Import Rose	Option 🔀
Import Please specify t	he path of the file to import.
File path:	C:\projects\SchoolForRose.mdl
Import mode:	Model and diagram
	Model only Model and diagram
	OK Cancel Help

Figure 7.53 - Select the import mode

4. The progress dialog box appears. You can check the check box **Close Dialog when finished progress** to close the dialog box when finished importing. You can select * button to open the message pane.

🖨 Import from Rose	
Waiting	
100%	
100 %	
Close Dialog when finished progress	
	Close

Figure 7.54 - Progress dialog box

5. The message pane shows the messages to indicate the progress of the importing process. When the process has finished click on the **Close** button in the progress dialog box to close.

🖨 Import from Rose	
Waiting	
100%	
Close Dialog when finished progress	
	Close
Message	
Finish processing the mdl file	

Figure 7.55 - Message pane opened

6. The models/diagrams are imported. Expand the project tree from **Diagram Navigator** and choose to browse for a diagram. You can Double-click on a diagram in the project tree to open the imported diagrams.

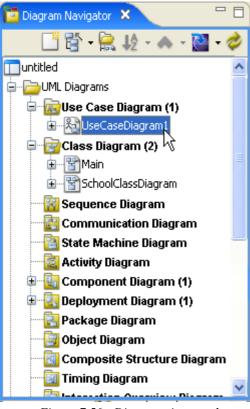


Figure 7.56 - Diagrams imported

If you have selected **Model only** in the **Import Mode** in step 3, only models are imported. You can see the imported models in the **Model** pane.

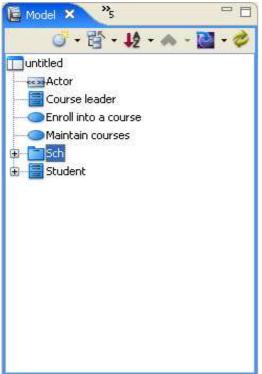


Figure 7.57 - Models Imported

## **ERwin Modeler Project File Importer**

### Importing an ERwin Data Modeler Project

To import an ERwin Project into SDE for Eclipse:

1. Design and save the model in ERwin Data Modeler as a XML file.

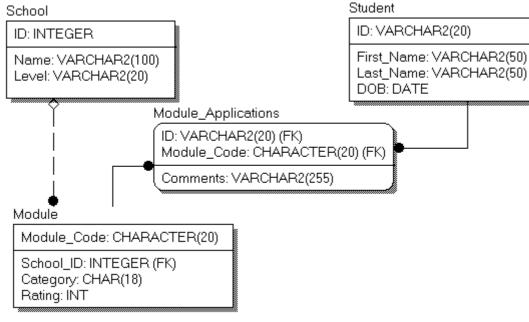


Figure 7.58 - Modeling in ERwin



## 2. Launch SDE for Eclipse. Select **File > SDE-EC Import > ERwin Project (XML)...** from main menu. This display the **AllFusion ERwin Data Modeler Project Importer** dialog box.

Revert			
Move		\$	
Rename	F2	-	
Refresh	F5	ition 👻	
Convert Line Delimiters To	•		
📤 Print	Ctrl+P	n -	
🚔 Print SDE-EC Diagrams		ociation	
Switch Workspace		n Class	
🔁 Import		cy 🔹	
🛃 Export		n •	
SDE-EC Import	•	🔄 UML M	odel
SDE-EC Export	•	🂐 Rose F	Project
Properties	Alt+Enter	🙀 хмі	
🔁 SDE-EC Project Properties		🙀 XML	
Exit		🖹 ERwin	Project (XML)
	🛛 🕀 — Containn	🐴 MS Wa	ord to Use Case Model
	Common	\$	
	Package	-	
Froperty 🛛 💦		M	
Class Diagram 1 - Class Diagram	🔚 🦳 Message	20	

Figure 7.59 - Menu for Import ERwin Project

3. In the dialog, locate the ERwin Project file and click **OK** to start import. You can enter the path directly on the text field or click ... to locate the file from file chooser.

🖨 AllFusion ERwin Data Modeler Project Import	er 🔀
Import Please specify the path of the file to import.	
Eile:	<b>~</b>
	OK <u>C</u> ancel

Figure 7.60 - Import ERwin Project dialog box

4. Then, the **Open Imported Entity Relationship Diagram(s)** dialog box is displayed if there are any entity relationship diagram. You can check the **Selected** column to select the diagram(s) you want to open.

🖨 Open Imported Entity Relationship Diagram(s)	
Select ERD(s) to open: Entity Relationship Diagram <main area="" subject=""></main>	Selected
Select All Open	Cancel

Figure 7.61 - Open Imported Entity Relationship Diagrams dialog box

5. Diagrams and Models were imported to the current project.

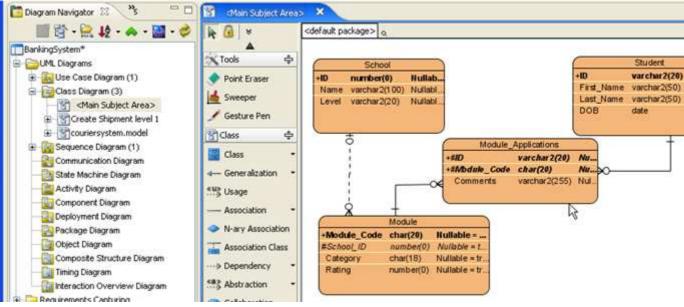


Figure 7.62 - The imported ERwin project

### **Oracle workflow engine BPEL generator**

Be De Be Be Pe 🚱

#### Generating BPEL for Oracle workflow engine

To generate BPEL for Oracle workflow engine: 1. Design a Business Process Diagram in SDE for Eclipse.

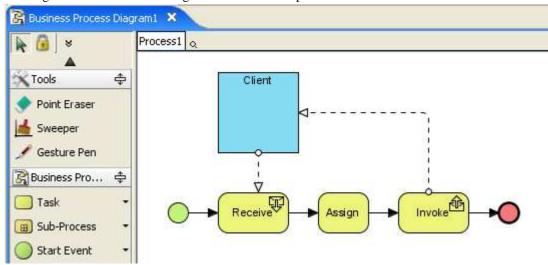


Figure 7.63 - Business Process Diagram

2. Right click on diagram. Select Generate > BPEL.... This display the Export BPEL dialog box.

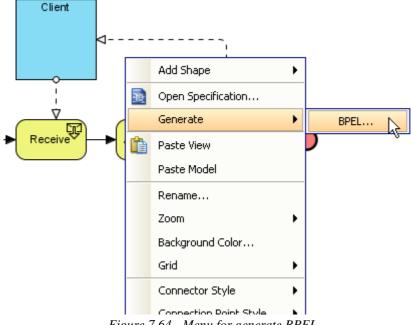


Figure 7.64 - Menu for generate BPEL

3. In the dialog, specify the path of the output BPEL files in **Output directory**. Select **Oracle BPEL Process Manager** (10.1.2) in **Target server**. You can **Auto overwrite existing files** by checking the check box. Click **OK** to start export.

🖨 Export BPEL	
Export configuration	]
An output directory is used to store the exported B A target server is the preferred workflow engine fo	
Output directory: C:\BPEL	<b>~</b>
Target server: Oracle BPEL Process Manager (10.1	2) 🗸 🔽
Auto overwrite existing files	<u>OK</u> <u>C</u> ancel

Figure 7.65 - Export BPEL Dialog box

4.List of exported files will be shown.

🖨 Ехр	ort Result	X
$(\mathbf{i})$	Exported files are listed below. Files generated by external tools may not included. The list may be emptied by turning off auto overwrite.	
	C:\BPEL\Process1.bpel C:\BPEL\Process1_Participant.wsdl C:\BPEL\bpel.xml	Irace
	⊆lose	

Figure 7.66 - Exported files

### **JBoss Workflow Engine BPEL Generator**



### Generating BPEL for JBoss workflow engine

To generate BPEL for JBoss workflow engine: 1. Design a Business Process Diagram in SDE for Eclipse.

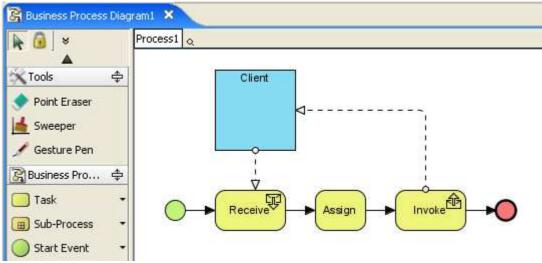


Figure 7.67 - Business Process Diagram

2. Right click on diagram. Select Generate > BPEL.... This displays the Export BPEL dialog box.

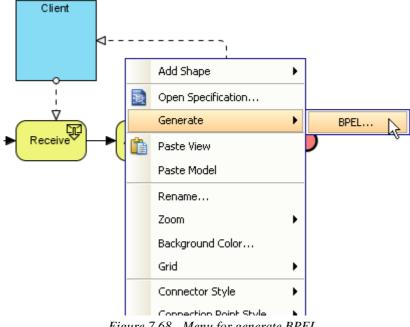


Figure 7.68 - Menu for generate BPEL

3. In the dialog, specify the path of the output BPEL files in **Output directory**. Select **JBoss jBPM BPEL (1.1 beta1)** in **Target server**. Click **OK** to start export.

🖨 Export BPEL	. 🛛 🔀
Export configura	ation
	ctory is used to store the exported BPEL files. r is the preferred workflow engine for executing the exported BPEL.
Output <u>d</u> irectory:	C:\BPEL 💙 🛄
<u>T</u> arget server:	JBoss jBPM BPEL (1.1 beta1)
🗌 Auto overwrite	e existing files

Figure 7.69 - Export BPEL dialog box

4.List of exported files will be shown.

🖨 Expo	ort Result		
(1) F	xported files are listed below. iles generated by external tools may not included. he list may be emptied by turning off auto overwrite.		
C	:\BPEL\Process1.bpel	^	<u>T</u> race
C	:\BPEL\Process1_Participant.wsdl		
	:\BPEL\bpel-definition.xml		
	:\BPEL\build\definition.par		
C	:\BPEL\deployTool.html		
C	:\BPEL\build\bpel-application.xml		
C	I:\BPEL\build\jboss-web.xml		
C	:\BPEL\build\application.xml	~	

Figure 7.70 - Exported files



# **User Interface Designer**

# **Chapter 8 - User Interface Designer**

Apart from facilitating visual modeling, SDE for Eclipse also facilitate screen mock up in early requirement capturing stage. With SDE for Eclipse cutting edge visual modeling technology, you can save a lot of time from writing tedious code to make a user interface for confirming requirements. In this chapter, you will learn:

• Creating User Interface Diagram

- Change Component Properties
- Annotating Component
- Linking Components
- Switching Orientation by Resource-centric Interface
- Auto Detect Orientation

### **Creating User Interface Diagram**

Similar to other diagrams, user interface diagram can be created using different ways:

- Using toolbar
- Using New Diagram dialog box
- Using popup menu of Diagram Navigator

Here, creation of it using toolbar is used as an example. To create a new user interface diagram, select **New SDE-EC Diagram** from toolbar. And select User Interface from the dialog box

: 📆 🎑	i 🖨 🚾	<b>A</b>		Modeling
		New SD	E-EC Diagram	
	9		🗄 Outline 🔀	

Figure 8.1 - Select New SDE-EC Diagram

E New SDE EE-EC Diagram	
Please select a type of SDE EE-EC diagram	-
Object Diagram         Textual Analysis         Business Workflow Diagram         CRC Card Diagram         Composite Structure Diagram         Timing Diagram         Interaction Overview Diagram         Overview Diagram         Overview Diagram         Overview Diagram         Overview Diagram         ORM Diagram         Business Process Diagram         Business Process Diagram         Requirement Diagram         Data Flow Diagram         User Interface	
Diagram Name : User Interface1	
⑦ Einish Can	cel

Figure 8.2 - Select User Interface

#### The diagram is created.

🔤 User Interface1 🗙	- E
🙀 🙆 ] 👻	
Tools 💠	
Point Eraser	
Sweeper	
Gesture Pen	
User Interface 💠	
Frame	
Panel	
Label	
Button	
≝= Checkbox	
Radio Button	
Toggle Button	
Text Field	
Text Area	
Combo Box	
List	
🔁 Table	
Tree Tree	
Come Horizontal Scrollbar 👻	
Slider	
E Spinner	
Progress Bar	
Password Field	
Tabbed Header	
H Separator	
Figure 8.2 - New User Interface Diagram	

Figure 8.2 - New User Interface Diagram

### **Creating Component**

You can create component by drag and drop, select and click and with size. To create by drag and drop:

1. Drag the component you want to add from the toolbar.

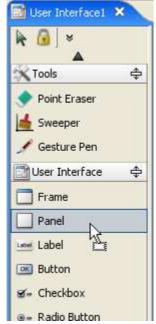


Figure 8.3 - Drag the component

2. Then drop the component on the diagram pane.

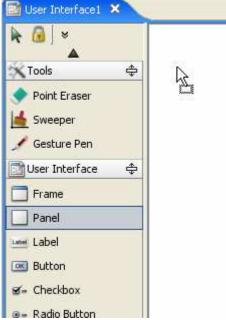


Figure 8.4 - Drop on diagram pane

To create by select and click:

1. Select the component you want to add in the toolbar.

🔄 User Interface1	×
k @] ≈ ▲	
Tools	\$
<ul> <li>Point Eraser</li> <li>Sweeper</li> <li>Gesture Pen</li> </ul>	
🔄 User Interface	\$
🗖 Frame	
Panel	
Label 😽	
🞯 Button	
🖅= Checkbox	
Radio Button	

Figure 8.5 - Select component

2. Click on the diagram pane. The component is created.

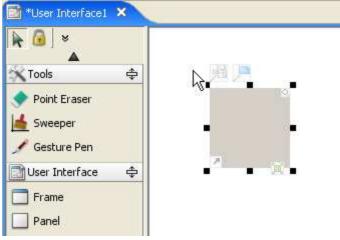


Figure 8.6 - Component created

To create by defining an initial size:

1. Select the component you want to add in the toolbar.

🔄 User Interface1	×
🖌 🙆 🛛 👻	
	\$
🔷 Point Eraser	
📥 Sweeper	
🖋 Gesture Pen	
User Interface	\$
Frame	
Panel	
Label 😽	
國 Button	
🖅 - Checkbox	
Radio Button	

Figure 8.7 - Select component

2. Drag a specific boundary before releasing the mouse to define the component's initial size.

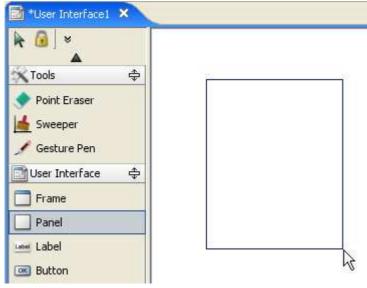


Figure 8.8 - Define an initial size

#### 3. The component with specific size is created

🔄 *User Interface1 🗙	1			
▶ @ × ▲				
🗙 Tools 👘	\$	- <b>-</b>	- <b>.</b>	- <b>1</b>
<ul> <li>Point Eraser</li> <li>Sweeper</li> <li>Gesture Pen</li> </ul>				
User Interface	<b>\$</b>	•		
Frame				
🔤 Label		•	4 <b>.</b>	• 🗟

Figure 8.9 - Component created

### **Change Component Properties**

You can set the properties of user interface by opening the specification of the component. Then, you can go into the **UI** tab to update all user interface properties.

Here, the configuration of the user interface properties of list and label are used as examples.

To set the properties of a label:

1. Right click on the label and select **Open Specification...** from the popup menu.

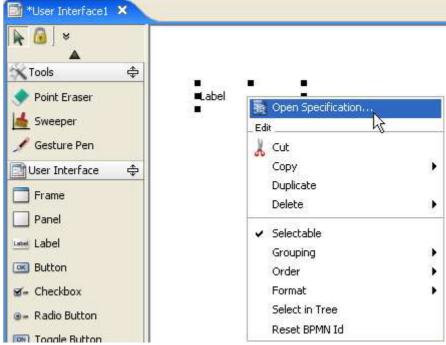


Figure 8.10 - Select Open Specification

#### 2. Then, select **UI** tab.

€	UlLabel Specification	×		
	General UI Relations References Comments			
	Documentation:			
	🗹 HTML B I 山 三 三 三 洼 듣   F Fr 🛷 🕈 📑 🐙 🚣 🍛 »			
	<u>R</u> eset <u>QK</u> <u>Cancel</u> Appl <u>y</u> <u>H</u> elp			

Figure 8.11 - Select UI tab

3. User interface properties can be configured.

🖶 UILabel Specification	×
General UI Relations References Comments	
Caption: Label	
Mnemonic:	
	_
Reset OK Cancel Apply Help	

Figure 8.12 - UI properties of label

#### 4. You can edit the Caption and Mnemonic.

🖨 UILabel Specification	×
General UI Relations References Comments	_
Caption: Please pick a fruit.	-
Mnemonic: P	
Reset OK Cancel Apply Help	

Figure 8.13 - Edit user interface properties

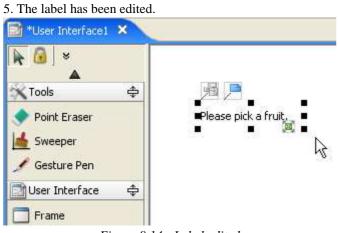


Figure 8.14 - Label edited

#### To set the user interface of a list:

1. Right click on a list and select **Open Specification...** from the popup menu.

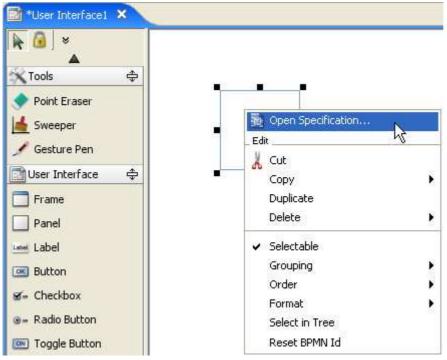


Figure 8.15 - Open Specification

#### 2. Select UI tab.

🖶 UIList Specification	×
General UI Relations References Comments	
Documentation:	
🗹 HTML B I 山 三 三 三 洼 汪   F Fr 🛹 🕈 誧 🐙 🚣 🐣 »	
Reset OK Cancel Apply Help	

Figure 8.16 - Select UI tab

#### 3. The UI properties you can edit is shown.

🖨 UIList Specifica	tion	
General UI Relation	ns References Comments	
Values:		Add
		Edit
		Down
Selected value:	null	×
Horizontal Scroll Bar:	As needed	~
Vertical Scroll Bar:	As needed	~
Reset	OK Cancel Apply	Help

Figure 8.17 - UI properties of List

4. You can edit the Values and Selected value of the user interface. You can also decide the properties of Horizontal Scroll Bar and Vertical Scroll Bar.

🖨 UIList Specifica	ation 🛛 🔀
General UI Relation	ons References Comments
Values:	Apple Add Orange Remove Edit Up Down
Selected value:	Apple 👻
Horizontal Scroll Bar	Never 💙
Vertical Scroll Bar:	As needed 🛛 👻
Reset	OK Cancel Apply Help

Figure 8.18 - Edit UI properties

#### 5. List has been edited.

Viser Interface1 ×	
Tools  Point Eraser Sweeper ✓ Gesture Pen	Apple Orange Pineapple
User Interface 💠	

Figure 8.19 - List edited

### **Annotating Component**

You may want to add annotation to specific UI Component as instruction. In SDE for Eclipse, you can use the Note resource to achieve it.

Here, adding annotation to a button is used as an example. When your mouse moves pass a button, you can see the Note resource.

🖻 *User Interface1 🗙			
Point Eraser	• ID:	TextField	2
Gesture Pen User Interface Frame Panel Label	Password:	TextField2	

Figure 8.20 - Note resource

Drag the Note resource to a place on diagram pane where you want the note to be created on.

📷 *User Interface1 🗙				
<ul> <li>▶</li> <li>Point Eraser</li> <li>▲</li> <li>Sweeper</li> <li>✓ Gesture Pen</li> <li>✓ User Interface</li> </ul>	ID: TextField Password: TextField2			
Frame Panel	OK Reset			
Label	$\mathbf{X}$			
🞯 Button				
≝= Checkbox				
🐲 Radio Button				
		- 11		

Figure 8.21 - Drag the Note resource

When you release the mouse, you can type in annotation in the note.

🖻 *User Interface1 🗙	
🖹 🙆 🛛 👻	
Point Eraser	
📥 Sweeper	ID: TextField
🖋 Gesture Pen	Password: TextField2
🔄 User Interface 🛛 🜩	
Trame	OK Reset
Panel	
Label	
💽 Button	ען בי בי בן אָב א די די אין איי איי איי איי איי איי איי איי אי
🖅 = Checkbox	
a Radio Button	

Figure 8.22 - Type in annotation

#### Annotation has been added

innotation has been added.		
🖻 *User Interface1 🗙 🔪		
<ul> <li>▶ ⓐ Sweeper</li> <li>✓ Gesture Pen</li> <li>◯ User Interface </li> </ul>	ID: [ Password: [	TextField TextField2
Frame Panel Label Button GetCheckbox		OK Reset
⊛= Radio Button		to 'Confirm'

Figure 8.23 - Annotation added

### **Linking Components**

Similar to other diagrams, user interface diagram allows you to create connector to connect two components. This can be achieved by using Resource Centric.

Here, connecting a button and a panel is used as an example.

1. Mouse over a button, you will see the Centric Resource for Generic Connector.

🖭 *User Interface1 🗙 🔨	
🔒 🛛 👻	
<b>A</b>	
🔷 Point Eraser	
📥 Sweeper	ID: TextField Login Help
🖋 Gesture Pen	Password: TextField2 To login,
📑 User Interface 🛛 🖨	泉戸
🔲 Frame	OK Reset Connector -> UI Component OK
Panel	

Figure 8.24 - Select Centric Resource for Generic Connector

#### 2. Drag the resource to the component you want to connect to.

🗈 *User Interface1 🗙					
📐 🙆 🛛 🗧					
🔷 Point Eraser					
📥 Sweeper	ID:	TextField		Login Help	
🖋 Gesture Pen	Password:	TextField2		To login,	
📄 User Interface 🛛 🜩					
🔲 Frame	ОК	Reset	Help	N	ок
Panel				6	

Figure 8.25 - Drag the resource

3. Release the mouse and connector is created. You may also edit the name of connector.

🔝 *User Interface1 🗙	
📐 🖉	
<b>A</b>	
🔷 Point Eraser	
📥 Sweeper	ID: TextField Login Help
🖋 Gesture Pen	Password: TextField2 To login,
📄 User Interface 🛛 🖨	
Frame	OK Reset Help OK OK

Figure 8.26 - Edit the name of connector

### **Switching Orientation by Resource-centric Interface**

Sometimes, you may want to switch the orientation of certain component. In SDE for Eclipse, you can use the Switch Orientation Resource to do so.

When your mouse move over some components like scollbar, you can see the Switch Orientation Resource.

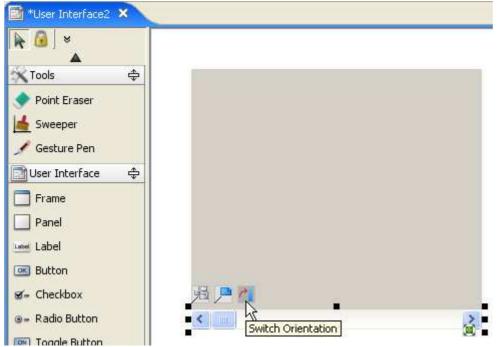


Figure 8.27 - Switch Orientation Resource

By selecting the resource, the orientation of component has been switched.

🛃 *User Interface2 🗙			
▶ 🙆 S			
🗙 Tools 🛛	\$		
<ul> <li>Point Eraser</li> <li>Sweeper</li> <li>Gesture Pen</li> </ul>			
User Interface	\$		
Frame			
Panel			
Label			
Button			
≝= Checkbox			
Badio Button			

Figure 8.28 - Orientation switched

### **Auto Detect Orientation**

SDE for Eclipse can detect the orientation of a component when you create it with specific size. For example, you may drag vertically to create a slider

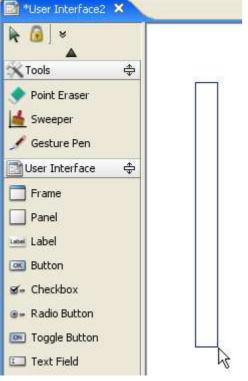


Figure 8.29 - Drag vertically

#### The slider created is in vertical orientation.

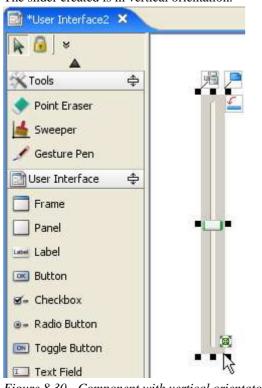


Figure 8.30 - Component with vertical orientaton



# **Instant Reverse**

# **Chapter 9 - Instant Reverse**

SDE for Eclipse provides a handy way to reverse engineer various sources (including binary files) into UML class models. This feature is called Instant Reverse. The use of Instant Reverse is discussed in this chapter. In this chapter:

- What is Instant Reverse?
- Supported Sources
- Using Instant Reverse
- Java Instant Reverse

### What is Instant Reverse?



The Instant Reverse facility of SDE for Eclipse allows you to reversely engineer different types of source or binary files into UML class models, such as java source, java classes, C++ Source, JDBC, .NET binaries, etc...(More types will be supported soon). This chapter provides a brief description on the supported formats and the steps required to reverse engineer source codes into UML class models in SDE for Eclipse.

### **Supported Sources**

Supported Instant Type	Extension	Remarks
Java Source	Dir/.java	
Java Class	Dir/.class/.jar/.zip	
Dynamic Link Library	.dll	Must be created by Microsoft® Visual Studio .NET Only one .dll file needs to be supplied. All other required .dll files will be looked up automatically.
Windows Executable	.exe	Must be created by Microsoft® Visual Studio .NET
XML	.xml	
XML Schema	.xsd	
C++ Source	.h/.cpp	
CORBA IDL Source	.idl	
PHP 5.0 Source	Dir/.php/.inc	
Hibernate	.hbm.xml	
JDBC		Reverse the database schema of the specific database according to the given JDBC Connection URL.
Ada 9x Source	.ada/.adb/.ads	

Table 9.1

# **Java Instant Reverse**

Instant Reverse supports the reverse engineering of Java up to version 1.5. Besides this, there are more advanced options for Java Instant Reverse compared to other languages.

Select menu **Modeling > Instant Reverse...** . The Instant Reverse dialog box will appear; select 'Java' from the language combo box.

🖨 Instant Reverse	×			
Language : Java Java Resources JARs, source and class folders on the instant reverse path: 	Add JARs Add Class Folder			
	Add Source Folder Remove Up Vp Down			
Reverse source on demand				
ОК	Cancel Help			

Figure 9.1 - Java Instant Reverse Dialog

The buttons on the right are used for adding, removing and reordering of Java source/class paths.

Button	Description	
Add JARs	Select JAR files to add to the instant reverse paths.	
Add Class Folder	Select class folders to add to the instant reverse paths.	
Add ZIPs	Select ZIP files to add to the instant reverse paths.	
Add Source Folder	Select source folders to add to the instant reverse paths.	
Remove	Remove selected instant reverse paths.	
Up	Move selected instant reverse paths upwards.	
Down	Move selected instant reverse paths downwards.	

Table 9.2

Select the **Reverse source on demand** option if you want the paths to be reversed to UML models only when you request it (see the **On-Demand Java Instant Reverse** section later in this chapter for details). If this option is not selected, the instant reverse paths will be reversed to UML models once you click OK.

### **On-Demand Java Instant Reverse**

After performed instant reverse of Java with the **Reverse source on demand** option selected, the **Class Repository** will have the reversed paths added under the **Java Resources** node.

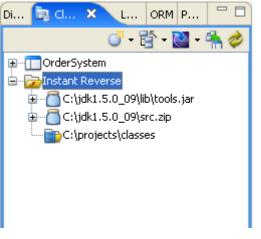


Figure 9.2 - Class Repository

There are three kinds of on-demand Java instant reverse you can use, they are 'reverse to Class Repository', 'reverse to diagram' and 'reverse by drag-and-drop'.

#### **Reverse to Class Repository**

In the Class Repository's Java Resources node, select the desired resources to be reversed, right-click on the selection and select **Reverse** ''**RESOURCE_NAME>**'' to **> Class Repository** from the popup menu.

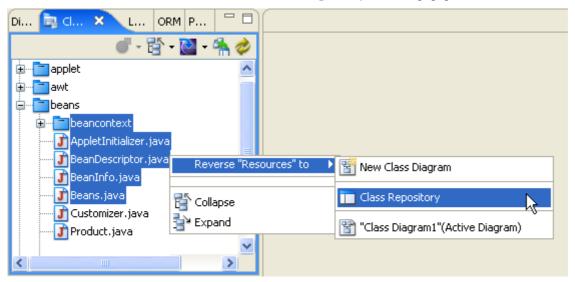


Figure 9.3 - Revert resources to Class Repository

The resources will be reversed to UML models and added to the project, but no diagrams or shapes will be generated.

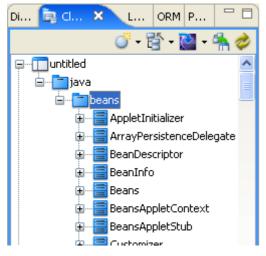


Figure 9.4 - Resource reversed in Class Repository

### **Reverse to Diagram**

In the Class Repository's Java Resources node, select the desired resources to reverse, right-click on the selection and select **Reverse** "**<RESOURCE_NAME>**" to from the popup menu to expand it.

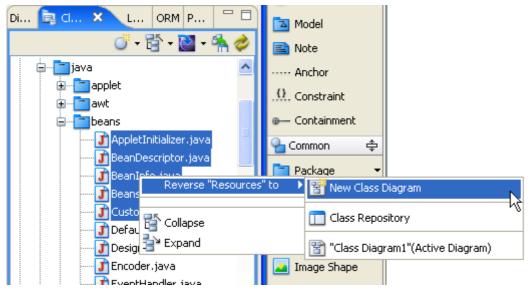


Figure 9.5 - Revert resources to form a new diagram

If you select the New Class Diagram menu, a new class diagram will be generated from the reversed UML models.

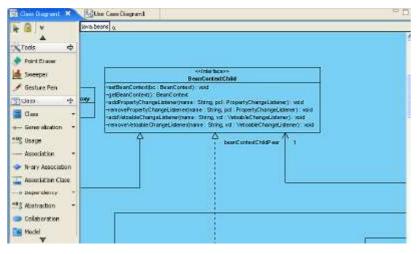


Figure 9.6 - The reversed Class Diagram

If there is an active class diagram and you selected the "**<DIAGRAM_NAME>**" (Active Diagram) menu, the shapes of the reversed UML models will be generated and appended to the empty space of this diagram.

### **Reverse by Drag-and-Drop**

In the Class Repository's Java Resources node, select the desired resources to be reversed, drag the selection over the target class diagram and then release the mouse button to drop it.

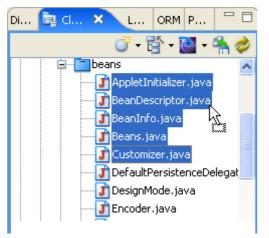


Figure 9.7 - Reverse by Drag and Drop

The shapes of the reversed UML models will be generated and placed to the location of this diagram where you dropped the resources.

# **Dynamic Link Library Instant Reverse**

Instant Reverse supports the reverse engineering of dynamic link library into UML class model.



Figure 9.8 - Dynamic Link Library file

To perform instant reverse of dll:

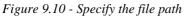
1. Select menu **Modeling** > **Instant Reverse** ... the **Instant Reverse** dialog box appears with Instant Reverse options for configuration. Select the language '.NET dll or exe files' from the combo box.

э	Modeling Run Window SVN Help	🖨 🖨 Instant Reverse
	🛞 Start SDE-EC	- matum reverse
	Application Options	Language : Java Java Reso
)	Auto Synchronization	C++ Source
Ĺ	Report	JARs, sou .NET dll or exe files CORBA IDL Source
	Project Publisher	Ada 9x Source XML XML Schema
	Edit Stereotypes	JDBC
	Configure Requirement Enumerations	Add ZIF
	📇 Use Case Scheduling	Add Source I
	ORM EJB	Remo
	Instant Reverse	
	State Machine Code	Do Do
	Teamwork	Reverse source on demand
	🐼 Shape Editor	
	🚳 DB-VA SQL	OK Cancel
	Key Manager	

Figure 9.9 - Open Instant Reverse dialog box and select language

2. Type in the path of the Dynamic Link Library file. You may also select ... to select the file path. Then select OK to start.

🖨 Instant Reverse 🛛 🔀
Language : .NET dll or exe files
Update Type
<ul> <li>Update duplicate class(es)</li> </ul>
Replace duplicate class(es)
Path : C:\projects\dll\PhoneBook.dll
OK Cancel Help



3. A Message dialog box will appear telling you the reversal is successful.

Message	ê	
į)	Instant Reverse successful!	
	OK	

Figure 9.11 - Message dialog box

4. An **Instant Reverse form Diagram** dialog box then appears. You can check the reversed classes and packages to form a new diagram. If you check the check box **<default package>**, you can form a diagram using the default package. You may also change the form diagram and presentation options. After selections have been made, click **OK**.

🖨 Instant Re	verse form Diagram			×
Diagram Name :	Class Diagram1			
Select Class	Form Diagram Options	Presentation O	ptions	
Reversed Class	es and Packages :		Selected Info	
	ault package> ohonebook		No. Selected Class : No. Selected Package :	
🔽 Show this di	alog after instant reverse			
			OK 💦 Cancel	

Figure 9.12 - Instant Reverse form Diagram dialog box

5. You can see the result of reversal in the Model pane.

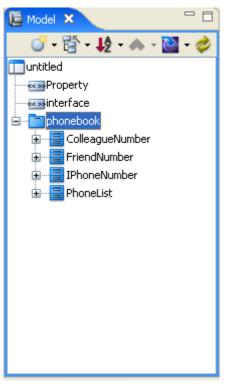


Figure 9.13 - Model pane

6. You may also select one or more models and select **Form Diagram** > **Customize.../Hierarchical/Navigation** to form a new diagram.

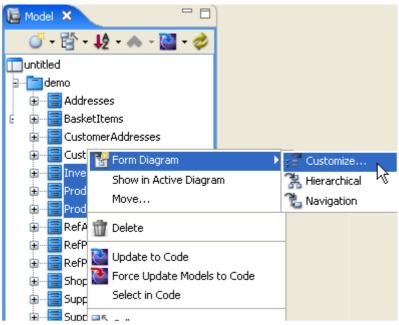


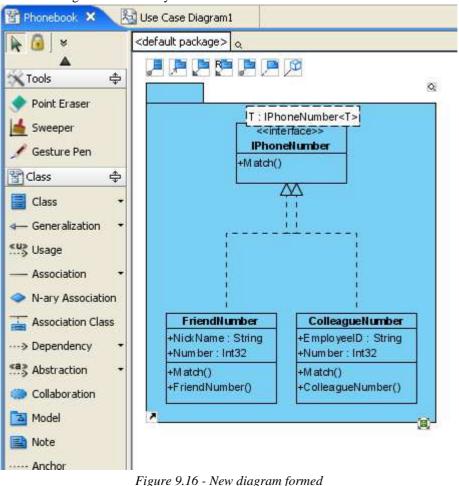
Figure 9.14 - Select model to form diagram

#### 7. The Form Diagram dialog box is shown. You can edit the details of the new diagram there.

🖨 Form Diagram	
Form Diagram Presentation Options	
Diagram Name: phonebook Generalization Superclasses Subclasses	]
Association Navigable classes Non-Navigable classes Realization	Please move the mouse pointer over the
B Suppliers B Clients Dependency J Suppliers	items on the left to load preview.
Containment	
Containers      Residents      Show single level only      Show all levels in single diagram      Show all levels in subdiagrams	
📓 🔲 Show as containment relationships	
Reset	OK Cancel Help

Figure 9.15 - Form Diagram dialog box

8.A new diagram is formed by the selected models.



### **XML Instant Reverse**

Instant Reverse supports the reverse engineering of XML into UML class model. Every XML Node in the XML will be reversed as a class model. The attributes in node will be reversed as Class' attributes and all Class models will be reversed into a root package.

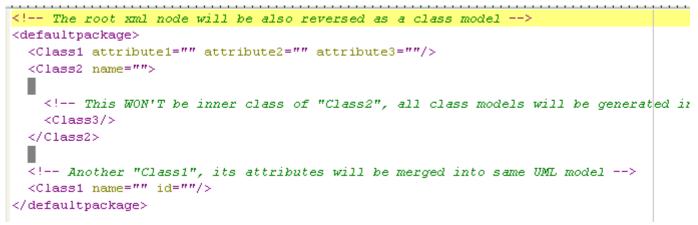


Figure 9.17 - XML file

To perform instant reverse of XML:

1. Select menu **Modeling > Instant Reverse...**, the **Instant Reverse** dialog box appears with the Instant Reverse options for configuration.

•	Modeling		Window	SVN	Help			
	Sta 🖉	irt SDE-	-EC				-1	
	App	olicatio	n Options.				þ	
)	Aut	to Sync	hronizatio:	n				
	Rep	oort					F	
	Pro	ject Pu	ıblisher					
	Edit Stereotypes							
	Cor	nfigure	Requirem	ent En	umeratio	ns		
	📇 Use Case Scheduling							
	OR	м					F	
	EJB	}					E I	
	👘 🐴 Ins	tant Re	everse					
	Ins	tant Ge	enerator		I	~5	F I	
	Sta	ite Mac	hine Code	!			<u>-</u>	
	Теа	amwork	(				۶	
	<b>ରେ</b> Sha	ape Edi	tor					
	💮 DB-	VA SQ	L					
	Кеу	/ Mana	ger					

#### Figure 9.18 - Open Instant Reverse dialog box

2. Select the language from the combo box and type in the path of the XML file. You may also select ... to select the file path. Then select **OK** to start.

🖨 Instant Reverse		X
Language : XML		*
Update Type		
<ul> <li>Update duplicate class(es)</li> </ul>		
<ul> <li>Replace duplicate class(es)</li> </ul>		
Path : C:\projects\xml\xml_instantreverse.xml		<b>v</b>
	OK Cancel	Help

Figure 9.19 - Specify the file path

3. A Message dialog box appears telling you the reversal is successful.

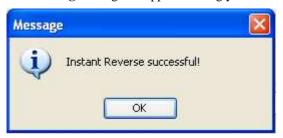


Figure 9.20 - Message dialog box

4. An **Instant Reverse form Diagram** dialog box then appears. You can check the reversed classes and packages to form a new diagram. If you check the check box **<default package>**, you can form a diagram using the default package. You may also change the form diagram and presentation options. Select **OK**.

🖨 Instant Re	verse form Diagram		X
	Class Diagram1		
Select Class	Form Diagram Options	Presentation Op	ptions
Reversed Class	es and Packages :		Selected Info
📄 📃 <def< td=""><td>ault package&gt;</td><td></td><td>No. Selected Class :</td></def<>	ault package>		No. Selected Class :
	Ilass1		No. Selected Package :
- 🗐 🗆 🖓	Ilass2		
- 🗐 🗆 🖓	Ilass3		
🗌 🔚 🔲 a	lefaultpackage		
Show this dialog after instant reverse			
			OK Cancel

Figure 9.21 - Instant Reverse form Diagram dialog box

5. You can see the result of reversal in the Model pane.

[ Model × Logical Vi Diagram 🖓 🗖
🍼 = 📴 = 📄 = 🐟 = 🔯 = 🤣
Tuntitled
🗊 🔤 Class1
🔁 🔤 Class2
Class3
defaultpackage

Figure 9.22 - Model pane

6. You may also select one or more models and select **Form Diagram** > **Customize.../Hierarchical/Navigation** to form a new diagram.

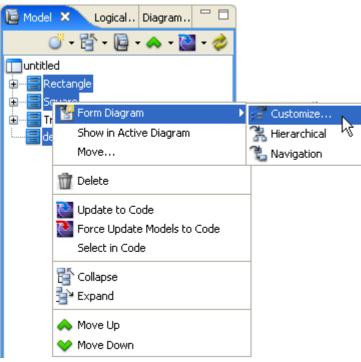


Figure 9.23 - Select model to form diagram

7. The Form Diagram dialog box is shown. You can edit the details of the new diagram there.

🖨 Form Diagram	×
Form Diagram Presentation Options	
Diagram Name:	
Class Diagram1	]
Generalization	
📌 🔽 Superclasses	
🖉 🗌 Subclasses	
Association	
📌 🛃 Navigable classes	
🔎 🥅 Non-Navigable classes	
Realization	Please move the mouse pointer over the
B Suppliers	items on the left to load preview.
R Clients	
Dependency	
🖉 🔽 Suppliers	
🔎 🔽 Clients	
Containment	
📴 🔽 Containers	
Residents	
Show single level only	
◯ Show all levels in single diagram	
◯ Show all levels in subdiagrams	
Show as containment relationships	
Reset	OK Cancel Help

Figure 9.24 - Form Diagram dialog box

8. A new diagram is formed by the selected models.

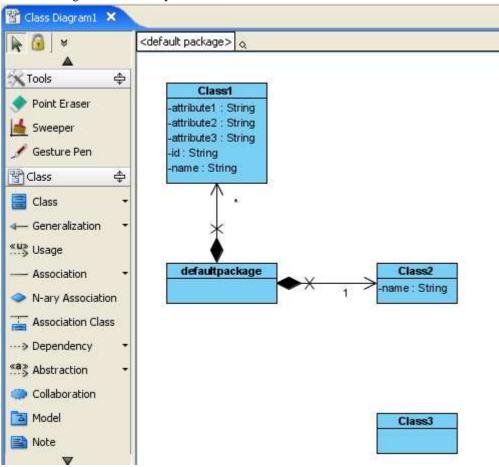


Figure 9.25 - New diagram formed

## **XML Schema Instant Reverse**

SDE for Eclipse can reverse XML Schema into UML class model.

```
?xml version="1.0" encoding="ISO-8859-1
<xs:schema
  targetNamespace="Polygon"
  xmlns="Polygon"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType name="Polygon">
  </xs:complexType>
  <xs:complexType name="Rectangle">
   <xs:all>
     <xs:element name="width" type="xs:double" minOccurs="0" maxOccurs="1"/>
     <xs:element name="height" type="xs:double" minOccurs="0" maxOccurs="1"/>
    </xs:all>
  </xs:complexType>
  <xs:complexType name="Square">
    <xs:all>
     <xs:element name="length" type="xs:double" minOccurs="0" maxOccurs="1"/>
    </xs:all>
  </xs:complexType>
  <xs:complexType name="Triangle">
   <xs:all>
     <xs:element name="length1" type="xs:double" minOccurs="0" maxOccurs="1"/>
     <xs:element name="length2" type="xs:double" minOccurs="0" maxOccurs="1"/>
     <xs:element name="length3" type="xs:double" minOccurs="0" maxOccurs="1"/>
   </xs:all>
  </xs:complexType>
</xs:schema>
```

```
Figure 9.26 - XML schema file
```

1. Select **Modeling > Instant Reverse...** from the main menu. The **Instant Reverse** dialog box appears with Instant Reverse options for configuration.

	Modeling	Run	Window	SVN	Help			
	🛞 Sta	rt SDE	-EC			ł		
	App	Application Options						
_	Aut	o Syna	chronizatio	n				
	Rep	oort				•		
	Pro	ject Pu	ublisher					
	Edit Stereotypes							
	Configure Requirement Enumerations							
	🔚 Use Case Scheduling							
	OR	м				•		
	EJB 🕨							
	👘 🐴 Ins	tant Re	everse		N			
	Ins	tant Ge	enerator		45			
	State Machine Code							
	Teamwork							
	Shape Editor							
	💿 DB-VA SQL							
	Кеу	/ Mana	ger					

Figure 9.27 - Open Instant Reverse dialog box

2. Select the language from the combo box and type in the path of the XML Schema file. You may also select ... to select the file path. Then select **OK** to start.

🖨 Instant Reverse	
Language : XML Schema	▼
Update Type	
<ul> <li>Update duplicate class(es)</li> </ul>	
<ul> <li>Replace duplicate class(es)</li> </ul>	
Path : C:\projects\xsd\Polygon.xsd	
Patri : C: (projects (xsu (Polygon, xsu)	<u> </u>
	OK Cancel Help

Figure 9.28 - Specify the file path

3. A Message dialog box appears telling you the reversal is successful.



Figure 9.29 - Message dialog box

4. An **Instant Reverse form Diagram** dialog box then appears. You can check the reversed classes and packages to form a new diagram. If you check the check box **<default package>**, you can form a diagram using the default package. You may also change the form diagram and presentation options. Then select **OK**.

🖨 Instant Re	verse form Diagram		×
Diagram Name : Select Class Reversed Class	Class Diagram1 Form Diagram Options Presentation es and Packages : ault package> olygon    Polygon    Polygon    Rectangle   Square	Options Selected Info No. Selected Class : No. Selected Package :	
	Triangle		
🖌 Show this di	alog after instant reverse	OK Cancel	

Figure 9.30 - Select class or package to form diagram

5. You can see the reverse result in the Model pane, and expand the tree to see the what the models contain.

📙 Model 🗙 Logical Diagram	
oji + 🔄 + 📴 + 🐟 + 🔯	- 🤣
Tuntitled	
🖶 🔁 Polygon	
XSDcomplexType	

Figure 9.31 - Model pane showing result

6. You may also select one or more models and select **Form Diagram** > **Customize.../Hierarchical/Navigation** to form a new diagram.

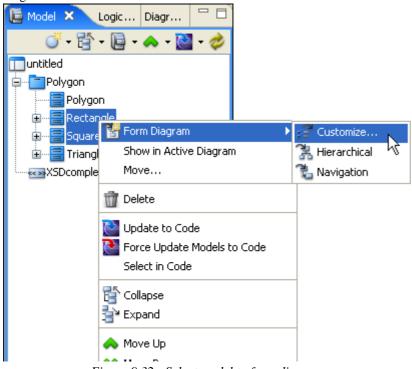


Figure 9.32 - Select model to form diagram

7. The Form Diagram dialog box is shown. You can edit the details of the new diagram there.

🛢 Form Diagram	
Form Diagram Presentation Options	
Diagram Name:	
Polygon	
Generalization	
📌 🔽 Superclasses	
Subclasses	
Association	
Navigable classes	
Non-Navigable classes	
Realization	Please move the mouse pointer over the items on the left to load preview.
B Suppliers	items on the left to load preview.
R Clients	
Dependency	
Juppliers	
Clients	
Containment	
🙀 🔽 Containers	
Residents	
<ul> <li>Show single level only</li> <li>Show all levels in single diagram</li> </ul>	
Show all levels in subdiagrams	
🕼 🔲 Show as containment relationships	
Reset	OK Cancel Help

Figure 9.33 - Form Diagram dialog box

8. A new diagram is formed with the selected models.

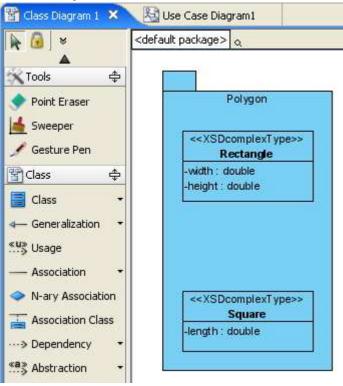
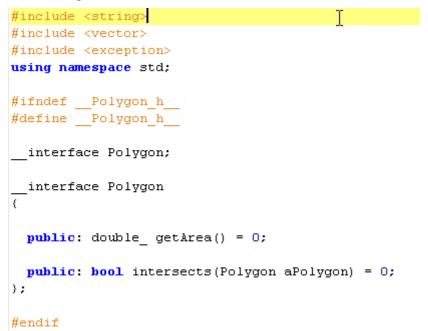


Figure 9.34 - Diagram formed

## **C++ Instant Reverse**

SDE for Eclipse can reverse C++ into UML class model.



*Figure* 9.35 - *C*++ *file* 

To perform instant reverse of C++:

1. Select menu **Modeling > Instant Reverse...**, the **Instant Reverse** dialog box appears with Instant Reverse options for configuration.

	Modeling	Run	Window	SVN	Help			
	🛞 Sta	rt SDE-	-EC				ł	
	App	olicatio	n Options.				þ	
_	Aut	Auto Synchronization						
	Report <b>•</b>							
	Pro	ject Pu	blisher					
	🚮 Edil	edit Stereotypes						
	Cor	Configure Requirement Enumerations						
	📇 Use Case Scheduling							
	OR	м					•	
	EJB 🕨							
	👘 🐴 Ins	tant Re	everse			N		
	Ins	tant Ge	enerator			43	•	
	Sta	te Mac	hine Code				•	
	Teamwork •							
	🐼 Shape Editor							
	🐵 DB-VA SQL							
	Kai	/ Mana						

Figure 9.36 - Open Instant Reverse dialog box

2. Select the language from the combo box and type in the path of the C++ file. You may also select ... to select the file path. You can select a folder or a C++ file, with the extension of .h or .cpp. Then select **OK** to start.

🖶 Instant Reverse 🛛 🔀
Language : C++ Source
Update Type
<ul> <li>Update duplicate class(es)</li> </ul>
O Replace duplicate class(es)
Path : C:\projects\C++
OK Cancel Help

Figure 9.37 - Specify the file path

3. A Message dialog box appears telling you the reversal is successful.

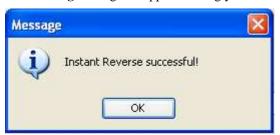


Figure 9.38 - Message dialog box

4. An **Instant Reverse form Diagram** dialog box then appears. You can check the reversed classes and packages to form a new diagram. If you check the check box **<default package>**, you can form a diagram using the default package. You may also change the form diagram and presentation options. Then, select **OK**.

🖨 Instant Reverse form Diagram	×
Diagram Name :       Class Diagram1         Select Class       Form Diagram Options       Presentation Options         Reversed Classes and Packages :	ptions Selected Info No. Selected Class : No. Selected Package :
Show this dialog after instant reverse	
	OK Cancel

Figure 9.39 - Instant Reverse form Diagram dialog box

5. You can see the result of reversal in the Model pane.

🔚 Model 🗙 Logic Diagr 🖓 🗖
🍼 - 🚰 - 📮 - 🐟 - 🔛 - 🤣
muntitled
🕀 🔤 Rectangle
😥 🚍 Square
🗄 📲 Triangle
5

Figure 9.40 - Model pane

6. You may also select one or more models and select **Form Diagram** > **Customize.../Hierarchical/Navigation** to form a new diagram.

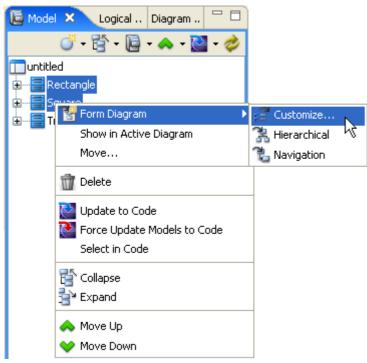


Figure 9.41 - Select model to form diagram

7. The Form Diagram dialog box is shown. You can edit the details of the new diagram there.

🛢 Form Diagram	
Form Diagram Presentation Options	
Diagram Name:	
Class Diagram1	
Generalization	
📌 🗹 Superclasses	
🖉 🗌 Subclasses	
Association	
📌 🔽 Navigable classes	
🔎 🗌 Non-Navigable classes	
Realization	Please move the mouse pointer over the
R Suppliers	items on the left to load preview.
B Clients	
Dependency	
🚚 🔽 Suppliers	
🔎 🔽 Clients	
Containment	
🙀 🔽 Containers	
🛅 🔽 Residents	
Show single level only	
⊖ Show all levels in single diagram	
Show all levels in subdiagrams	
Show as containment relationships	
Reset	OK Cancel Help
- NOJOC	

Figure 9.42 - Form Diagram dialog box

8. A new diagram is formed with the selected models.

🖌 🙆 💆	<default package=""> o</default>
Tools 💠 Point Eraser Sweeper Gesture Pen	Square length : double_ +getArea() +intersects()
Class 💠	
Generalization •	Rectangle width : double_ height : double_
<ul> <li>Association</li> <li>N-ary Association</li> </ul>	+getArea() +intersects()
Association Class	

Figure 9.43 - New diagram formed

# **CORBA IDL Source Instant Reverse**

SDE for Eclipse also supports reversing CORBA IDL Source into UML classes or models.

```
interface Polygon {
    double_ getArea();
    boolean_ intersects(inout Polygon aPolygon);
};
```

Figure 9.44 - CORBA IDL file

#### To perform instant reverse of CORBA IDL:

1. Select menu **Modeling** > **Instant Reverse...**, the **Instant Reverse** dialog box appears with Instant Reverse options for configuration.

	Modeling	Run	Window	SVN	Help		
	🛞 Sta	irt SDE	-EC			ł	
	App	olicatio	n Options.				
_	Aut	to Syna	hronizatio:	n			
	Rep	oort					
	Pro	iject Pu	ıblisher				
	Edit Stereotypes						
	Configure Requirement Enumerations						
	📇 Use Case Scheduling						
	OR	м				•	
	EJB 🕨						
	👘 🐴 Ins	tant Re	everse				
	Ins	tant Ge	enerator		M	s̃ ►	
	State Machine Code						
	Teamwork 🕨						
	🐼 Shape Editor						
	🚱 DB-VA SQL						
			ger				

Figure 9.45 - Open Instant Reverse dialog box

2. Select the language from the combo box and type in the path of the CORBA file. You may also select ... to select the file path. You can select a folder or a CORBA file. Then select **OK** to start.

🖨 Instant Reverse	×
Language : CORBA IDL Source	~
Update Type	
<ul> <li>Update duplicate class(es)</li> </ul>	
<ul> <li>Replace duplicate class(es)</li> </ul>	
Path : C:\projects\idl	<u> </u>
	OK Cancel Help

Figure 9.46 - Specify the file path

3. A Message dialog box appears telling you the reversal is successful.

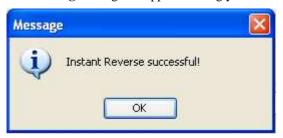


Figure 9.47 - Message dialog box

4. An **Instant Reverse form Diagram** dialog box then appears. You can check the reversed classes and packages to form a new diagram. If you check the check box **<default package>**, the diagram will follow the default package. You may also change the form diagram and presentation options. Then, select **OK**.

🖨 Instant Re	verse form Diagram			×	
Diagram Name :	Class Diagram1				
Select Class	Form Diagram Options	Presentation Op	tions		
Reversed Class	es and Packages :		Selected Info		
F	ault package> Yolygon Rectangle Square Yriangle		No. Selected Class : No. Selected Package :		
Show this dialog after instant reverse					
			OK Cancel		

Figure 9.48 - Instant Reverse form Diagram dialog box

5. You can see the result of reversal in the Model pane.

[ Model × Logical Diagram 🖓 🗖
off - 🚰 - 📔 - 🐟 - 🔛 - 🤣
🛄 untitled
🖶 🚍 Polygon
🖶 📲 Rectangle
🛱 🔤 Square
🗄 🚍 Triangle

Figure 9.49 - Model pane

6. You may also select one or more models and select **Form Diagram** > **Customize.../Hierarchical/Navigation** from the popup menu to form a new diagram.

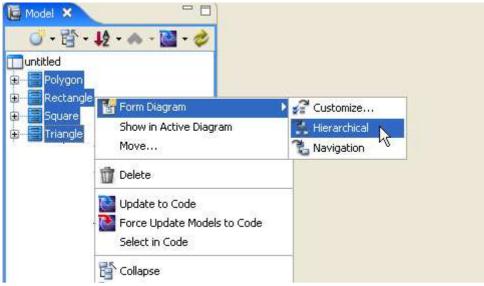
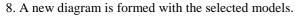


Figure 9.50 - Select model to form diagram

7. The Form Diagram dialog box is shown. You can edit the details of the new diagram there.

🖨 Form Diagram	
Form Diagram Presentation Options	
Diagram Name:	
Class Diagram1	]
Generalization	
📌 🔽 Superclasses	
🖉 🔲 Subclasses	
Association	
📌 🖂 Navigable classes	
Non-Navigable classes	
Realization	Please move the mouse pointer over the
B Suppliers	items on the left to load preview.
R Clients	
Dependency	
🔎 🖂 Suppliers	
🔎 Clients	
Containment	
🙀 🔽 Containers	
The Residents	
Show single level only	
Show all levels in single diagram	
Show all levels in subdiagrams	
Show as containment relationships	
Reset	OK Cancel Help

Figure 9.51 - Form Diagram dialog box



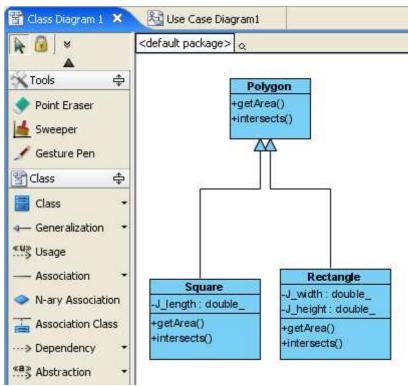


Figure 9.52 - New diagram formed

## **PHP Instant Reverse**

SDE for Eclipse can reverse PHP into UML class model.

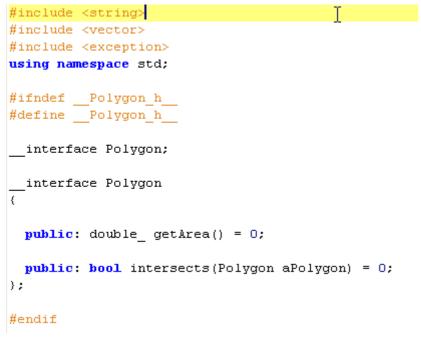


Figure 9.53 - PHP file

To perform instant reverse of PHP:

1. Select menu **Modeling** > **Instant Reverse...**, the **Instant Reverse** dialog box appears with Instant Reverse options for configuration.

	Modeling	Run	Window	SVN	Help		
	🛞 Sta	rt SDE-	-EC				ł
	App	olicatio	n Options.				þ
_	Aut	o Sync	hronizatio:	п			
	Rep	oort					•
	Pro	ject Pu	blisher				
	🚮 Edil	t Stere	otypes				
	Cor	nfigure	Requirem	ent En	umerati	ons	
	🔡 Use Case Scheduling						
	ORM F						•
	EJE	)					<u> </u>
	👘 🐴 Ins	tant Re	everse			N	
	Ins	tant Ge	enerator			К	•
	Sta	te Mac	hine Code				•
	Теа	amwork	:				•
	<b>ରେ</b> Sha	ape Edi	tor				
	💿 DB-	VA SQ	L				
	Kai	/ Mana					

Figure 9.54 - Open Instant Reverse dialog box

2. Select the language from the combo box and type in the path of the PHP file. You may also select ... to select the file path. You can select a folder or a PHP file. Then select **OK** to start.

🖶 Instant Reverse 🛛 🔀
Language : PHP 5.0 Source
Update Type
<ul> <li>Update duplicate class(es)</li> </ul>
Replace duplicate class(es)
Path : C:\projects\php
Remove '\$' prefix
Treat directory as package
OK Cancel Help

Figure 9.55 - Specify the file path

3. A Message dialog box appears telling you the reversal is successful.

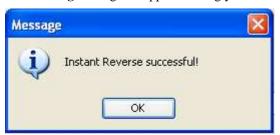


Figure 9.56 - Message dialog box

4. An **Instant Reverse form Diagram** dialog box then appears. You can check the reversed classes and packages to form a new diagram. If you check the check box **<default package>**, the diagram will follow the default package. You may also change the form diagram and presentation options. Then, select **OK**.

🖨 Instant Reverse form Diagram		
Diagram Name : Class Diagram1 Select Class Form Diagram Options Reversed Classes and Packages : Case of the second secon	No. 9	Selected Class : Selected Package :
✓ Show this dialog after instant reverse		
	(	OK Cancel

Figure 9.57 - Instant Reverse form Diagram dialog box

5. You can see the result of reversal in the Model pane.

🚺 Model 🗶 Logic Diagr 🏳 🗖
🍼 - 🚰 - 📮 - 🐟 - 🔛 - 🤣
muntitled
😥 – 🚍 Rectangle
🕀 🔚 Square
🗄 📲 Triangle
S

Figure 9.58 - Model pane

6. You may also select one or more models and select **Form Diagram** > **Customize.../Hierarchical/Navigation** to form a new diagram.

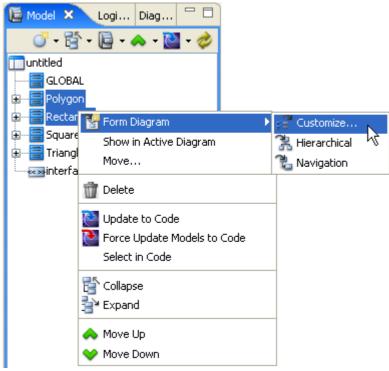


Figure 9.59 - Select model to form diagram

7. The Form Diagram dialog box is shown. You can edit the details of the new diagram there.

🖨 Form Diagram	×
Form Diagram Presentation Options	
Diagram Name:	
Class Diagram1	
Generalization	
📌 🔽 Superclasses	
🖉 🗌 Subclasses	
Association	
🔎 Navigable classes	
🖉 🗌 Non-Navigable classes	
Realization	Please move the mouse pointer over the
R V Suppliers	items on the left to load preview.
R Clients	
Dependency	
Juppliers	
🔎 Clients	
Containment	
Containers	
Residents	
Show single level only	
<ul> <li>Show all levels in single diagram</li> <li>Show all levels in subdiagrams</li> </ul>	
Show all levels in subdiagrams	
Reset	OK Cancel Help

Figure 9.60 - Form Diagram dialog box

8. A new diagram is formed with the selected models.

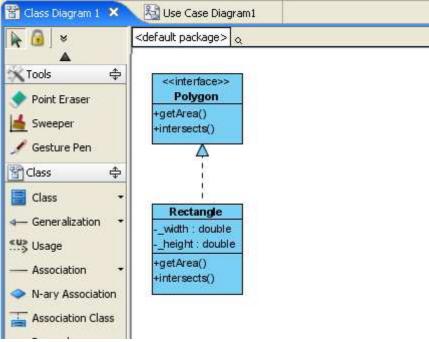


Figure 9.61 - New diagram formed

# **Hibernate Instant Reverse**

In SDE for Eclipse, you can generate UML classes and models by converting Hibernate code.

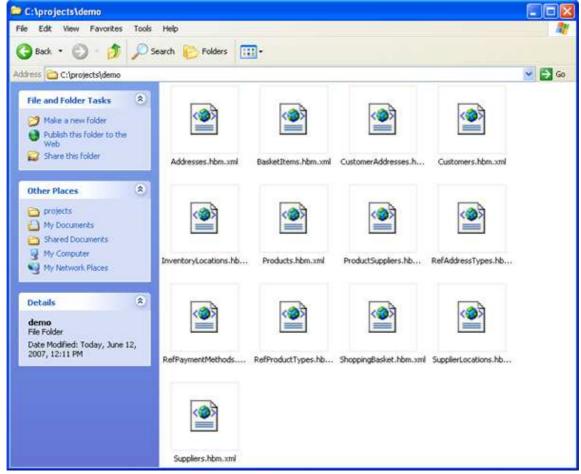


Figure 9.62 - Hibernate file

To perform instant reverse of Hibernate:

1. Select menu **Modeling** > **Instant Reverse...**, the **Instant Reverse** dialog box appears with Instant Reverse options for configuration.

Modeling	Run	Window	SVN	Help		
🐼 Sta	rt SDE	-EC				ł
App	Application Options					
Aut	o Syno	hronizatio:	n			
Rep	oort					L
Pro	ject Pu	ıblisher				
Zelit Stereotypes Configure Requirement Enumerations Use Case Scheduling						
ORM F						
		everse				
		enerator hine Code		N		
Теа	amwork	(			•	
<b>ତ୍ତି</b> Sha	ape Edi	tor				
💿 DB-	VA SQ	L				
Кеу	/ Mana	oer				

Figure 9.63 - Open Instant Reverse dialog box

2. Select the language from the combo box and type in the path of the Hibernate file. You may also select ... to select the file path. You can select a folder or a Hibernate file. Then select **OK** to start.

	~
	<b>~ `</b>
OK Cancel	Help
	OK Cancel

Figure 9.64 - Specify the file path

3. A Message dialog box appears telling you the reversal is successful.



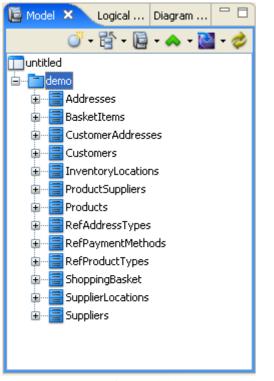
Figure 9.65 - Message dialog box

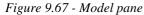
4. An **Instant Reverse form Diagram** dialog box then appears. You can check the reversed classes and packages to form a new diagram. If you check the check box **<default package>**, the diagram will follow the default package. You may also change the form diagram and presentation options. Then, select **OK**.

🖨 Instant Re	verse form Diagram			
Diagram Name :	Class Diagram1			
Select Class	Form Diagram Options	Presentatio	on O	ptions
Reversed Class	es and Packages :			Selected Info
📄 🔲 <def< td=""><td>ault package&gt;</td><td></td><td>^</td><td>No. Selected Class :</td></def<>	ault package>		^	No. Selected Class :
📄 📩 📄 🔲 o	lemo			No. Selected Package :
	Addresses			
	BasketItems			
	CustomerAddresses		_	
	Customers		=	
	InventoryLocations			
	ProductSuppliers			
	Products			
	RefAddressTypes			
	RefPaymentMethods			
	RefProductTypes		~	
Show this di	alog after instant reverse	;		
				OK Cancel

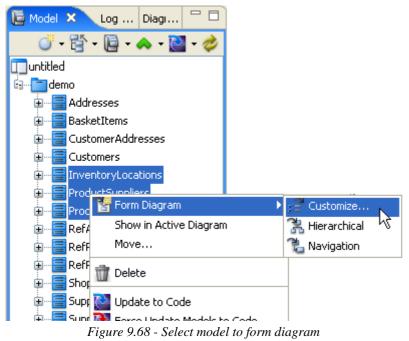
Figure 9.66 - Instant Reverse form Diagram dialog box

5. You can see the result of reversing in the Model pane.





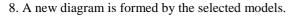
6. You may also select one or more models and select **Form Diagram** > **Customize.../Hierarchical/Navigation** from the popup menu to form a new diagram.



7. The Form Diagram dialog box is shown. You can edit the details of the new diagram there.

🖨 Form Diagram	
Form Diagram Presentation Options	
Diagram Name:	
demo	
Generalization	
Juperclasses	
Subclasses	
Association	
📌 🔽 Navigable classes	
Non-Navigable classes	
Realization	Please move the mouse pointer over the
B Suppliers	items on the left to load preview.
Dependency	
🔎 🗸 Suppliers	
Clients 🗸	
Containment	
📴 🗹 Containers	
Residents	
Show single level only	
<ul> <li>Show all levels in single diagram</li> <li>Show all levels in subdiagrams</li> </ul>	
Show an levels in subulagrams	
Reset	OK Cancel Help

Figure 9.69 - Form Diagram dialog box



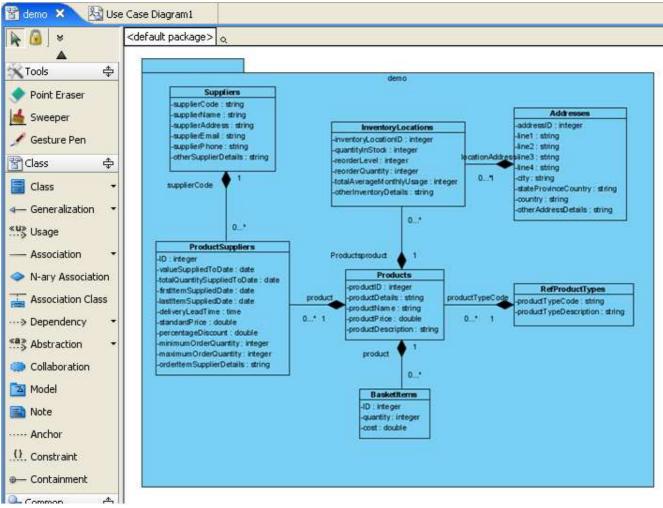


Figure 9.70 - New diagram formed

## **JDBC Instant Reverse**

You can reverse databases into UML classes and models via JDBC.

To perform instant reverse of JDBC:

1. Select menu **Modeling** > **Instant Reverse...**, the **Instant Reverse** dialog box appears with Instant Reverse options for configuration.

	Modeling	Run	Window	SVN	Help		
	🛞 Sta	rt SDE	-EC				ł
	App	olicatio	n Options.				
	Aut	o Syna	hronizatio:	n			
	Rep	oort				•	L
	Pro	ject Pu	ıblisher				
	Cor	😹 Edit Stereotypes Configure Requirement Enumerations      Use Case Scheduling					
		ORM FIB					
	👘 🐴 Ins	tant Re	everse		N		
	Ins	tant Ge	enerator		42	•	
	Sta	te Mac	hine Code:				
	Теа	amwork	<			•	
	Shape Editor						
🔞 DB-VA SQL							
	Key Manager						

Figure 9.71 - Open Instant Reverse dialog box

2. Select the language from the combo box and configure the JDBC Setting. You can select or type in the path of the driver in the **JDBC Driver**. Then select the **JDBC Driver Name** from the dropdown menu.

🖨 Instant Reverse		×
Language : JDBC		~
Update Type		5
🔘 Update duplicate cl	ass(es)	
<ul> <li>Replace duplicate c</li> </ul>	lass(es)	
JDBC Setting		5
JDBC Driver :	C:\mysql-connector-java-5.0.6-bin.jar 🛛 🗸 🛄	J
JDBC Driver Name :	DB2	
JDBC Driver Class :	DB2 DB2/400(Natibye driver)	
JDBC Connection URL :	DB2/400(Natibve driver) K DB2/400(Toolbox driver)	
User :	HypersonicSQL	
Password :	MS SQL Server(JSQL Driver)	
	MS SQL Server(JTURBO Driver)	U
	OK Cancel Help	

Figure 9.72 - Select the Driver Name

3. The JDBC Driver Class is automatically generated. You may also configure the driver class yourself.

😂 Instant Reverse	
Language : JDBC	✓
Update Type	
🔘 Update duplicate d	lass(es)
<ul> <li>Replace duplicate</li> </ul>	class(es)
JDBC Setting	
JDBC Driver :	C:\mysql-connector-java-5.0.6-bin.jar
JDBC Driver Name :	Mysql 💌
JDBC Driver Class :	com.mysql.jdbc.Driver
JDBC Connection URL	
User :	
Password :	
	OK Cancel Help

Figure 9.73 - Driver class is generated automatically

#### 4. Configure the JDBC Connection URL, User and Password. Then select OK.

🖨 Instant	Reverse	
Language :	JDBC	✓
Update Ty	ре	
🚫 Update	e duplicate cl	ass(es)
💿 Replac	e duplicate c	lass(es)
JDBC Setti	ng	
JDBC Drive		C:\mysql-connector-java-5.0.6-bin.jar
JUDC DRIVE	fr ;	C: (Inysq-connector-java-5.0.6-bin.jar
JDBC Drive	r Name :	MySQL 💌
JDBC Drive	er Class :	com.mysql.jdbc.Driver
JDBC Conn	ection URL :	jdbc:mysql://192.168.5.161/epos
User :		root
Password :		••••
		OK Cancel Help

Figure 9.74 - Configure connection URL, user and password

5. A Message dialog box appears telling you the reversal is successful.

Messag	: 🛛
ų)	Instant Reverse successful!
	OK

Figure 9.75 - Message dialog box

6. An **Instant Reverse form Diagram** dialog box then appears. You can check the reversed classes and packages to form a new diagram. If you check the check box **<default package>**, the diagram will follow the default package. You may also change the form diagram and presentation options. Then, select **OK**.

🖨 Instant Re	verse form Diagram			×
Diagram Name :	Class Diagram1			
Select Class	Form Diagram Options	Presentation Op	otions	
Reversed Class	es and Packages :		Selected Info	
📄 🔲 <def< td=""><td>ault package&gt;</td><td>~</td><td>No. Selected Class :</td><td></td></def<>	ault package>	~	No. Selected Class :	
- 📄 🗖 a	addresses		No. Selected Package :	
📕 📑 🔲 E	oasketitems			
🗌 🛏 🗐 🔲 o	ustomeraddresses			
- 📄 🗖 🗆 o	ustomers			
📗 📑 🗔 ir	nventorylocations	=		
- E - F	products			
- E - F	productsuppliers			
📗 🔚 🔲 r	efaddresstypes			
📕 🖳 r	efpaymentmethods			
🛛 🖳 🗐 🔲 r	efproducttypes			
📕 🖳 🗐 🔲 s	hoppingbasket	~		
Show this di	alog after instant reverse			
			OK Canc	el

Figure 9.76 - Instant Reverse form Diagram dialog box

7. You can see the result of reversing in the Model pane.

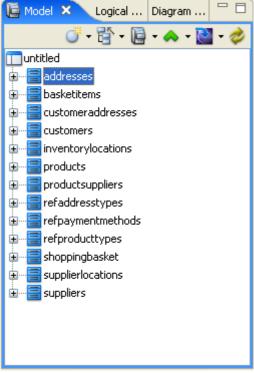
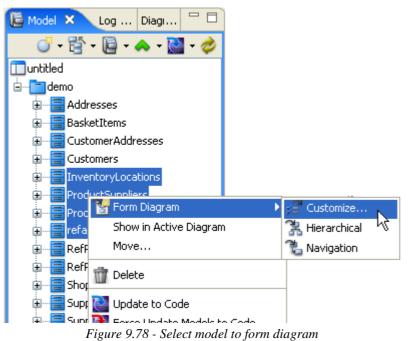


Figure 9.77 - Model pane

8. You may also select one or more models and select **Form Diagram** > **Customize.../Hierarchical/Navigation** from the popup menu to form a new diagram.



#### 9. The Form Diagram dialog box is shown. You can edit the details of the new diagram there.

🛢 Form Diagram	$\mathbf{X}$
Form Diagram Presentation Options	
Diagram Name:	1
Class Diagram1	
Generalization	
📌 🗹 Superclasses	
🖉 🗌 Subclasses	
Association	
📌 🔽 Navigable classes	
🖉 🗌 Non-Navigable classes	
Realization	Please move the mouse pointer over the
👫 🔽 Suppliers	items on the left to load preview.
B.■ □ Clients	
Dependency	
🔎 🔽 Suppliers	
🔎 🖂 Clients	
Containment	
🙀 🔽 Containers	
ि <b>⊘</b> Residents	
<ul> <li>Show single level only</li> </ul>	
◯ Show all levels in single diagram	
◯ Show all levels in subdiagrams	
📓 🗌 Show as containment relationships	
Reset	OK Cancel Help

Figure 9.79 - Form Diagram dialog box

#### 10. A new diagram is formed by the selected models.

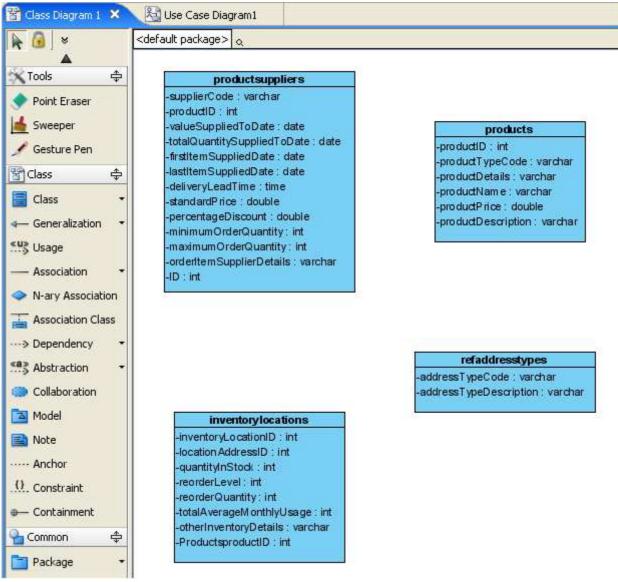


Figure 9.80 - New diagram formed

## Ada 9x Instant Reverse

SDE for Eclipse also supports reversing Ada 9x code into UML classes or models.

```
-- The implementation body of class Polygon
package body Polygon is
function getArea(aThis : PolygonObject) return double is
begin
    null;
end getArea;
function intersects(aThis : PolygonObject ; apolygon : Polygon) return boolean is
begin
    null;
end intersects;
end Polygon;
```

Figure 9.81 - Ada 9X file

To perform instant reverse of Ada 9x:

1. Select menu **Modeling** > **Instant Reverse...**, the **Instant Reverse** dialog box appears with Instant Reverse options for configuration.

Modeling	Run	Window	SVN	Help			
🛞 Sta	irt SDE-	-EC			ł		
App	Application Options						
Aut	to Sync	hronizatio:	n				
Rep	oort				•		
Pro	ject Pu	blisher					
🚮 Edil	t Stere	otypes					
Cor	nfigure	Requirem	ent En	umerations	;		
BUse	e Case	Scheduling	J				
OR	м				•		
EJE	}						
👘 🐴 Ins	tant Re	everse		N			
Ins	tant Ge	enerator		43			
Sta	ite Mac	hine Code			<u> </u>		
Teamwork 🕨							
<b>ତ୍ତି</b> Sha	ape Edi	tor					
💮 DB-	VA SQ	L					
Vo	/ Mana						

Figure 9.82 - Open Instant Reverse dialog box

2. Select the language from the combo box and type in the path of the Ada 9x file. You may also select ... to select the file path. You can select a folder or an Ada 9x file. Then select **OK** to start.

🖨 Instant Reverse	×
Language : Ada 9x Source	×
Update Type     O Update duplicate class(es)     Replace duplicate class(es)	
Path : C:\projects\ada95	<b>▼</b>
	OK Cancel Help

Figure 9.83 - Specify the file path

3. A Message dialog box appears telling you the reversal is successful.



Figure 9.84 - Message dialog box

4. An **Instant Reverse form Diagram** dialog box then appears. You can check the reversed classes and packages to form a new diagram. If you check the check box **<default package>**, the diagram will follow the default package. You may also change the form diagram and presentation options. Then, select **OK**.

🖨 Instant Re	verse form Diagram			×	
Diagram Name :	Class Diagram1				
Select Class	Form Diagram Options	Presentation Opl	tions		
Reversed Class	es and Packages :	ſ	-Selected Info		
	ault package> 5LOBAL Polygon Rectangle 5quare Triangle		No. Selected Class : No. Selected Package :		
Show this dialog after instant reverse					
			ОК Са	ncel	

Figure 9.85 - Instant Reverse form Diagram dialog box

5. You can see the result of reversing in the Model pane.

🐚 Model 🗙	- 0
<b>○ - 🗄 - ↓2 - ▲</b>	- 🎑 - 🤣
muntitled	
GLOBAL	
🕀 🧧 Polygon	
🕀 🧧 Rectangle	
🕀 🧧 Square	
🕀 🔚 Triangle	

Figure 9.86 - Model pane

6. You may also select one or more models and select **Form Diagram** > **Customize.../Hierarchical/Navigation** from the popup menu to form a new diagram.

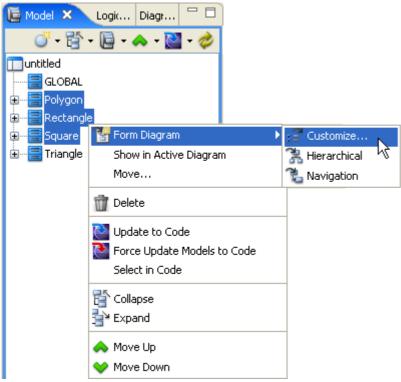


Figure 9.87 - Select model to form diagram

7. The Form Diagram dialog box is shown. You can edit the details of the new diagram there.

🖨 Form Diagram	$\mathbf{X}$
Form Diagram Presentation Options	
Diagram Name: Class Diagram1	
Generalization	
Association Reference of the set	
Realization R V Suppliers R Clients	Please move the mouse pointer over the items on the left to load preview.
Dependency Suppliers Clients	
Containment Containers Containers Containers Containers Containers Containers Containers Containers Containent relationships Containment relationships	
Reset	OK Cancel Help

Figure 9.88 - Form Diagram dialog box

8. A new diagram is formed by the selected models.

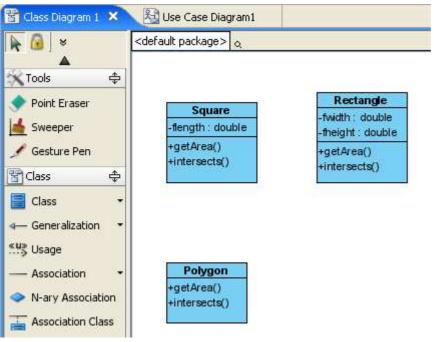


Figure 9.89 - New diagram formed

## **Objective-C Instant Reverse**

SDE for Eclipse also supports reversing Objective-C code into UML classes or models.

```
#import <objc/Object.h>
#import "stdio.h"
#import "Polygon.h"
@interface Rectangle :Object <Polygon> {
    @private id _width;
    @private id _height;
}
-(id) getArea;
-(BOOL) intersects :(id) aPolygon;
@end
```

Figure 9.90 - Objective-C file

To perform instant reverse of Ada 9x:

1. Select menu **Modeling** > **Instant Reverse...**, the **Instant Reverse** dialog box appears with Instant Reverse options for configuration.

Modeling	Run	Window	SVN	Help		
🛞 Sta	rt SDE	-EC				Ł
App	olicatio	n Options.				
Aut	o Syno	hronizatio:	п			L
Rep	oort				►	L
Pro	ject Pu	ıblisher				
🚮 Edil	: Stere	otypes				
Cor	nfigure	Requirem	ent En	umerations		
BUse	e Case	Scheduling	g			
OR	м				•	
EJB	l				•	
👘 🐴 Insl	tant Re	everse		N		
Ins	tant Ge	enerator		15	•	
Sta	te Mac	hine Code			•	
Теа	amwork	<			•	
🔄 Sha	ape Edi	tor				
💿 DB-	VA SQ	L				
Kev	/ Mana	oer .				

Figure 9.91 - Open Instant Reverse dialog box

2. Select the language from the combo box and type in the path of the Objective-C file. You may also select ... to select the file path. You can select a folder or an Ada 9x file. Then select **OK** to start.

🖶 Instant Reverse 🛛 🔁	
Language : Objective-C	
Update Type	
<ul> <li>Update duplicate class(es)</li> </ul>	
Replace duplicate class(es)	
Path : C:\projects\Objective-C	
OK Cancel Help	)

Figure 9.92 - Specify the file path

3. A Message dialog box appears telling you the reversal is successful.



Figure 9.93 - Message dialog box

4. An **Instant Reverse form Diagram** dialog box then appears. You can check the reversed classes and packages to form a new diagram. If you check the check box **<default package>**, the diagram will follow the default package. You may also change the form diagram and presentation options. Then, select **OK**.

🖨 Instant Reverse form Diagram	
Instant Reverse form Diagram   Diagram Name : Class Diagram1   Select Class Form Diagram Options   Reversed Classes and Packages :   Case and Package >   Case and Package >	on Options Selected Info No. Selected Class : No. Selected Package :
Show this dialog ofter instant reverse	
Show this dialog after instant reverse	OK Cancel

Figure 9.94 - Instant Reverse form Diagram dialog box

5. You can see the result of reversing in the Model pane.

📔 Model 🗙 🛛 Logical	Diagram	
J - 🛱 - 📔	- 📣 - 💽	- 🤣
untitled		
🗈 🔚 Rectangle		
🗄 🔚 Square		
🗄 📲 Triangle		

Figure 9.95 - Model pane

6. You may also select one or more models and select **Form Diagram** > **Customize.../Hierarchical/Navigation** from the popup menu to form a new diagram.

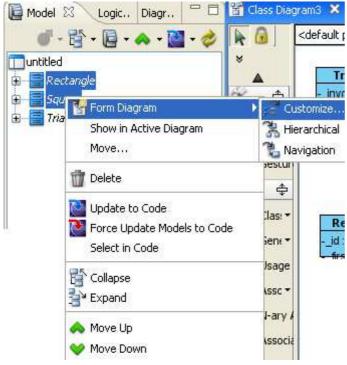
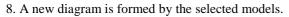


Figure 9.96 - Select model to form diagram

7. The Form Diagram dialog box is shown. You can edit the details of the new diagram there.

🛢 Form Diagram	
Form Diagram Presentation Options	
Diagram Name: Class Diagram1	]
Generalization →■ ✓ Superclasses ↓■ ○ Subclasses	
Association Pavigable classes Non-Navigable classes	
Realization B	Please move the mouse pointer over the items on the left to load preview.
Dependency Suppliers Clients	
Containment	
<ul> <li>Residents</li> <li>Show single level only</li> <li>Show all levels in single diagram</li> <li>Show all levels in subdiagrams</li> </ul>	
Show all levels in subdiagrams	
Reset	OK Cancel Help

Figure 9.97 - Form Diagram dialog box



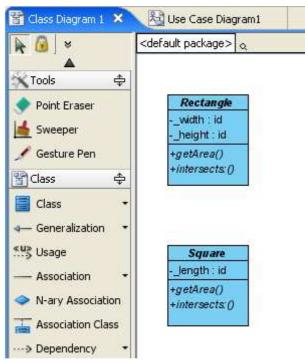


Figure 9.98 - New diagram formed

# Instant Generator

# **Chapter 10 - Instant Generator**

In SDE for Eclipse, you can generate codes by using Instant Generator. In this chapter:

- What is Instant Generator?
- Supported Sources
- Using Instant Generator
- Generating different languages

# What is Instant Generator?

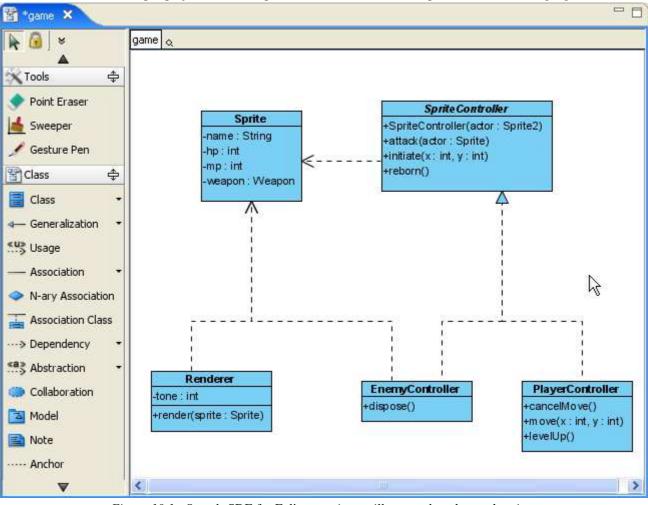


The Instant Generator facility of SDE for Eclipse allows you to generate codes. SDE for Eclipse supports many types of language including Java, C#, VB.NET etc.This chapter provides a brief description on the supported formats and will show you how to generate codes.

# **Supported Sources**

Instant Generator currently supports fifteen types of sources. They are:

- Java
- C#
- VB.NET
- PHP
- ODL
- ActionScript
- IDL
- C++
- Delphi
- Perl
- XSD
- Python
- Objective-C
- Ada95
- Ruby



We will use a SDE for Eclipse project as an example to illustrate the advanced options of different languages.

Figure 10.1 - Sample SDE for Eclipse project to illustrate the advanced options

## **Using Instant Generator**

Open the Instant Generator dialog from the main menu: click Modeling > Instant Generator > Instant Generator....

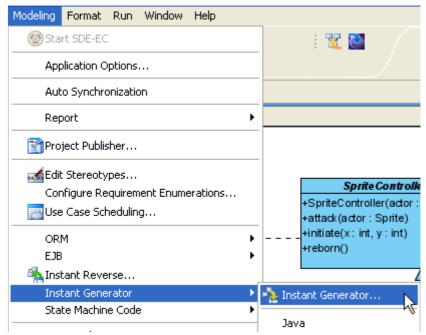


Figure 10.2 Open Instant Generator dialog

The Instant Generator dialog box will be displayed.

🖨 Instant Generator	
Language: Java 💌	
Select elements for code generation	Options
☐ _ untitled 	Attribute prefix: Parameter prefix: a
	Generate Ant build file
	Implement abstract operations
	Generate association operations
	Association Vector 💌
	JDK Version: 5.0
	Advanced Options
Output path: Generate to Source Folder	
Template directory: C:\eclipse-5DK-3.2-win32\eclipse\sde\instan	tgenerator
Prompt to confirm overwrite file	
Generator Output	]
	$\mathbb{R}$
Open output folder Previ	ew Generate Close

Figure 10.3 Instant Generator dialog

#### **General Settings**

As the configuration is simplified, only three values are required to be input even if it is the first time running Instant Generator.

1. Select Language to specify which language of source will generated for. In this example, C++ is selected.

🖨 Instant Gene	rator	
Language:	Java	*
Select elements f		<u>^</u> n
intitled	C# VB.NET PHP	=
	ODL	
	ActionScript	
		~
	CTT	

Figure 10.4 - Select Language

2. Choose classes or packages which will be included in the generation.



Figure 10.5 - Choose classes or packages included

3. Select an output path for placing generated source.

🖨 Instant Generator	×
Language: Java 💌	
Select elements for code generation	Options
in v untitled	Attribute prefix:
EnemyController	Parameter prefix: a
📑 🔽 PlayerController	Generate Ant build file
Sprite	Implement abstract operations     Generate association operations
🦾 📑 🔽 SpriteController	Association Vector
	JDK Version: 5.0
	Advanced Options
Output path: 📃 Generate to Source Folder	
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\in	istantgenerator
Prompt to confirm overwrite file	
Generator Output	
Open output folder	Preview Generate Close

Figure 10.6 - Select output path

### Language Specified Options

There are two options which allow you to control the properties in each language. One is **Basic options** and the other is **Advanced options**.

You can directly edit the common change options in Basic options in the Instant Generator dialog.

🖨 Instant Generator	
Language: Java  Select elements for code generation  Select multiled  Generation  Controller  Controller  PlayerController	Options Attribute prefix: Parameter prefix: a V Generate Ant build file
<ul> <li>✓ Renderer</li> <li>✓ Sprite</li> <li>✓ SpriteController</li> </ul>	<ul> <li>Implement abstract operations</li> <li>Generate association operations</li> <li>Association implementation:</li> <li>JDK Version:</li> <li>5.0</li> <li>Advanced Options</li> </ul>

Figure 10.7 - Basic Options

Advanced options contains all options of the language, including those in Basic options. To edit Advanced options, click Advanced Options in the Instant Generator dialog.

•
Attribute prefix:
Parameter prefix: a
Generate Ant build file
Implement abstract operations
Generate association operations
Association implementation:
JDK Version: 5.0
Advanced Options
4

Figure 10.8 - Select Advanced Options

🖨 Advanced Options for Java Code Generation 🛛 🛛 🔀			
Encoding  Default (windows-1252)  Other: Big5			
Language			
Attribute prefix:			
Parameter prefix:	a		
Indentation:	<tab></tab>	Tab	
Generate unnamed attribut			
Unnamed attribute:	Unnamed_\${classname}_	Classname	
Invalid char replacement:			
Default attribute type:	Object		
Default parameter type:	Object		
Default operation return type:	void		
🔽 Generate Ant build file			
Implement abstract operat	ions		
Generate association opera	ations		
Local variable prefix:	1		
Association implementation:	Vector	~	
JDK Version:	5.0	~	
Version Details			
Generics (Template)			
Set as Default Restore to Default OK Cancel			

Figure 10.9 - Advanced Options

#### **Preview or Generate**

As different values of options will produce different generation results, the Instant Generator provides a preview of the generation result before the actual generation.

To Preview the generation result:

Press Preview in Instant Generator dialog.

Output path:	Generate to Source Folder
	C:\Demo\InstantGenerator
Template directory:	C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\java
🗹 Prompt to confi	rm overwrite file
Generator Outpu	·]
Open output fok	der Preview Generate Close

Figure 10.10 - Select Preview

Previewing result:

🖶 Preview	
PlayerController.ja priva	
	Close

Figure 10.11 - Previewing result

#### To generate codes using the Instant Generator dialog: Press **Generate** in the Instant Generator dialog to perform actual generation.

Output path:	Generate to Source Folder
	C:\Demo\InstantGenerator
Template directory:	C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\java
🔽 Prompt to conf	irm overwrite file
Generator Outpu	t
Open output fol	der Preview Generate Close

Figure 10.12 - Select Generate

While the generation, the progress is displayed in *Generator Output*. Output folder can be opened by pressing **Open output folder** in Instant Generator dialog.

Output path:	Generate to Source Folder	
	C:\Demo\InstantGenerator	
Template directory:	C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\java	
🔽 Prompt to confi	irm overwrite file	
Generator Outpu	t	
Saving Renderer.java to C:\Demo\InstantGenerator\game Saving PlayerController.java to C:\Demo\InstantGenerator\game Saving EnemyController.java to C:\Demo\InstantGenerator\game Saving SpriteController.java to C:\Demo\InstantGenerator\game Saving Sprite.java to C:\Demo\InstantGenerator\game		
Open output fol	der Preview Generate Close	

Figure 10.13 - Open output folder

## **Generating Java**

Using SDE for Eclipse, Java can be generated easily.

To generate Java:

1. Open the Instant Generator dialog for Java by clicking Modeling > Instant Generator > Java... in the main menu.

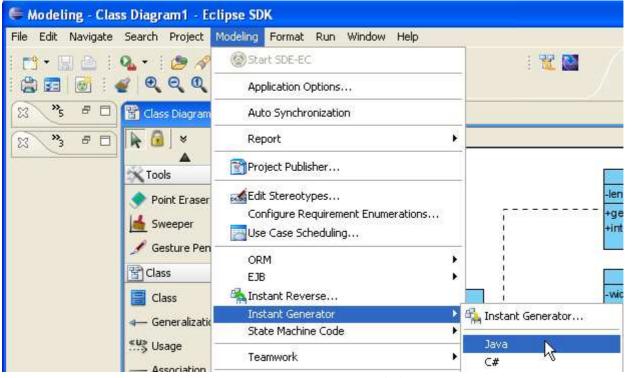


Figure 10.14 - Open Instant Generator dialog for Java

#### 2. The Instant Generator dialog box for Java is displayed.

🚔 Instant Generator	N 1997
Language: Java 💌	Options
<ul> <li>Polygon</li> <li>Polygon</li> <li>Polygon</li> <li>PolygonImage</li> <li>Rectangle</li> <li>Square</li> <li>Triangle</li> </ul>	Attribute prefix: Parameter prefix: a Generate Ant build file Implement abstract operations Generate association operations Association implementation: JDK Version: 5.0 Advanced Options
Output path: Generate to Source Folder	
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instantg	enerator\java  ]
Prompt to confirm overwrite file	
Generator Output	
Open output folder Prev	iew Generate Close

Figure 10.15 - Instant Generator dialog box

3. Choose the classes or packages you want to generate in Java.

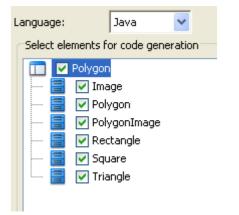


Figure 10.16 - Choose the classes and packages

#### 4. Edit the Options.

Options		
Attribute prefix:	_	
Parameter prefix:	a	
Generate Ant build file		
✓ Implement abstract operations		
Generate association operations		
Association implementation:	Vector 🔽	
JDK Version:	5.0 🔽	
Adv	vanced Options	

Figure 10.17 - Edit the options

Name	Description
Attribute prefix	Configure the prefix of attribute.
Parameter prefix	Configure the prefix of parameter.
Generate Ant build file	Check this option to generate Ant build file.
Implements abstract operations	Check this option to implement abstract operations in generated classes.
Generate association operations	If you check this box, when a role is selected to provide setter/getter, the corresponding operation(s) will be generated for the role's attribute.
Association implementation	Select from drop-down menu any of the options to configure the multiplicity of a class: Vector - The collection is expandable size. Array - The collection has fixed size.
JDK Version	Select this option to generate code for target JDK. The version SDE for Eclipse supports are 5.0 and 1.4.
Advanced Options	Edit the advance options.

Table 10.1

S Advanced Options for Java Code Generation	package demo;
Attribute prefix: 1	import java.util.List;
Parameter prefix: 2 a	import demo.Polygon;
Indentation: (3) <tab> Tab</tab>	import java.util.Vector;
Generate unnamed attribute	3 public class PorgonImage(E) extends demo.Image ( private int attrib (5) prefix:
Unnamed attribute: 4 Unnamed_\${classname}_ Classname	private int invalid that;
Invalid char replacement: 5	priv O Object _default_attribute_type;
Default attribute type: 6 Object	private List <polygon> unnamed Polygon = new Vector (Polygon&gt;();</polygon>
Default parameter type: 7 Object	<pre>public void default operation return_type() (</pre>
Default operation return t 8 void	throw new UnsupportedOperationException();
Generate Ant build file	) (7) (2)
Implement abstract operations 9	public void operation (Object apefault parameter type) (
Generate association operations (10)	throw new UnsupportedOperationException();
Local variable prefix: 11	·
Association implementation 2 Vector	public void addUnnamed_Polygon_(Polygon aUnnamed Polygon_) (
DOK Version: 5.0	thisunnamed_Polygonadd(aUnnamed_Polygon_);
Version Details	
	<pre>public void removeUnnamed_Polygon_(Polygon aUnnamed_Polygon_) (</pre>
Generics (Template)	thisunnamed_Polygonremove(aUnnamed_Polygon_);
(13)	¹ 10
Set as Default Restore to Default OK Cancel	<pre>public Polygon_coUnnamed_Polygon_krray() (     Polygon[]</pre>
	<pre>public void render() {    throw new UnsupportedOperationException();</pre>

Figure 10.18 - Example illustrating the functions of different options in Advanced Options

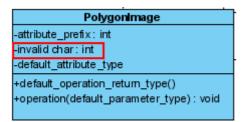


Figure 10.19 - Diagram of invalid char

4. Specify the **Output path** and select **Generate** to generate Java.

🖨 Instant Generator	
Language: Java 🔽	
Select elements for code generation	Options
<ul> <li>Polygon</li> <li>Polygon</li> <li>Polygon</li> <li>PolygonImage</li> <li>PolygonImage</li> <li>Rectangle</li> <li>Square</li> <li>Y Square</li> <li>V Triangle</li> </ul>	Attribute prefix: Parameter prefix: a Generate Ant build file Miniplement abstract operations Generate association operations Association implementation: JDK Version: 5.0 Advanced Options
Output path: Generate to Source Folder	
C:\Demo\Java	
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instantge	enerator\java
Prompt to confirm overwrite file	
Generator Output	
Open output folder Previe	ew Generate Close

Figure 10.20 - Select Generate

5. The progress of generation is shown in the **Generator Output** column. After generation, you can select **Open output folder** to open the output folder generated.

Output path:	Generate to Source Folder	
	C:\Demo\Java	
Template directory:	C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\java	
🔽 Prompt to conf	irm overwrite file	
Generator Outpu	it.	
Saving Rectangle Saving PolygonIr	ava to C:\Demo\Java e.java to C:\Demo\Java nage.java to C:\Demo\Java	^
	ava to C:\Demo\Java va to C:\Demo\Java	<b>•</b>
Open output fol	der Preview Generate Clos	e

Figure 10.21 - Open output folder

#### 6. Java files are generated.

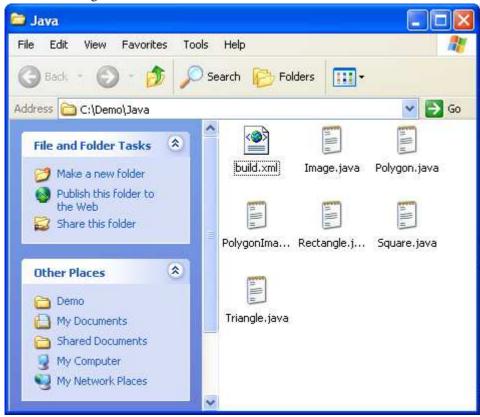


Figure 10.22 - Java files generated

# **Generating C#**

SDE for Eclipse can generate C# file. To generate C#:

1. Open Instant Generator dialog for C# by clicking Modeling > Instant Generator > C#... in the main menu.

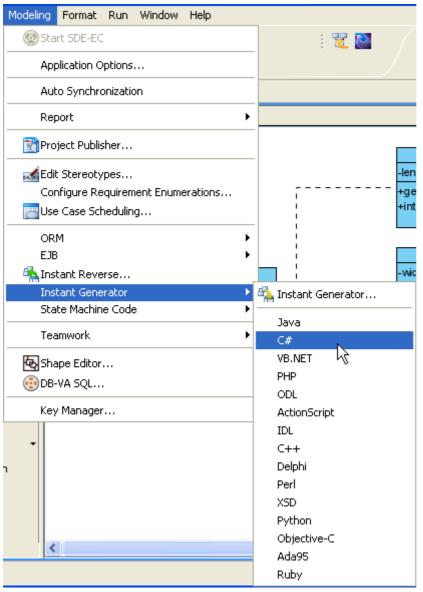


Figure 10.23 - Open Instant Generator dialog for C#

#### 2. The Instant Generator dialog box for C# is displayed.

🖨 Instant Generator		
Language: C#  Select elements for code generation Polygon Image Polygon Polygon	Options  Create folder for namespace  Implements abstract method	
PolygonImage Rectangle Square Triangle	Follow Microsoft naming convention Attribute prefix: Parameter prefix: a	
Output path: Generate to Source Folder	Advanced Options	
Template directory:       C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\csharp		
Prompt to confirm overwrite file     Generator Output		
Open output folder P	review Generate Close	

Figure 10.24 - Instant Generator dialog box

3. Choose the classes or packages you want to generate C#.

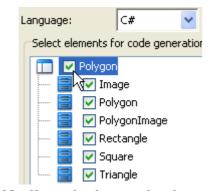


Figure 10.25 - Choose the classes and packages

### 4. Edit the Options.

Options
Create folder for namespace
Implements abstract method
Follow Microsoft naming convention
Attribute prefix:
Parameter prefix: a
Advanced Options

Figure 10.26 - Edit the options

Name	Description	
Create folder for namespace	Create a new folder for namespace to avoid name conflict.	
Implements abstract method	Check this option to implement abstract methods in generated classes.	
Follow Microsoft naming convention	Name the file generated using the Microsoft naming convention. If you uncheck this option, you can enter the prefix for attribute and parameter of prefix.	
Attribute prefix	Configure the prefix of attribute.	
Parameter prefix	Configure the prefix of parameter.	
Advanced Options	Edit the advance options.	

Table 10.2

Default attribute type:       2000         Default parameter type:       2000         Default parameter type:       2000         Default operation return type:       2000         Default operation return type:       2000         Create folder for namespace       3000         Provide int attribute_prefix;       private int attribute_prefix;         private int attribute_prefix;       private int attribute_type;         Parameter type:       2000         Auto implement base dass abstract method       3000         Parameter prefix:       2000         Polygoning:       2000         Pa	S Advanced Options for C# Code Generation	1 using System:
Default parameter type: Ordealt parameter type: Ordealt operation return type Versite folder for namispace Auto implement base dass abstract method Provide folder for namispace Provide fold	Default strubute hone:	2 Enamespace demo ( 5
Defail operation return type void 3 Association implementation: Accomplement base dass adstract method Polynoming convertion Activity prefix: Parameter prefix: Diagram for abstract method Polynominge thicke_prefix int Polynominge thicke_prefix int Polynominge thicke_prefix int Provide int attribute_prefix; private int attribute_prefix; private int invalid_char; private for prefix; private int invalid_char; private for prefix; private for prefix		4 E public class PolygonImage <e> : Image (</e>
Association implementation: wray () () () () () () () () () () () () ()		5
<pre>V Create folder for namespace () V Auto implement base class abstract method</pre>		
<pre>v Auto implement base dass abstract method () v Auto implement base dass abstract method () v Auto implement base dass abstract method () v Follow Microsoft naming convertion (* Not implemented); } v Follow Microsoft naming convertion (* Not implemented); } v Follow Microsoft naming convertion (* Not implemented); } v Follow Microsoft naming convertion (* Not implemented); } v Follow Microsoft naming convertion (* Not implemented); } v Follow Microsoft naming convertion (* Not implemented); } v Follow Microsoft naming convertion (* Not implemented); } v Follow Microsoft naming convertion (* Not implemented); } v Follow Microsoft naming convertion (* Not implemented); } v Follow Microsoft naming convertion (* Not implemented); } v Follow Microsoft naming convertion (* Not implemented); } v Follow Microsoft naming convertion (* Not implemented); } v Follow Microsoft naming convertion (* Not implemented); } v Follow Microsoft naming convertion (* Not implemented); }  public void Render() { throw new System.Exception(* Not implemented); }  private Polygon[] GetPolygons; public void SetPolygons() { return polygons; }  public void SetPolygons(Polygon[] aValue) { polygons = aValue; } } </pre>		
<pre>     Auto implement base class abstract method     Auto implement base class abstract method     Polyon Microsoft naming convertion     Polyon Microsoft naming convertio</pre>		
<pre>Prolow Microsoft naming convention () Attribute prefix: Parameter prefix:  Parameter prefix:  Parameter prefix:  Diagram for abstract method Polygon/mage intribute_prefix:  Diagram for abstract method Polygon/mage Polygon/mage</pre>	Auto implement base class abstract method 6	
Attracte prefix: Parameter prefix: Parameter prefix: Set as Default Restore to Default OK Cancel	Follow Microsoft naming convention	
Parameter prefix: Parameter prefix:	Attribute prefix:	
Is       throw new System.Exception("Not implemented");         Set as Default       OK         Cancel       If         Is       If	Parameter prefix:	THE PARTY OF THE P
Set as Default       Restore to Default       OK       Cancel		
Set as Default       Restore to Default       OK       Cancel       117       Image         19       10       Image       117       Image		
Set as Default       OK       Cancel       19       throw new System.Exception("Not implemented");         Diagram for abstract method       Image       20       21       20       21         Diagram for abstract method       Image       Image       23       public Polygon[] GePolygons;       public Polygons;         Diagram for abstract method       Image       Image       23       24       24       25       24         Image       Image       Image       Image       23       10       10       10       10       10         Diagram for abstract method       Image       Image       Image       23       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10       10		17 6
Diagram for abstract method Polygonimage -stribute_greak: int -otenut_intribute_type +cenute(r): void Polygonimage -stribute_greak: int -otenut_intribute_type() +cenute(r): void Polygonimage -stribute_type() +cenute(r): void Polygonimage -stribute_greak: int -otenut_intribute_type() +cenute(r): void Polygonimage -stribute_type() +cenute(r): void Polygonimage -stribute_greak: int -stribute_greak: int -stribute_type() -		
Diagram for abstract method Polygonimage -attribute_prefx: int -bread d fina: int -default_antribute_type *defau	Set as Default Restore to Default OK Cancel	
Diagram for abstract method       Image +render(): void       32 23 23 23 23 23 23 23 23 23 23 23 23 2		
Diagram for abstract method Polygonimage -attribute_prefx; int -mvalid dimar; int -default_parameter type); void Vertice of the term polygon [] GetPolygons() { return polygons; 25 public Void SetPolygons() { return polygons; 26 public void SetPolygons() aValue) { polygons = aValue; 30 31 32 )	la ses	
Diagram for abstract method Diagram for abstract method Polygonimage -attribute_prefx; int -mvalid char; int -default_antribute_jorefx; int -default_antr		
Diagram for abstract method  Polygonimage  attribute_prefix: int  at		
Diagram for abstract method Polygonimage -attribute_prefx: int -invalid char: int -default_attribute_type +default_premation_return_type() +operation_default_parameter type): void +operation_default_parameter type); void	T I	
Polygonimage     1     28       -attribute_prefx: int     29       -invalid char: int     29       -default_attribute_type     30       +default_operation_return_type()     31       +operation(default_parameter_type): void     32	Diagram for abstract method	· · · · · · · · · · · · · · · · · · ·
-attribute_prefix: int 29 -invalid char: int 29 -default_attribute_type 31 +default_operation_return_type() +operation(default_parameter_type): void 32		
-default_athribute_type X 30 31 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 32 30 31 30 31 30 31 30 30 30 30 30 30 30 30 30 30 30 30 30		
+default_operation_return_type() 31 +operation(default_parameter_type): void 32		
vopenauon(delaut parameter type), void		

Figure 10.27 - Example illustrating the functions of different options in Advanced Options

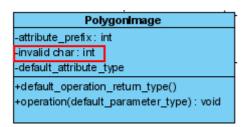


Figure 10.28 - Diagram of invalid char

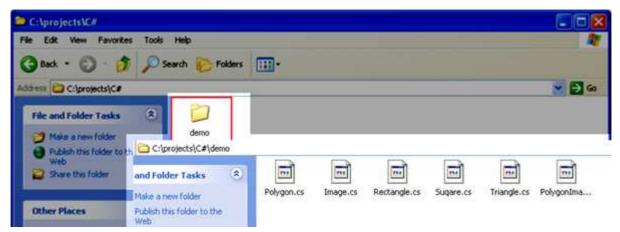


Figure 10.29 - File generated with folder created for namespace

#### 5. Specify the **Output path** and select **Generate** to generate C#.

👄 Instant Generator	X		
Language: C# 💌			
Select elements for code generation	Options		
Polygon	Create folder for namespace		
> 📄 🔽 Image > 🗃 🔽 Polygon	✓ Implements abstract method		
	Follow Microsoft naming convention		
	Attribute prefix:		
🔤 🗹 Triangle	Parameter prefix: a		
	Advanced Options		
Output path: Generate to Source Folder			
C:\projects\C#			
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instan	tgenerator\csharp		
Prompt to confirm overwrite file			
Generator Output			
Open output folder P	review Generate Close		

Figure 10.30 - Select Generate

Prompt to confirm overwrite file	
Generator Output	
Saving generated code Saving Triangle.cs to C:\projects\C# Saving Square.cs to C:\projects\C# Saving Rectangle.cs to C:\projects\C# Saving Polygon.cs to C:\projects\C#	
Open output folder	Preview Generate Close

Figure 10.31 - Open output folder

#### 7.C# files generated.

C:\projects\C#					
le Edit View Favorites Tools	Help				
3) Back 🔹 🕥 🚽 🏂 🔎 Sea	arch 🌔 Folders 📋	<b></b>			
ldress 🛅 C:\projects\C#					👻 🄁 Go
File and Folder Tasks 🙁					
🧭 Make a new folder	111	<u>a a a</u>			
Publish this folder to the Web					
🛃 Share this folder	Polygon.cs	Square.cs	Rectangle.cs	Triangle.cs	

Figure 10.32 - C# files generated

# **Generating VB.NET**

SDE for Eclipse can generate VB.NET file. To generate VB.NET file:

1. Open the **Instant Generator** dialog for VB.NET by clicking **Modeling** > **Instant Generator** > **VB.NET...** in the main menu.

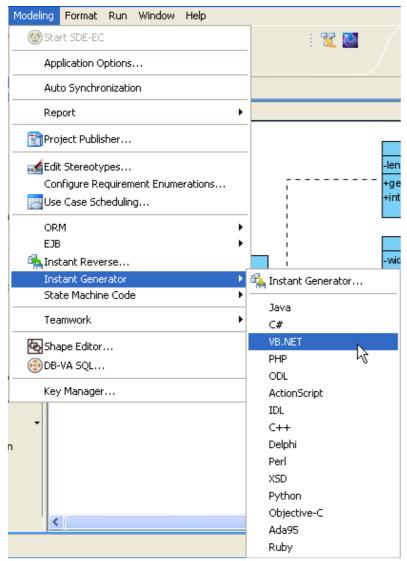


Figure 10.33 - Open Instant Generator dialog for VB.NET

#### 2. The Instant Generator dialog box for VB.NET is displayed.

🖨 Instant Generator	X	
Language: VB.NET 🗸		
Select elements for code generation	Options	
Polygon	Create folder for namespace	
- Image Image Polygon	Implements abstract method	
PolygonImage	Follow Microsoft naming convention	
- Rectangle - Square	Attribute prefix:	
	Parameter prefix: a	
	Advanced Options	
Output path: Generate to Source Folder		
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instanl	tgenerator\vbnet	
Prompt to confirm overwrite file		
Generator Output		
Open output folder Pr	review Generate Close	

Figure 10.34 Instant Generator dialog box

3. Choose the classes or packages you want to generate .

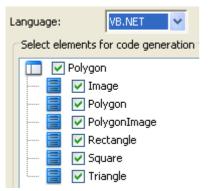


Figure 10.35 - Choose the classes and packages

### 4. Edit the Options.

Options
Create folder for namespace
Implements abstract method
Follow Microsoft naming convention
Attribute prefix:
Parameter prefix: a
Advanced Options

Figure 10.36 - Edit the options

Name	Description	
Create folder for namespace	Create a new folder for namespace to avoid name conflict.	
Implements abstract method	Check this option to implement abstract methods in generated classes.	
Follow Microsoft naming convention	Name the file generated using the Microsoft naming convention. If you uncheck this option, you can enter the prefix for attribute and parameter of prefix.	
Attribute prefix	Configure the prefix of attribute.	
Parameter prefix	Configure the prefix of parameter.	
Advanced Options	Edit the advance options.	

Table 10.3

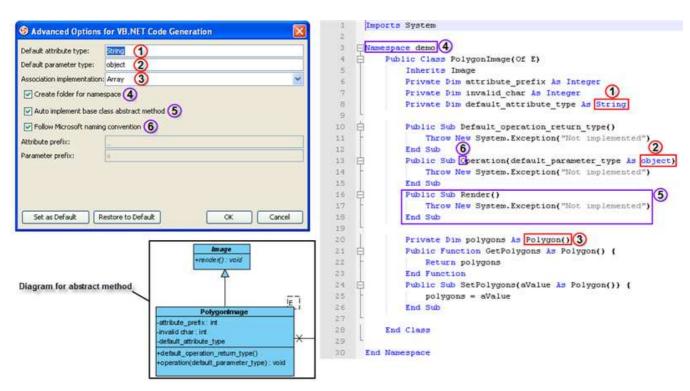


Figure 10.37 - Example illustrating the functions of different options in Advanced Options

🚔 C:\projects\VB.NET	
File Edit View Favorites Tools Help	1
🔇 Back + 🔘 · 🍻 🔎 Search 📂 Folders 💷 ·	
Address C:lprojects\VB.NET	🖌 🄁 Go
File and Folder Tasks     Image: Control of the second secon	
Publish the C:\projects\VB.NET\demo     Web     Web     Share the and Folder Tasks     M     M     M     M     M     M     M	-
Make a new folder         Polygon.vb         Image.vb         Rectangle.vb         Sugare.vb         Triangle.vb         PolygonIma           Other Places         publich this folder to the         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v         v	

Figure 10.38 - File generated with folder created for namespace

#### 5. Specify the **Output path** and select **Generate** to generate VB.NET.

🖨 Instant Generator	×		
Language: VB.NET Select elements for code generation Polygon Polygon Polygon Polygon Polygon	Options  Create folder for namespace  Implements abstract method  Follow Microsoft naming convention		
Rectangle Square	Attribute prefix: Parameter prefix: a		
	Advanced Options		
Output path: Generate to Source Folder C:\projects\VB.NET			
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\in:	stantgenerator\vbnet		
Prompt to confirm overwrite file			
Generator Output			
Open output folder	Preview Generate Close		

Figure 10.39 - Select Generate

Prompt to confirm overwrite file	
Generator Output	
Saving generated code Saving Triangle.vb to C:\projects\VB.NET Saving Square.vb to C:\projects\VB.NET Saving Rectangle.vb to C:\projects\VB.NET Saving Polygon.vb to C:\projects\VB.NET	
Open output folder	Preview Generate Close

Figure 10.40 - Open output folder

#### 7.VB.NET files generated.

C:\projects\WB.NET					
le Edit View Favorites Tools <mark>He</mark>	lp.				
🗿 Back 👻 🕥 🕘 🏂 🔎 Search	n 🌔 Folders 📔	-			
dress 🛅 C:\projects\VB.NET					🔽 🄁 Go
File and Folder Tasks 🔕					
🧭 Make a new folder			9 9 9		
Publish this folder to the Web					
😂 Share this folder	Polygon.vb	Square.vb	Rectangle.vb	Triangle.vb	

Figure 10.41 - VB.NET files generated

# **Generating PHP**

SDE for Eclipse can generate PHP file. To generate PHP file:

1. Open the Instant Generator dialog for PHP by clicking Modeling > Instant Generator > PHP... in the main menu.

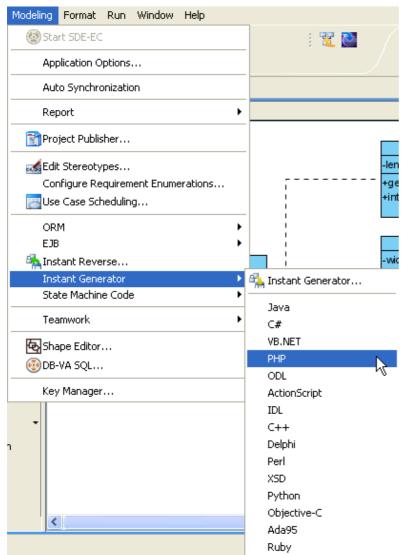


Figure 10.42 - Open Instant Generator dialog for PHP

#### 2. The Instant Generator dialog box for PHP is displayed.

🖨 Instant Generator	
Language:   Select elements for code generation   Polygon   Image   Polygon   PolygonImage   Rectangle   Square   Triangle	Options Attribute prefix: Parameter prefix: a  Implement abstract operations Generate association operations Directory: Follow pack  Advanced Options
Output path: Generate to Source Folder	
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instantger	
Prompt to confirm overwrite file	
Generator Output	
Open output folder Prev	riew Generate Close

Figure 10.43 - Instant Generator dialog box

 $\ensuremath{\mathsf{3.Choose}}$  the classes or packages you want to generate .

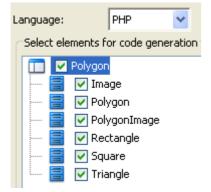


Figure 10.44 - Choose the classes and packages

#### 4. Edit the Options.

Options	
Attribute prefix:	_
Parameter prefix:	a
🔽 Implement ab	stract operations
🔽 Generate ass	ociation operations
Directory:	Follow package 🔽
Ad	Ivanced Options

### Figure 10.45 - Edit the options

Name	Description
Attribute prefix	Configure the prefix of attribute.
Parameter prefix	Configure the prefix of parameter.
Implements abstract operations	Check this option to implement abstract operations in generated classes.
Generate association operations	If you check this box, when a role is selected to provide setter/getter, the corresponding operation(s) will be generated for the role's attribute.
Directory	Select from drop-down menu any of the options to configure the output directory: Flat level: Save files to the output path defined below. Follow package: Create a new directory with the package names in the output path and save files there.
Advanced Options	Edit the advance options.

Table 10.4

		php</th
	2: 2	require_once(realpath(dirname(FILE)) . '//demo/Polygon.php');
	31	require once(realpath(dirname( FILE )) . '//demo/Image.php');
	4	
	5 8	class PolygonImage extends Image (
	6	/**
	7	T @AttributeType int
		3 CattributeType int
	8	
	9	private attribute_prefix;
	28	/**
	11	* @AttributeType int
	12.	*/ 6
	13	private \$_invalid_:har;
	14	private \$ default attribute type;
	the second se	/**
	15	
	16	* @AssociationType demo.Polygon 5
	17	
	18	private \$ unnamed Polygon = array(): 4
Parameter prefix: (2) a	19	
Indentation: (3) <ta8> Tab</ta8>	20 白	public function default operation return type() (
	21	// Not yet implemented
Generate unnamed attribute (4)		22. Piol yes impresented
	22	
	23	
Invalid char replacement: _ 6	24	/**
Implement abstract operations (7)	25	* @ReturnType void
	26	· @ParamType aDefault_parameter_type
Generate association operations 8	27	-/ 😕
	28 1	public function operation(
cocal variable pretix:	29	// Not yet implemented
Directory: Follow package	30	an teor yes implemented
	Charles and Charles	8
	31	
	32	[## ·
	33	* @ReturnType vold
	34	* @ParamType aUnnamed_Polygon_demo.Polygon
Set as Default Restore to Default OK Cancel	3.5	-/
	36 1	public function addUnnamed_Polygon_(Polygon \$aUnnamed_Polygon_) (
	37 T	
	0.00	array_push(\$this->_unnamed_Polygon_, \$aUnnamed_Polygon_);
	38	
	39	
	40	7**
	60)	7
	61	* @ReturnType void
	20.00	*/
	62	
	63 印	<pre>public function render() (</pre>
	64	// Not yet implemented
	65 -	
	66 -1	
	67	7>

Figure 10.46 - Example illustrating the functions of different options in Advanced Options

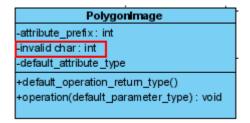


Figure 10.47 - Diagram of invalid char

#### 5. Specify the **Output path** and select **Generate** to generate PHP.

🖨 Instant Generator	
Language: PHP 💌	Options
<ul> <li>Polygon</li> <li>Polygon</li> <li>Polygon</li> <li>Polygon</li> <li>PolygonImage</li> <li>Rectangle</li> <li>Square</li> <li>Y Triangle</li> </ul>	Attribute prefix: Parameter prefix: a Implement abstract operations Generate association operations Directory: Follow pack V Advanced Options
	Source Folder
C:\Projects\php	
Prompt to confirm overwrite file	3.2-win32 (eclipse (soe (instantgenerator (pnp
Generator Output	
Open output folder	Preview Generate Close

Figure 10.48 - Select Generate

Prompt to confirm overwrite file	
Generator Output	
Saving generated code Saving Triangle.php to C:\projects\php Saving Square.php to C:\projects\php Saving Rectangle.php to C:\projects\php Saving Polygon.php to C:\projects\php	
Open output folder	Preview Generate Close

Figure 10.49 - Open output folder

#### 7.PHP files generated.

C:\projects\php					
File Edit View Favorites Tools	Help				
🔇 Back 🔹 🔘 - 🍺 🔎 Se	arch 🜔 Folders	<b>I</b> -			
Address 🛅 C:\projects\php					💙 🋃 Go
File and Folder Tasks					
🧭 Make a new folder	۱	(3)	<b>(3)</b>	1	
Publish this folder to the Web					
😂 Share this folder	Polygon.php	Square.php	Rectangle.php	Triangle.php	

Figure 10.50 - PHP files generated

# **Generating ODL**

SDE for Eclipse can generate ODL file. To generate ODL file:

1. Open the **Instant Generator** dialog for ODL by clicking **Modeling** > **Instant Generator** > **ODL**... in the main menu.

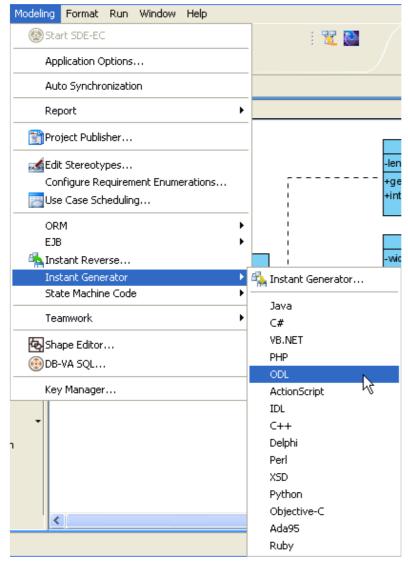


Figure 10.51 - Open Instant Generator dialog for ODL

#### 2. Instant Generator dialog box for ODL is displayed.

Language: OC Select elements for code generation Select elements for code generation Polygon Bell Polygon Bel	🖨 Instant Generator	$\mathbf{X}$
Polygon          Image         Polygon         Prompt to confirm overwrite file		
Image   Polygon   PolygonTmage   Rectangle   Square   Triangle     Advanced Options   Output path:    Generate to Source Folder       Template directory:    C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\odl		Options
Polygon   PolygonImage   Rectangle   Square   Triangle     Advanced Options   Output path:    Generate to Source Folder       Template directory:    C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\odl		
PolygonImage   Rectangle   Square   Triangle     Advanced Options     Output path:   Generate to Source Folder       Template directory:     C:\eclipse-5DK-3.2-win32\eclipse\sde\instantgenerator\odl		
Square   Triangle     Advanced Options     Output path:   Generate to Source Folder       Template directory:   C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\odl     Prompt to confirm overwrite file		
Image   Image   Image   Image   Advanced Options   Output path:   Image: Image   Image: Image		
Advanced Options   Output path:   Generate to Source Folder     Template directory:   C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\odl     Prompt to confirm overwrite file		
Output path:       Generate to Source Folder             Template directory:       C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\odl         Prompt to confirm overwrite file		
Output path:       Generate to Source Folder             Template directory:       C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\odl         Prompt to confirm overwrite file		
Output path:       Generate to Source Folder             Template directory:       C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\odl         Prompt to confirm overwrite file		
Output path:       Generate to Source Folder             Template directory:       C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\odl         Prompt to confirm overwrite file		
Output path:       Generate to Source Folder             Template directory:       C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\odl         Prompt to confirm overwrite file		
Output path:       Generate to Source Folder             Template directory:       C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\odl         Prompt to confirm overwrite file		
Image: Complete directory:       C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\odl          Image: Prompt to confirm overwrite file       Image: Complete directory of the stantgenerator		Advanced Options
Image: Complete directory:       C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\odl          Image: Prompt to confirm overwrite file       Image: Complete directory of the stantgenerator		
Template directory:       C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\odl         Prompt to confirm overwrite file	Output path: Generate to Source Folder	
Prompt to confirm overwrite file		
_	Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instantge	enerator\odi
Generator Output	Prompt to confirm overwrite file	
	Generator Output	
Open output folder Preview Generate Close	Open output folder Preview	Generate Close

Figure 10.52 - Instant Generator dialog box

3. Choose the classes or packages you want to generate .

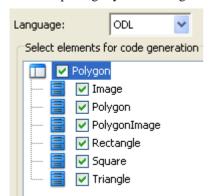


Figure 10.53 - Choose the classes and packages

#### 4. Specify the Output path and select Generate to generate ODL.

👄 Instant Generator 🛛 🔀
Language: ODL V Select elements for code generation Options
Advanced Options         Output path:       Generate to Source Folder         C:\Projects\odl
Template directory:         C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\odl
Prompt to confirm overwrite file
Generator Output
Open output folder Preview Generate Close

Figure 10.54 - Select Generate

ſ	Generator Output	
	Saving generated code	~
	Saving Triangle.odl to C:\projects\odl	
	Saving Square.odl to C:\projects\odl Saving Rectangle.odl to C:\projects\odl	
	Saving Polygon.odl to C:\projects\odl	
l		
[	Open output folder	Close

Figure 10.55 - Open output folder

#### 6.ODL files generated.

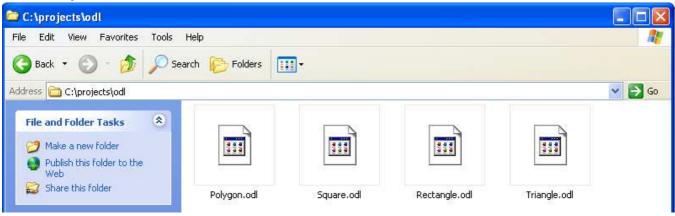


Figure 10.56 - ODL files generated

# **Generating ActionScript**

SDE for Eclipse can generate ActionScript file. To generate ActionScript file:

1. Open the **Instant Generator** dialog for ActionScript by clicking **Modeling** > **Instant Generator** > **ActionScript...** in the main menu.

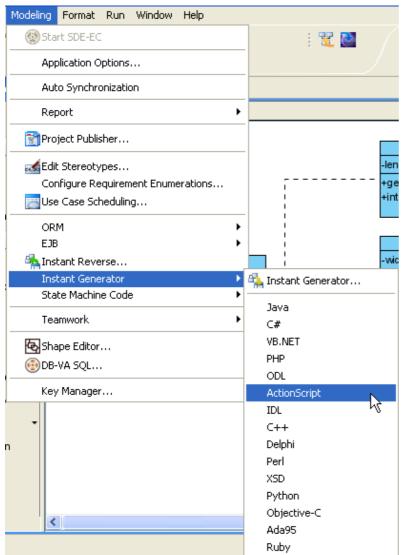


Figure 10.57 - Open Instant Generator dialog for ActionScript

2. The Instant Generator dialog box for ActionScript is displayed.

🖨 Instant Generator 🛛 🔀				
Language: ActionScript V Select elements for code generation	Options			
<ul> <li>Polygon</li> <li>Polygon</li> <li>Polygon</li> <li>PolygonImage</li> <li>Rectangle</li> <li>Square</li> <li>Triangle</li> </ul>	Attribute prefix: Parameter prefix: a Implement abstract operations Generate association operations Advanced Options			
Output path: Generate to Source Folder				
Template directory:         C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\actionscript				
Prompt to confirm overwrite file				
Generator Output				
Open output folder Prev	iew Generate Close			

Figure 10.58 - Instant Generator dialog box

3. Choose the classes or packages you want to generate .

Language:		ActionScript 🔽	
	Select elements for code generation		
	🔲 🗹 Polygon		
	🔚 🖂 🔚 💽 Ima	ige	
	Poly 🖂 💽 Poly	/gon	
	Poly 🖂 💽 Poly	/gonImage	
	🚽 🖂 📑 🔽 Rec	tangle	
	🔄 🖂 🚍 🔽 Squ	lare	
	📃 🦾 🚍 🔽 Tria	ingle	

Figure 10.59 - Choose the classes and packages

#### Chapter 10 – Instant Generator

### 4. Edit the Options.

Options	
Attribute prefix:	_
Parameter prefix:	a
V Implement ab:	stract operations
🔽 Generate asso	ciation operations
Adv	anced Options

Figure 10.60 - Edit the options

Name	Description
Attribute prefix	Configure the prefix of attribute.
Parameter prefix	Configure the prefix of parameter.
Implements abstract operations	Check this option to implement abstract operations in generated classes.
Generate association operations	If you check this box, when a role is selected to provide setter/getter, the corresponding operation(s) will be generated for the role's attribute.
Advanced Options	Edit the advance options.

Table 10.5

	<pre>public class PolygonImage extends Image</pre>
	11 12 (2) (8)
S Advanced Options for ActionScript Code Generation	13 public function operation (aperault_parameter_type:Cbject) :void_
Attribute prefix: 1	14 E ( 15 // Not yet implemented
Parameter prefix: 2 a	16 return null;
Indentation: 3 <tab> Tab</tab>	17 -11 )
Generate unnamed attribute 4	18 19 public function addUnnamed Polygon (aUnnamed Polygon :Polygon):Void
Unnamed attribute: 5 Unnamed_\$(classname)_ Classname	20 E (
Invalid char replacement: 6	<pre>21 thisunnamed_Polygonpush(aUnnamed_Polygon_);</pre>
Default attribute type: 🕧 Object	22 - )
Default parameter type: (8) Object	23 24 public function removeUnnamed Polygon (aUnnamed Polygon :Polygon):Void
Default operation return type: Void 9	25 E (
Implement abstract operations 10	<pre>26 for (var i:Number = 0; i &lt; thisunnamed_Polygonlength; i++)</pre>
Generate association operations	
Local variable prefix:	<pre>28 if (thisunnamed_Polygon_[i] == aUnnamed_Polygon_) 29 E (</pre>
ActionScript Version: 3.0	<pre>30 this. unnamed_Polygonsplice(1, 1);</pre>
	31 - )
	32 )
	33 - )
	35 public function toUnnamed_Polygon_Array():Array
Set as Default Restore to Default OK Cancel	36 日 ( )
	37 return this, unnamed_Polygon_;
	38 - )
	40 public function render():void_
	41 🖯 (
	42 // Not yet implemented 43 return null;
	43 return null;
	an Ly L

Figure 10.61 - Example illustrating the functions of different options in Advanced Options

Polygonimage
-attribute_prefix:int
-invalid char : int
-default_attribute_type
+default_operation_return_type()
+operation(default_parameter_type) : void

Figure 10.62 - Diagram of invalid char

5. Specify the **Output path** and select **Generate** to generate ActionScript.

🖨 Instant Generator	X
Language: ActionScript   Select elements for code generation <ul> <li>Polygon</li> <li>Polygon</li> <li>PolygonImage</li> <li>Rectangle</li> <li>Square</li> <li>Triangle</li> </ul>	Options Attribute prefix: Parameter prefix: a  ✓ Implement abstract operations  ✓ Generate association operations
Output path: Generate to Source Folder	
C:\Projects\ActionScript	
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instantge	enerator\actionscript
Prompt to confirm overwrite file	
Generator Output	
Open output folder Prev	iew Generate Close

Figure 10.63 - Select Generate

Prompt to confirm overwrite file	
Generator Output	
Saving Square.as to C(\Projects\ActionScript Saving Rectangle.as to C(\Projects\ActionScript Saving PolygonImage.as to C(\Projects\ActionScript Saving Polygon.as to C(\Projects\ActionScript Saving Image.as to C(\Projects\ActionScript	
Open output folder	Preview Generate Close

Figure 10.64 - Open output folder

#### 7.ActionScript files generated.

e Edit View Favorites Tools	Help				4
🕽 Back 👻 🕥 - 🏠 🔎 Se	earch 🜔 Folders 📘				
dress 🛅 C:\projects\ActionScript					💌 🄁 G
File and Folder Tasks 🛞					
🧭 Make a new folder	Ì	Ø	Ì	Ø	
Publish this folder to the Web					
😂 Share this folder	Polygon.as	Square.as	Rectangle.as	Triangle.as	

Figure 10.56 - ActionScript files generated

# **Generating IDL**

SDE for Eclipse can generate IDL file. To generate IDL file:

1. Open the Instant Generator dialog for IDL by clicking Modeling > Instant Generator > IDL... in the main menu.

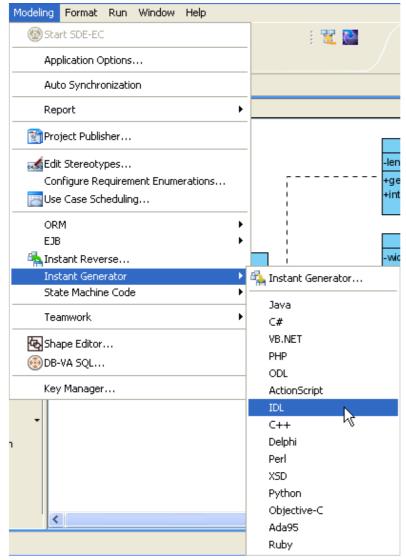


Figure 10.66 - Open Instant Generator dialog for IDL

2. The Instant Generator dialog box for IDL is displayed.

🖨 Instant Generator 🛛 🔀				
Language: IDL  Select elements for code generation	Options			
<ul> <li>Polygon</li> <li>Polygon</li> <li>Polygon</li> <li>PolygonImage</li> <li>Rectangle</li> <li>Square</li> <li>Triangle</li> </ul>	Attribute prefix: Parameter prefix: a Implement abstract operations Generate association operations Advanced Options			
Output path: Generate to Source Folder				
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\idl				
Prompt to confirm overwrite file				
Generator Output				
Open output folder Previ	iew Generate Close			

Figure 10.67 - Instant Generator dialog box

3. Choose the classes or packages you want to generate .

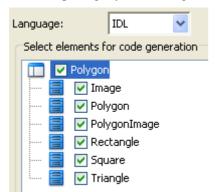


Figure 10.68 - Choose the classes and packages

### 4. Edit the Options.

Options
Attribute prefix:
Parameter prefix: a
Implement abstract operations
Generate association operations
Advanced Options

Figure 10.69 - Edit the options

Name	Description
Attribute prefix	Configure the prefix of attribute.
Parameter prefix	Configure the prefix of parameter.
Implements abstract operations check this option to implement abstract operations in generated classes.	
Generate association operations	If you check this box, when a role is selected to provide setter/getter, the corresponding operation(s) will be generated for the role's attribute.
Advanced Options	Edit the advance options.

## Table 10.6

S Advanced Options for IDL Code Generation	1 interface PolygonImage : Image ( ) attribute long attribute prefix;
Attribute prefix: 1 a	3 attribute long J invalidU0020char; 4 attribute ::CORBA::WStringValue J default attribute type;
Indentation: 3 <tab> Tab</tab>	5 attribute ::org::omg::boxedRMI::seq1_Polygon J_unnamed_Polygon ;
Generate unnamed attribute	void default_operation_return_type();
Unnamed_st(classname)Classname	9 8-void operation(inout ::CORBA::WStringValue aDefault_parameter_type);
Default attribute type: 6 ::CORBA::WStringValue Default parameter type: 7 ::CORBA::WStringValue	10 11 void_addUnnamed_Polygon_(Polygon_aUnnamed_Polygon_);
Default operation return type: void 8	12
□ Implement abstract operations 9	13 10 void_ removeUnnamed_Polygon_(Polygon aUnnamed_Polygon_); 14
C Generate association operations	<pre>15 15 16 15 15 16</pre>
	17 9 void_ render();
Set as Default Restore to Default OK Cancel	10 17

Figure 10.70 - Example illustrating the functions of different options in Advanced Options

5. Specify the Output path and select Generate to generate ActionScript.

🖨 Instant Generator	X
Language: IDL  Select elements for code generation  Polygon  Polygon  Polygon  Polygon  PolygonImage  Rectangle  Square  Triangle	Options Attribute prefix: Parameter prefix: a ✓ Implement abstract operations ✓ Generate association operations
	Advanced Options
Output path: Generate to Source Folder C:\Projects\idl	
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instanl	tgenerator\idl
Prompt to confirm overwrite file	
Generator Output	
Open output folder Pr	review Generate Close

Figure 10.71 - Select Generate

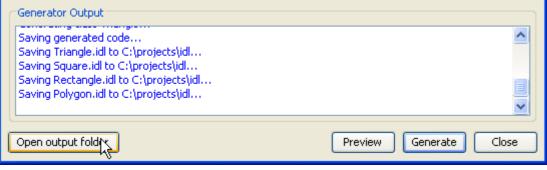


Figure 10.72 - Open output folder

#### 7.IDL files generated.

e Edit View Favorites To	ols Help				4
🕽 Back 🝷 🕥 – 🍺 🎉	🕽 Search 🛛 🔂 Folders 🛛 🛐				
dress 🛅 C:\projects\idl					💌 🄁 G
File and Folder Tasks					
🧭 Make a new folder	4 4 4	4 4 4	4 9 4 4 9 4	111	
Publish this folder to the Web					
🙀 Share this folder	Polygon.idl	Square.idl	Rectangle.idl	Triangle.idl	

Figure 10.73 - IDL files generated

# **Generating C++**

SDE for Eclipse can generate C++ file. To generate C++ file:

1. Open the Instant Generator dialog for IDL by clicking Modeling > Instant Generator > C++... in the main menu.

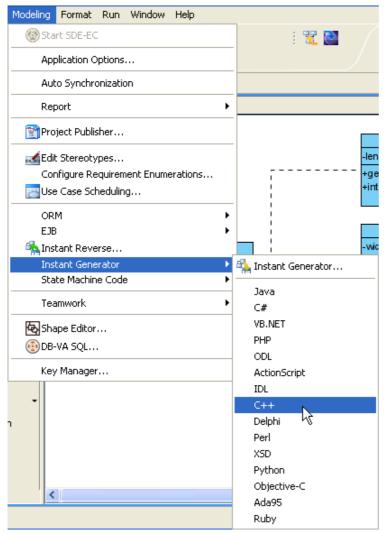


Figure 10.74 - Open Instant Generator dialog for C++

2. The Instant Generator dialog box for C++ is displayed.

🖨 Instant Generator			
Language: C++ 💙	Options		
<ul> <li>Polygon</li> <li>Image</li> <li>Polygon</li> <li>PolygonImage</li> <li>Rectangle</li> <li>Square</li> <li>Triangle</li> </ul>	Attribute prefix: Parameter prefix: Parameter prefix: Implement abstract operations Generate association operations Association implementation: Vector Advanced Options		
Output path: Generate to Source Folder			
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instantger	nerator\cplusplus		
Prompt to confirm overwrite file			
Open output folder Previe	ew Generate Close		

Figure 10.75 - Instant Generator dialog box

3. Choose the classes or packages you want to generate .

La	ngua	ge:		C++	*	
r	Select elements for code generation					n
Γ		<b>v</b>	Polygon			
		Ē	🔽 Ima	ge		
		Ē	🔽 Poly	/gon		
		Ē	🔽 Poly	/gonImage		
		Ē	🔽 Rec	tangle		
		Ē	🔽 Squ	are		
	l		🔽 Tria	ngle		

Figure 10.76 - Choose the classes and packages

### 4. Edit the Options.

Options			
Attribute prefix:	_		
Parameter prefix:	a		
Implement abstract operations			
🗹 Generate asso	ciation operations		
Association implementation:	Vector 💌		
Adv	anced Options		

Figure 10.77 - Edit the options

Name	Description
Attribute prefix	Configure the prefix of attribute.
Parameter prefix	Configure the prefix of parameter.
Implements abstract operations	Check this option to implement abstract operations in generated classes.
Generate association operations	If you check this box, when a role is selected to provide setter/getter, the corresponding operation(s) will be generated for the role's attribute.
Association implementation	Select from drop-down menu any of the options to configure the multiplicity of a class: Vector - The collection is expandable size. Array - The collection has fixed size.
Advanced Options	Edit the advance options.

Table 10.7

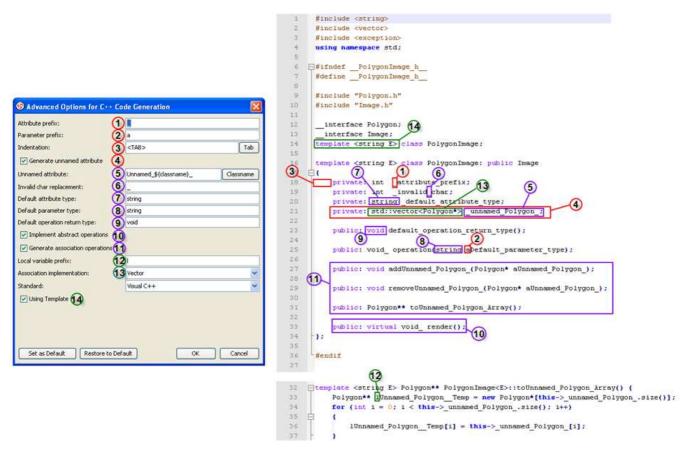


Figure 10.78 - Example illustrating the functions of different options in Advanced Options

	Polygonimage
-a	ttribute_prefix: int
-in	nvalid char: int
-d	efault_attribute_type
+d	lefault_operation_return_type()
+0	peration(default_parameter_type): void

Figure 10.79 - Diagram of invalid char

#### 5. Specify the **Output path** and select **Generate** to generate C++.

🖨 Instant Generator 🛛 🔀			
Language: C++  Select elements for code generation  Polygon  Mage  Polygon  Polygon	Options Attribute prefix: Parameter prefix: a		
PolygonImage Rectangle Square Triangle	<ul> <li>Implement abstract operations</li> <li>Generate association operations</li> <li>Association implementation:</li> </ul>		
	Advanced Options		
Output path: Generate to Source Folder			
C:\Projects\C++			
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instantger	nerator\cplusplus		
Prompt to confirm overwrite file			
Generator Output			
Open output folder Previ	ew Generate Close		

Figure 10.80 - Select Generate

Generator Output	
Saving Square.h to C:\projects\C++ Saving Rectangle.cpp to C:\projects\C++ Saving Rectangle.h to C:\projects\C++ Saving Polygon.cpp to C:\projects\C++ Saving Polygon.h to C:\projects\C++	
Open output folder	Preview Generate Close

Figure 10.81 - Open output folder

### 7.C++ files generated.

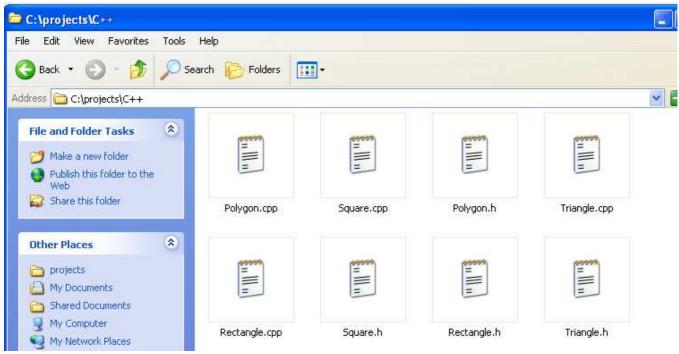


Figure 10.82 - C++ files generated

# **Generating Delphi**

SDE for Eclipse can generate Delphi file. To generate Delphi file:

1. Open the **Instant Generator** dialog for Delphi by clicking **Modeling** > **Instant Generator** > **Delphi...** in the main menu.

Modeling Format Run Window Help	
🛞 Start SDE-EC	i 🐮 🔯
Application Options	
Auto Synchronization	
Report •	
Project Publisher	
Section Stereotypes Configure Requirement Enumerations Use Case Scheduling	-len +ge +int
ORM FIB FIB	
Instant Generator 🔹 🕨	💫 Instant Generator
State Machine Code 🔹 🕨	
Teamwork 🕨	Java C#
Shape Editor	VB.NET
@DB-VA SQL	PHP
	ODL
Key Manager	ActionScript
	IDL
	C++
n	Delphi
	Perl K
	XSD
	Python
<	Objective-C
	Ada95
	Ruby

Figure 10.38 - Open Instant Generator dialog for Delphi

### 2. The Instant Generator dialog box for Delphi is displayed.

🚔 Instant Generator	
Language: Delphi 🗸	Options
<ul> <li>Polygon</li> <li>Polygon</li> <li>Polygon</li> <li>PolygonImage</li> <li>Rectangle</li> <li>Square</li> <li>Triangle</li> </ul>	Attribute prefix: Parameter prefix: a Implement abstract operations Generate association operations Advanced Options
Output path: Generate to Source Folder	
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instantge	nerator\delphi
Prompt to confirm overwrite file	
Generator Output	
Open output folder Previ	iew Generate Close

Figure 10.84 - Instant Generator dialog box

 $\ensuremath{\mathsf{3.Choose}}$  the classes or packages you want to generate .

Language:			Delphi	~	
Select elements for code generation					
🔲 🔽 Polygon					
	[	📑 🔽 Image			
	📄 🔽 Polygon				
	···· [	🚦 🔽 Poly	🔽 PolygonImage		
	···· 🗄	🚦 🗹 Rec	🔽 Rectangle		
	[	🚦 🗹 Squ	🔽 Square		
	🛄 🔄 🔽 Triangle				

Figure 10.85 - Choose the classes and packages

## 4. Edit the Options.

Options
Attribute prefix:
Parameter prefix: a
Implement abstract operations
Generate association operations
Advanced Options

Figure 10.86 - Edit the options

Name	Description
Attribute prefix	Configure the prefix of attribute.
Parameter prefix	Configure the prefix of parameter.
Implements abstract operations	Check this option to implement abstract operations in generated classes.
Generate association operations	If you check this box, when a role is selected to provide setter/getter, the corresponding operation(s) will be generated for the role's attribute.
Advanced Options	Edit the advance options.

Table 10.8

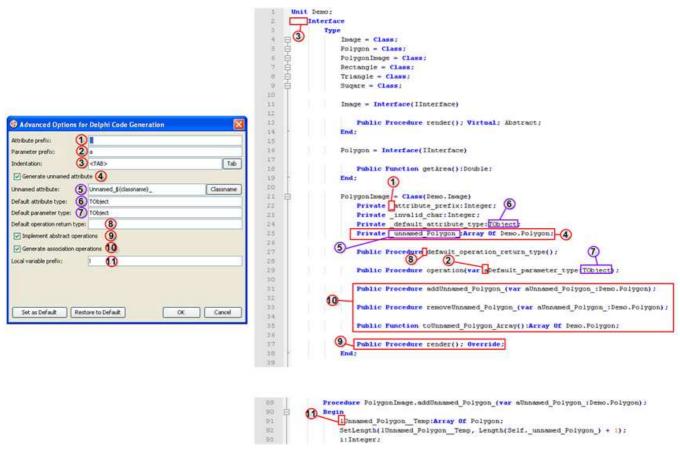


Figure 10.87 - Example illustrating the functions of different options in Advanced Options

### 5. Specify the **Output path** and select **Generate** to generate Delphi.

🖨 Instant Generator	×
Language: Delphi 🔽	Options
<ul> <li>Polygon</li> <li>Polygon</li> <li>Polygon</li> <li>PolygonImage</li> <li>Rectangle</li> <li>Square</li> <li>Triangle</li> </ul>	Attribute prefix: Parameter prefix: a Implement abstract operations Generate association operations Advanced Options
Output path: Generate to Source Folder	
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instantge	nerator\delphi
Prompt to confirm overwrite file	
Generator Output	
Open output folder Previ	

Figure 10.88 - Select Generate

6. The progress of generation is shown in the **Generator Output** column. After generation, you can select **Open output folder** to open the output folder generated.

	Generator Output		
	Processing Rectangle		<u>^</u>
	Processing Square Processing Triangle		
	Saving generated code Saving Polygon.pas to C:\projects\delphi		
	Saving Polygon, pas to C. (projects (delphi		~
C	Open output folder	Preview Generate	Close

Figure 10.89 - Open output folder

7.Delphi files generated.



Figure 10.90 - Delphi files generated

# **Generating Perl**

SDE for Eclipse can generate Perl file. To generate Perl file:

1. Open the Instant Generator dialog for Delphi by clicking Modeling > Instant Generator > Perl... in the main menu.

Modeling Format Run Window Help	
Start SDE-EC	i 🐮 🔯
Application Options	
Auto Synchronization	
Report	•
Project Publisher	
Edit Stereotypes	-len
Configure Requirement Enumerations	+ge
Use Case Scheduling	
ORM	•
EJB	
🐴 Instant Reverse	-wid
Instant Generator 🔹 🕨	🐴 Instant Generator
State Machine Code	Java
Teamwork	C#
Shape Editor	VB.NET
() DB-VA SQL	PHP
	ODL
Key Manager	ActionScript
	IDL
•	C++
ר ר	Delphi -
	Perl
	XSD ^V S
	Python
<	Objective-C
	Ada95
	Ruby

Figure 10.91 - Open Instant Generator dialog for Perl

# 2. The Instant Generator dialog box for Perl is displayed.

🚔 Instant Generator		
Language:  Perl Select elements for code generation	Options	
<ul> <li>Polygon</li> <li>Image</li> <li>Polygon</li> <li>PolygonImage</li> <li>Rectangle</li> <li>Square</li> <li>Triangle</li> </ul>	Attribute prefix: ✓ Generate association operations	
	Advanced Options	
Output path: Generate to Source Folder		
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\perl		
Prompt to confirm overwrite file		
Generator Output		
Open output folder Previ	iew Generate Close	

Figure 9.92 - Instant Generator dialog box

3. Choose the classes or packages you want to generate .

Language:		Perl	*
Select ele	Select elements for code generation		
	Polygor		
	🔽 Ima	ige	
	🔽 Poly	/gon	
=	🔽 Poly	/gonImage	
- E	🔽 Rec	tangle:	
	🔽 Squ	lare	
· · · ·	🔽 Tria	ingle	

Figure 10.93 - Choose the classes and packages

## 4. Edit the Options.

Options
Attribute prefix:
Parameter prefix: a
Implement abstract operations
Generate association operations
Advanced Options

Figure 10.94 - Edit the options

Name	Description
Attribute prefix	Configure the prefix of attribute.
Parameter prefix	Configure the prefix of parameter.
Implements abstract operations	Check this option to implement abstract operations in generated classes.
Generate association operations	If you check this box, when a role is selected to provide setter/getter, the corresponding operation(s) will be generated for the role's attribute.
Advanced Options	Edit the advance options.

Table 10.9

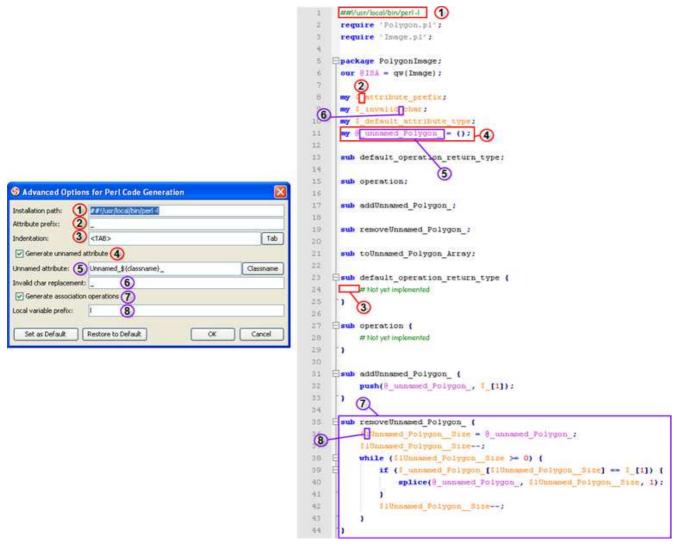


Figure 10.95 - Example illustrating the functions of different options in Advanced Options

Polygonimage		
-attribute_prefix:	int	
-invalid char : int	7	
-default_attribute	_type	
+default_operation_return_type()		
+operation(default_parameter_type): void		

Figure 10.96 - Diagram of invalid char

### 5. Specify the **Output path** and select **Generate** to generate Perl.

🖨 Instant Generator	X	
Language: Perl 💌		
Select elements for code generation	Options Attribute prefix: Generate association operations	
	Advanced Options	
Output path: Generate to Source Folder		
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\perl		
Prompt to confirm overwrite file		
Generator Output		
Open output folder Previ	iew Generate Close	

Figure 10.97 - Select Generate

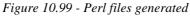
6. The progress of generation is shown in the **Generator Output** column. After generation, you can select **Open output folder** to open the output folder generated.

Generator Output	
Saving generated code Saving Triangle.pl to C:\projects\perl	
Saving Square.pl to C:\projects\perl	
Saving Rectangle.pl to C:\projects\perl Saving Polygon.pl to C:\projects\perl	
Open output folder	Preview Generate Close

Figure 10.98 - Open output folder

## 7.Perl files generated.

Edit View Favorites Tools	Help				
) Back 🔹 🕥 - 🏂 🔎 Sea	rch 😥 Folders 🔋				
ess 🛅 C:\projects\perl					<ul><li>✓</li></ul>
File and Folder Tasks 🔹	an 1977 - 19	000775	49779.	49929.	
🍠 Make a new folder	n	n    1	= =	n (19933)	
Publish this folder to the Web	E	<u> </u>	E	1	
Gare this folder	Polygon.pl	Square.pl	Rectangle.pl	Triangle.pl	



# **Generating XSD**

SDE for Eclipse can generate XSD file. To generate XSD file:

1. Open the Instant Generator dialog for XSD by clicking Modeling > Instant Generator > XSD... in the main menu.

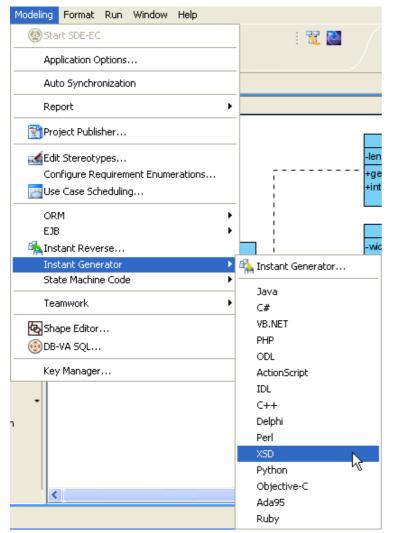


Figure 10.100 - Open Instant Generator dialog for XSD

2 The. Instant Generator dialog box for XSD is displayed.

🖨 Instant Generator	×			
Language: XSD 🔽	Options			
Select elements for code generation	Options Indentation: <tab> Tab Tab Generate unnamed attribute Unnamed attribute: Unnamed_\${cl} Classname Invalid char replacement : Default attribute string type:</tab>			
Output path: Generate to Source Folder				
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instant	igenerator\xsd			
Prompt to confirm overwrite file Generator Output				
Open output folder Previ	ew Generate Close			

Figure 10.101 - Instant Generator dialog box

3. Choose the classes or packages you want to generate .

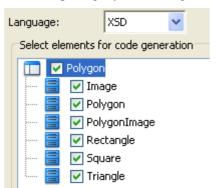


Figure 10.102 - Choose the classes and packages

#### 4. Edit the Options.

Options	
Indentation:	<tab></tab>
	Tab
🔽 Generate unnan	ned attribute
Unnamed attribute:	Unnamed_\${classname}_
	Classname
Invalid char	
replacement:	
Default attribute type:	string
cype.	
	Advanced Options

Figure 10.103 - Edit the options

Name	Description	
Indentation	To configure the spacing characters you want to use for each indent level. A tab button is provided to add tab to define different levels.	
Generate unnamed attribute	To allow generating unnamed attribute.	
Unnamed attribute	Predefine a name for unnamed attribute.	
Invalid char replacement If there is character which is invalid, the character will be replaced by the character box.		
Default attribute type	Configure the default type of attribute.	
Advanced Options	Edit the advance options.	

Table 10.10

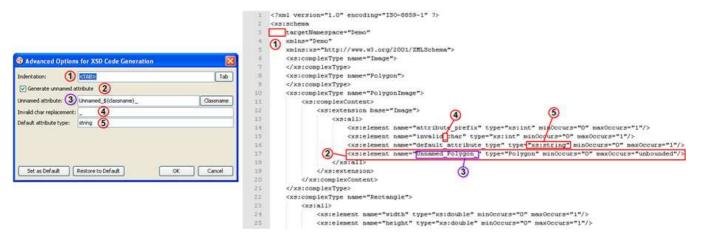


Figure 10.104 - Example illustrating the functions of different options in Advanced Options

Polygonimage		
-attribute_prefix:int		
-invalid char : int		
-default_attribute_type		
+default_operation_return_type()		
+operation(default_parameter_type): void	a l	

Figure 10.105 - Diagram of invalid char

## 5. Specify the **Output path**. Then, select **Generate** to generate XSD.

🖨 Instant Generator			
Language: XSD 💌	0-1-		
Select elements for code generation	Options		
<ul> <li>Polygon</li> <li>Polygon</li> <li>Polygon</li> <li>PolygonImage</li> <li>Rectangle</li> <li>Square</li> <li>Y Square</li> <li>Y Triangle</li> </ul>	Indentation: Generate unnan Unnamed attribute: Invalid char replacement : Default attribute type:		
	Advanc	ed Options	
Output path: Generate to Source Folder  C:\projects\xsd  Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instante	generator\xsd		
Prompt to confirm overwrite file			
Generator Output			
Open output folder Previe	ew Generate	Close	

Figure 10.106 - Select Generate

6. The progress of generation is shown in the **Generator Output** column. After generation, you can select **Open output folder** to open the output folder generated.

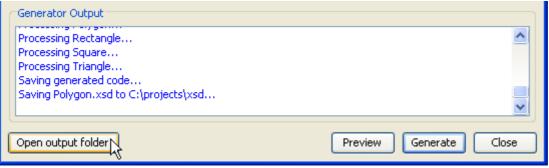


Figure 10.107 - Open output folder

7.XSD files generated.

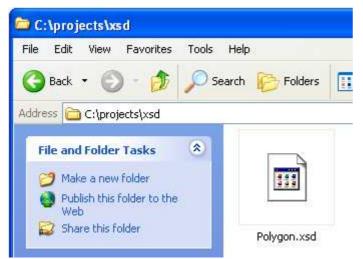


Figure 10.108 - XSD files generated

# **Generating Python**

SDE for Eclipse can generate Python file. To generate Python file:

1. Open **Instant Generator** dialog for Python by clicking **Modeling** > **Instant Generator** > **Python...** in the main menu.

Modeling Format Run Window Help	
🛞 Start SDE-EC	i 🏗 🎴 🖉
Application Options	
Auto Synchronization	
Report	•
Project Publisher	
Edit Stereotypes	-len
Configure Requirement Enumerations	+ge
Use Case Scheduling	
ORM	
EJB	
🐴 Instant Reverse	-wio
Instant Generator	🔜 🐴 Instant Generator
State Machine Code	Java
Teamwork	• C#
Shape Editor	VB.NET
B-VA SQL	PHP
	ODL
Key Manager	ActionScript
-	IDL
	C++
n	Delphi
	Perl
	XSD
	Python
<	Objective-C 1/2
<u>p</u> 1	Ada95
	Ruby

Figure 10.109 - Open Instant Generator dialog for Python

## 2. Instant Generator dialog box for Python is displayed.

🚔 Instant Generator	×
Language: Python  Select elements for code generation	Options
Polygon   Polygon   Polygon   PolygonImage   Rectangle   Square   Triangle	Attribute prefix: Parameter prefix: a Generate association operations Advanced Options
Output path: Generate to Source Folder	
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instantge	enerator\python
Prompt to confirm overwrite file	
Generator Output	
Open output folder Prev	iew Generate Close

Figure 10.110 - Instant Generator dialog box

3. Choose the classes or packages you want to generate .

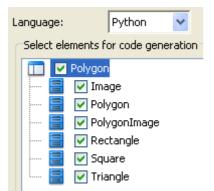


Figure 10.111 - Choose the classes and packages

#### 4. Edit the Options.

Options
Attribute prefix:
Parameter prefix: a
Generate association operations
Advanced Online
Advanced Options

Figure 10.112 - Edit the options

Name	Description
Attribute prefix	To configure the prefix of attribute.
Parameter prefix	To configure the prefix of parameter.
Generate association operations	If you check this box, when a role is selected to provide setter/getter, the corresponding operation(s) will be generated for the role's attribute.
Advanced Options	Edit the advance options.



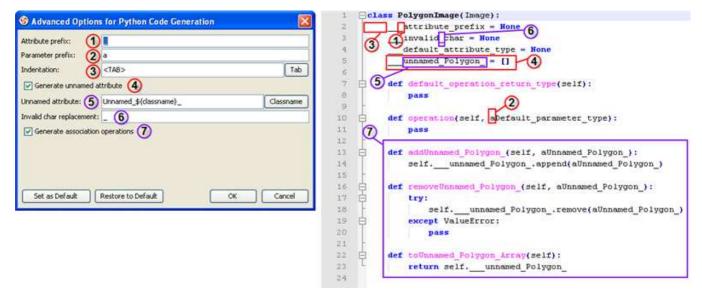


Figure 10.113 - Example illustrating the functions of different options in Advanced Options

Polygonimage			
-attribute_prefix:int			
-invalid char : int			
-default_attribute_type			
+default_operation_return_type()			
+operation(default_parameter_type): void			

Figure 10.114 - Diagram of invalid char

5	Specify the	Output nath	and select	Generate to	generate Python.
5.	speeny me	Output pati	I and select	Other are to	generate i ython.

🖨 Instant Generator					
Language: Python ♥ Select elements for code generation   ♥ Polygon  ♥ Polygon  ♥ PolygonImage  ♥ Rectangle  ♥ Square  ♥ Triangle	Options Attribute prefix: Parameter prefix: a  Generate association operations  Advanced Options				
Output path: Generate to Source Folder					
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instantge	nerator\python				
Prompt to confirm overwrite file Generator Output					
Open output folder Previ	iew Generate Close				

Figure 10.115 - Select Generate

6. The progress of generation is shown in the **Generator Output** column. After generation is complete, you can select **Open output folder** to open the files in the generated folder.

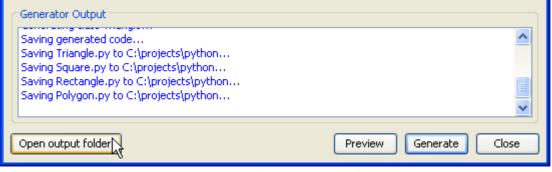


Figure 10.116 - Open output folder

7. Python files generated.

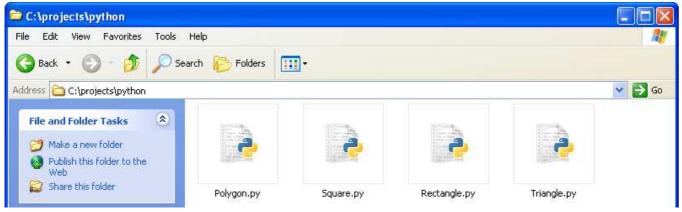


Figure 10.117 - Python files generated

# **Generating Objective-C**

SDE for Eclipse can also generate Objective-C files. To generate an Objective-C file:

1. Open the **Instant Generator** dialog for Objective-C by clicking **Modeling** > **Instant Generator** > **Objective-C**... in the main menu.

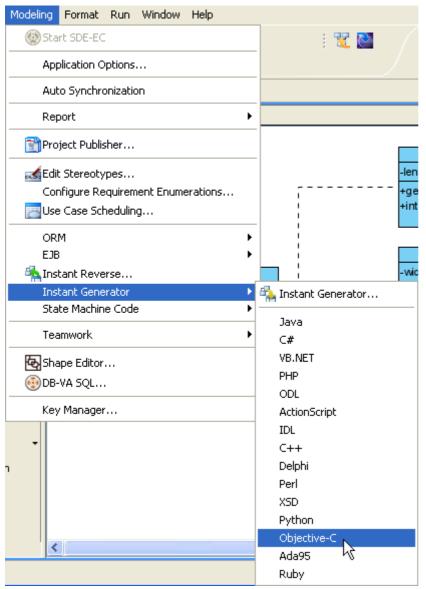


Figure 10.118 - Open Instant Generator dialog for Objective-C

## 2. Instant Generator dialog box for Objective-C is displayed.

🖨 Instant Generator	<u> </u>				
Language: Objective-C 🔽	Options				
<ul> <li>Polygon</li> <li>Polygon</li> <li>Polygon</li> <li>PolygonImage</li> <li>Rectangle</li> <li>Square</li> <li>Triangle</li> </ul>	Attribute prefix: Parameter prefix: a Implement abstract operations Generate association operations Advanced Options				
Output path: Generate to Source Folder					
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instant	:generator\objectivec				
Prompt to confirm overwrite file					
Generator Output					
Open output folder Previ	iew Generate Close				

Figure 10.119 - Instant Generator dialog box

3. Choose the classes or packages you want to generate .

Language:	Objective-C 🔽		
Select elements for code generation			
🔲 🔽 Polygon			
- E 💌	Image		
🗌 🔤 🖃	Polygon 📃 🔽 Polygon		
🗌 🔤 🖃	📄 🔤 🗹 PolygonImage		
🗌 🔤 🖃	Rectangle		
🗌 🔤 🖃	Square		
📔 🤐 🚍 🔽	Triangle		

Figure 10.120 - Choose the classes and packages

#### Chapter 10 – Instant Generator

# 4. Edit the Options.

0.11	
Options	
Attribute prefix:	
Parameter prefix:	a
✓ Implement abs	stract operations
🔽 Generate asso	ciation operations
Adv	anced Options

## Figure 10.121 - Edit the options

Name	Description	
Attribute prefix	o configure the prefix of attribute.	
Parameter prefix	o configure the prefix of parameter.	
Implements abstract operations	Check this option to implement abstract operations in generated classes.	
Generate association operations	If you check this box, when a role is selected to provide setter/getter, the corresponding operation(s) will be generated for the role's attribute.	
Advanced Options	Edit the advance options.	

Table 10.12

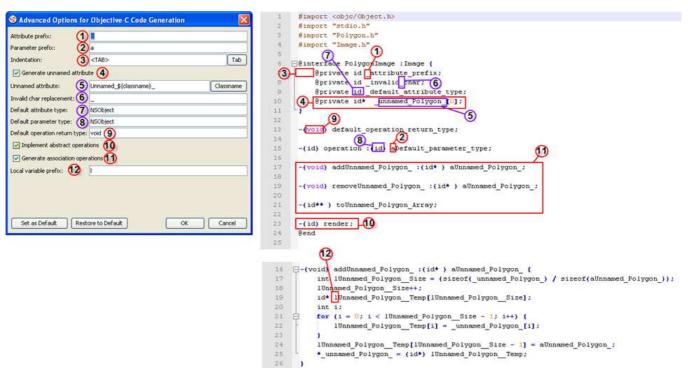


Figure 10.122- Example illustrating the functions of different options in Advanced Options

Polygonimage		
-attribute_prefix:int		
-invalid char : int		
-default_attribute_type		
+default_operation_return_type()		
+operation(default_parameter_type) : void		

Figure 10.123- Diagram of invalid char

5. Specify the Output path. Then, select Generate to generate Objective-C.

🖨 Instant Generator				
Language: Objective-C 🐱				
Select elements for code generation	Options			
<ul> <li>Polygon</li> <li>Polygon</li> <li>Polygon</li> <li>PolygonImage</li> <li>Rectangle</li> <li>Square</li> <li>V Triangle</li> </ul>	Attribute prefix: Parameter prefix: a Implement abstract operations Generate association operations Advanced Options			
Output path: Generate to Source Folder	·			
C:\Projects\Objects-C				
Template directory:         C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\objectivec				
Prompt to confirm overwrite file				
Generator Output				
Open output folder Preview Generate Close				

Figure 10.124 - Select Generate

6. The progress of generation is shown in the **Generator Output** column. After generation, you can select **Open output folder** to open the newly generated folder.

Generator Output	
Saving Square.h to C:\projects\Objective-C Saving Rectangle.m to C:\projects\Objective-C Saving Rectangle.h to C:\projects\Objective-C Saving Polygon.m to C:\projects\Objective-C Saving Polygon.h to C:\projects\Objective-C	
Open output folder	Preview Generate Close

Figure 10.125 - Open output folder

# 7. Objective-C files generated.

) Back 🔹 🕥 - 🏂 🔎 Se	arch 🜔 Folders 📘				
ess 🛅 C:\projects\Objective-C					× >
ile and Folder Tasks     Image: Comparison of the state o	En III 11	<b>€</b> 11111	2n     n		
Dther Places	Polygon.h	Square.h	Rectangle.h	Polygon.m	
<ul> <li>projects</li> <li>My Documents</li> <li>Shared Documents</li> </ul>					
Shared Documents     My Computer     My Network Places	Square.m	Triangle.h	Triangle.m	Rectangle.m	

Figure 10.126 - Objective-C files generated

# **Generating Ada95**

SDE for Eclipse can also generate Ada95 file. To generate an Ada95 file:

1. Open the Instant Generator dialog for Ada95 by clicking Modeling > Instant Generator > Ada95... in the main menu.

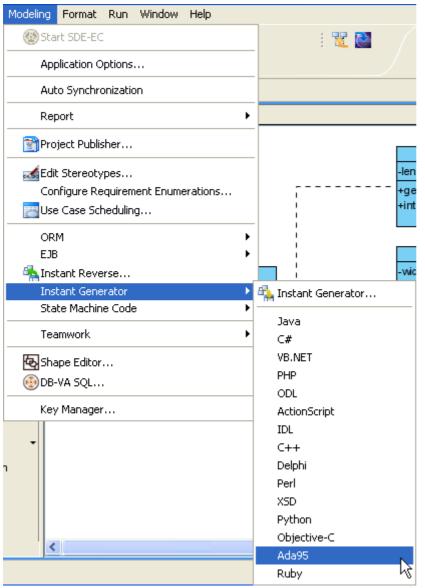


Figure 10.127 - Open Instant Generator dialog for Ada95

## 2. The Instant Generator dialog box for Ada9x is displayed.

🖨 Instant Generator	X
Language: Ada95 Select elements for code generation Polygon Image	Options Attribute Prefix: f Parameter Prefix: a
Polygon PolygonImage Rectangle Square Triangle Triangle	Generate this parameter This Parameter Name: This
Output path: Generate to Source Folder	
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerato	r\ada95
Prompt to confirm overwrite file	
Generator Output	
Open output folder Preview	Generate Close

Figure 10.128 - Instant Generator dialog box

3. Choose the classes or packages you want to generate.

Langu	age:	Ada95	*		
Sele	Select elements for code generation				
	Polygo	n			
	📄 🔽 Im	age			
	📄 🔽 Pol	ygon			
	📄 🔽 Pol	ygonImage			
	📄 🗹 Re	ctangle			
	📄 🗹 Sqi	uare			
L	📄 🔽 Tri	angle			
	Re	ctangle uare			

Figure 10.129 - Choose the classes and packages

#### Chapter 10 – Instant Generator

## 4. Edit the Options.

Options	
Attribute Prefix:	F
Parameter Prefix:	a
🗹 Generate this par	ameter
This Parameter Name:	This
Adva	nced Options

Figure 10.130- Edit the options

Name	Description	
Attribute prefix	To configure the prefix of attribute.	
Parameter prefix	To configure the prefix of parameter.	
Generate this parameter	Check to generate this parameter.	
This Parameter Name	Configure the name of this parameter.	
Advanced Options	Edit the advance options.	



S Advanced Options for Ada95 Code Generation	1 - The Declaration of class PolygonImage
Attrobute Prefix: 1 fl a Parameter Prefix: a a Generate this parameter (3) This Parameter Name: This Default Attrobute Type: String Default Attrobute Type: String Default Attrobute Type: String Gass Name	<pre>2 with Image: use Image.with Polygon: use Polygon: 3 package PolygonImage is 4 0 type PolygonImage(Chiect is new ImageObject with null record: 5 type PolygonImage(Chiect is new ImageObject Class; 7 provedure default operation return tyme(aThis : PolygonImageObject); 8 function operation withis: PolygonImageObject : antefault_parameter_type : String return void: 9 private 4 3 2 6</pre>
Internal Type Name Suffix: Object (8) Class Name	11 type PrivateComponent is tagged
Private Component Name: PrivateComponent   Class Name  Set as Default Restore to Default  CK Cancel	12 13 14 14 15 15 15 15 16 17 18 12 12 12 12 13 14 15 15 15 15 16 17 17 18 19 19 19 19 19 10 10 10 10 10 10 10 10 10 10
	19 end PolygonImage:

Figure 10.131 - Example illustrating the functions of different options in Advanced Options

### 5. Specify the **Output path** and click **Generate** to generate Ada95.

Language:       Ada95       Options         Select elements for code generation       Options         Polygon       Attribute Prefix:       f         Image       Parameter Prefix:       a					
Polygon       Attribute Prefix:       f         Image       Parameter Prefix:       a					
Parameter Prefix: a					
✓ Polygon       ✓ Generate this parameter					
Image       Image         I					
Square					
Triangle					
Advanced Options					
Advanced Options					
Output path: 🔄 Generate to Source Folder					
C:\p}ojects\Ada95					
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\ada95					
Prompt to confirm overwrite file					
Open output folder Preview Generate Close					

Figure 10.132 - Select Generate

6. The progress of generation is shown in the **Generator Output** column. After generation, you can select **Open output folder** to open the output folder generated.

ſ	Generator Output		
	Saving rectangle.adb to C:\projects\ada95 Saving rectangle.ads to C:\projects\ada95 Saving polygon.adb to C:\projects\ada95		
	Saving polygon.ads to C:\projects\ada95		
	Open output folder	Preview Generate	Close

Figure 10.133 - Open output folder

### 7. Ada95 files generated.

e Edit View Favorites Tools H Back + 🕥 - 🎓 🔎 Sear	ch 🌔 Folders [			
	ch 🌔 Folders [	-		
dress 🛅 C:\projects\ada95				
	81			4
File and Folder Tasks 🙁				
💋 Make a new folder	888	4 4 4 4 4 4	<b>a a a</b>	4 4 4 4 4 9
Publish this folder to the				
Web Share this folder				
	square.adb	polygon.adb	triangle.adb	rectangle.adb
Other Places				
🛅 projects				
A My Documents		4 4 4		
C Shared Documents	<u></u>			
My Computer	polygon.ads	square.ads	rectangle.ads	triangle.ads

Figure 10.134 - Ada95 files generated

# **Generating Ruby**

SDE for Eclipse can generate Ruby files. To generate a Ruby file:

1. Open Instant Generator dialog for Ruby by clicking Modeling > Instant Generator > Ruby... in the main menu.

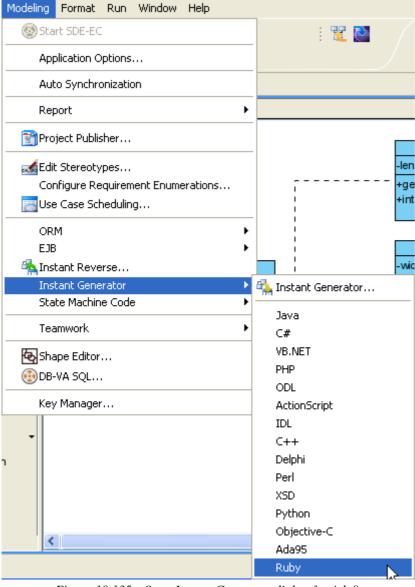


Figure 10.135 - Open Instant Generator dialog for Ada9x

2. Instant Generator dialog box for Ada95 is displayed.

🖨 Instant Generator 🛛 🔀				
Language: Ruby 🔽				
Select elements for code generation	Options Attribute prefix: Parameter prefix: a  Implement abstract operations Generate association operations Advanced Options			
Output path: Generate to Source Folder				
Template directory: C:\eclipse-SDK-3.2-win32\eclipse\sde\instantge Prompt to confirm overwrite file Generator Output	enerator\ruby			
Open output folder Pre	view Generate Close			

Figure 10.136 - Instant Generator dialog box

3. Choose the classes or packages you want to generate .

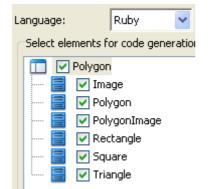


Figure 10.137 - Choose the classes and packages

## 4. Edit the Options.

<ul> <li>Attribute prefix:</li> <li>Parameter prefix: a</li> <li>✓ Implement abstract operations</li> <li>✓ Generate association operations</li> </ul>
Implement abstract operations
Generate association operations
Advanced Options

Figure 10.138 - Edit the options

Name	Description
Attribute prefix	Configure the prefix of attribute.
Parameter prefix	Configure the prefix of parameter.
Implements abstract operations	Check this option to implement abstract operations in generated classes.
Generate association operations	If you check this box, when a role is selected to provide setter/getter, the corresponding operation(s) will be generated for the role's attribute.
Advanced Options	Edit the advance options.

Table 10.14

Attribute prefix:		
Parameter prefix:	2 *	
Indentation:	3 <ta8></ta8>	Tab
Generate unn	amed attribute (4)	
Unnamed attribute	: (5) Unnamed_\${classname}_	Classname
Invalid char replac	ement: _ (6)	0.
Implement ab:	stract operations (7)	
Generate asso	ociation operations 8	

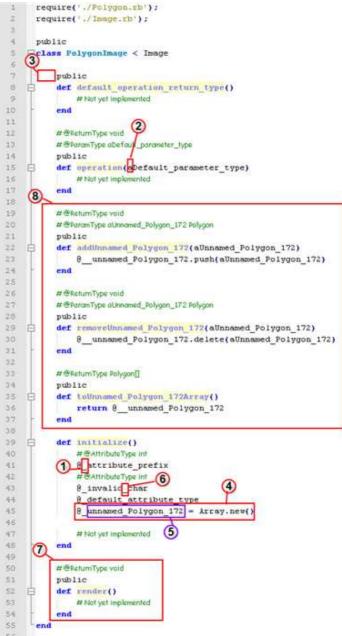


Figure 10.139 - Example illustrating the functions of different options in Advanced Options

	Polyg	onimage	е	
-attribute_p	refix:int			
-invalid cha	r:int			
-default_att	ribute_typ	e		
+default_op	eration_r	eturn_ty	pe()	
+operation(	default p	aramete	r_type): void	

Figure 10.140 - Diagram of invalid char

### 5. Specify the **Output path**. Then, select **Generate** to generate Ada95.

🖨 Instant Generator 🛛 🔀				
Language: Ruby Select elements for code generation Polygon Polygon Polygon PolygonImage Rectangle Square Square Triangle	Options Attribute prefix: Parameter prefix: a  Implement abstract operations  Generate association operations			
Advanced Options         Output path:       Generate to Source Folder         C:\projects\ruby          Template directory:       C:\eclipse-SDK-3.2-win32\eclipse\sde\instantgenerator\ruby				
Prompt to confirm overwrite file				
Generator Output				
Open output folder Previ	ew Generate Close			

Figure 10.141 - Select Generate

6. The progress of generation is shown in the **Generator Output** column. After generation, you can select **Open output folder** to open the output folder generated.

Generator Output	
Saving generated code Saving Triangle.rb to C:\projects\ruby Saving Square.rb to C:\projects\ruby	
Saving Rectangle.rb to C:\projects\ruby Saving Polygon.rb to C:\projects\ruby	
Open output folder	Preview Generate Close

Figure 10.142 - Open output folder

### 7. Ruby files generated.

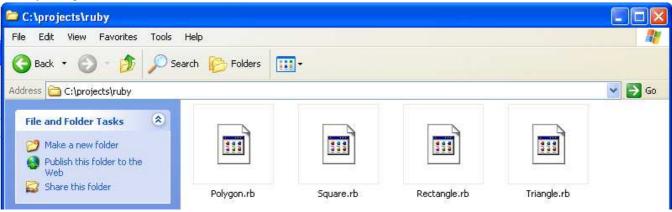


Figure 10.143 - Ruby files generated



# Java Round Trip Engineering

# **Chapter 11 - Java Round-Trip Engineering**

SDE for Eclipse facilitate the generation and reverse of Java by the Java Round-Trip Engineering. In this chapter:

- Generating Code
- Reversing Code
- Select in Code/UML
- Round-trip Code Engineering
- Advanced code generation

# **Generate Code**

You can generate Java using Java round-trip Engineering in SDE for Eclipse.

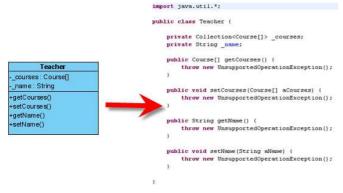


Figure 11.1 - Generate code

Here, a class diagram is used as an example to illustrate the steps of generating code.

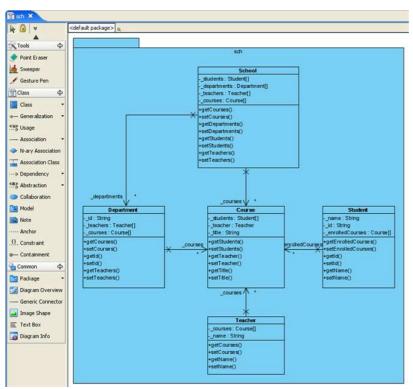


Figure 11.2 - Class diagram used as an example

You may generate Java source code from three kinds of sources: project, package and class.

#### **Generate by Selecting Project**

There are several ways of generating code from project. The first one is by clicking Update Code in the toolbar.



Figure 11.3 - Clicking Update Code

Alternatively, you may select Update Code in Diagram Navigator, Model Tree or Class Repository.

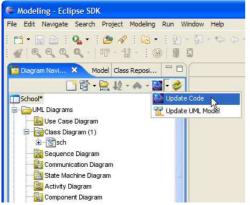


Figure 11.4 - Selecting Update Code

You may also right-click on the project node in Diagram Navigator, Model Tree or Class Repository, and then select **Update Project to Code** from the popup menu.

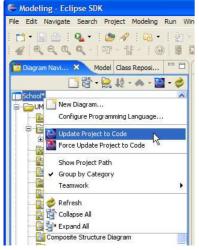


Figure 11.5 - Selecting Update Project to Code

This will result in generating code from all the classes models under the project.

#### **Generate by Selecting Package**

Besides generating all the class models, you may select to generate a package of classes. There are several ways to achieve this. The first one is by right-clicking on a package in Diagram Navigator, Model Tree or Class Repository, and then by selecting **Update to Code** from the popup menu.

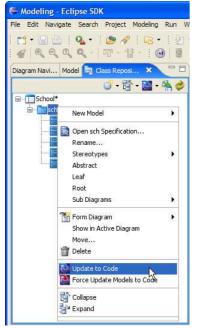


Figure 11.6 - Selecting Update to Code

You may also right-click on a package on diagram, and select Update to Code from the popup menu.

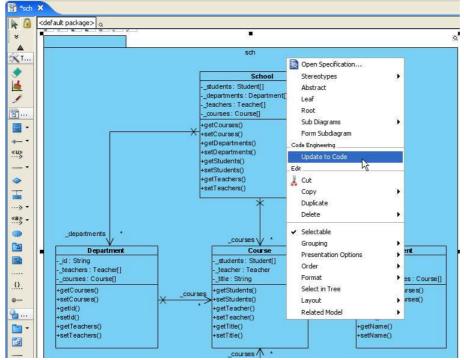


Figure 11.7 - Selecting Update to Code from the popup menu of a package on diagram

Both approaches will result in generating code from the selected package and the class models under it.

#### **Generate by Selecting Class**

You may also select to generate code from specific classes. The first way to achieve this is by right-clicking on a class in Diagram Navigator, Model Tree or Class Repository, and selecting **Update to Code** from the popup menu.

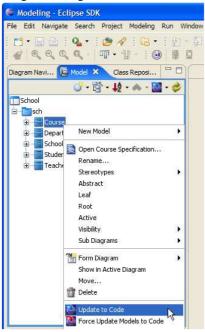


Figure 11.8 - Selecting Update to Code

Alternatively, right-click on a class on diagram, and select Update to Code from the popup menu.

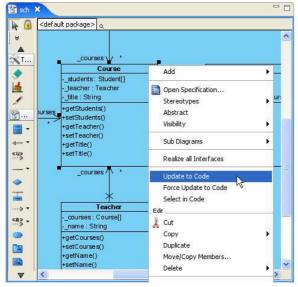


Figure 11.9 - Selecting Update to Code

This will generate code from the selected class model.

# **Reverse Code**

You can reverse class model using Java round-trip Engineering in SDE for Eclipse.



Figure 11.10 - Reverse code

Here, a class called Professor which created in the IDE is used as an example.

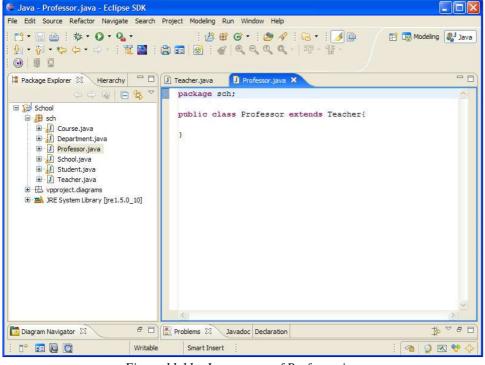


Figure 11.11 - Java source of Professor.java

You may reverse Java source code from three kinds of sources: project, package and class.

#### **Reverse by Selecting Project**

There are several ways of reversing code from project. The first one is by clicking Update UML Model in the toolbar.



Figure 11.12 - Selecting Update UML Model

Alternatively, you may select Update UML Model in Diagram Navigator, Model Tree or Class Repository.



Figure 11.13 - Selecting Update UML Model

You may also right-click on the project node under the Package Explorer, and then select **Update UML Model** from the popup menu.

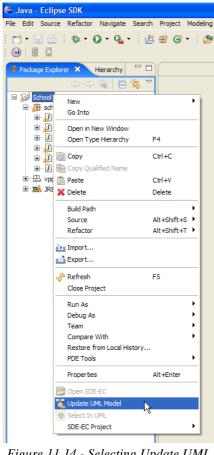


Figure 11.14 - Selecting Update UML Model

This will result in reversing all the classes and packages defined under the source project.

### **Reverse by Selecting Package**

Besides generating all the class models, you may select to generate a package of classes by right-clicking on a package node under the source project, and then by selecting **Update UML Model** from the popup menu.

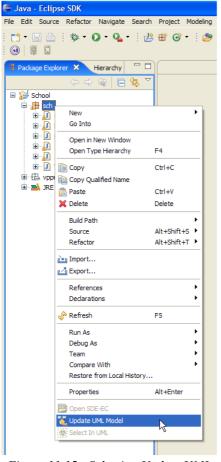


Figure 11.15 - Selecting Update UML Model

This will result in reversing the selected package, its contained classes, and its subpackages.

#### **Reverse by Selecting Class**

You may also select to reverse from specific classes. The first way to achieve this is by right-clicking on a class node under the source package, and selecting **Update UML Model** from the popup menu.

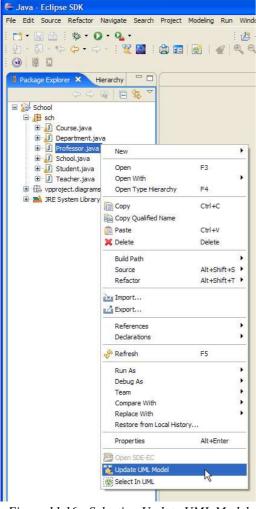


Figure 11.16 - Selecting Update UML Model

Alternatively, right-click on the code editor, and select Update UML Model from the popup menu.

🖸 Professor.java 🗙	Copy Ctrl+C Paste Ctrl+V
package sch;	Source Alt+Shift+S
public class Professor extends Tea	
}	References Declarations
	Run As  Debug As
	Team Compare With
	Replace With
	Prerences  Prevences  Prevences  Prevences
	Update UML Model
3	<u>~</u>

Figure 11.17 - Selecting Update UML Model

This will reverse the selected class into UML class model.

## Forming Diagram from Reversed Model

UML class models are formed by reverse engineering. They can be used to form a new class diagram. To form a class diagram from the class models:

- 1. Select from Model Tree or Class Repository the class models to be included in the new diagram.
- 2. Right-click on the selection
- 3. Select Form Diagram > %OPTION% from the popup menu

To add class models to an existing diagram, simply drag them from Model Tree or Class Repository and drop them onto the diagram.

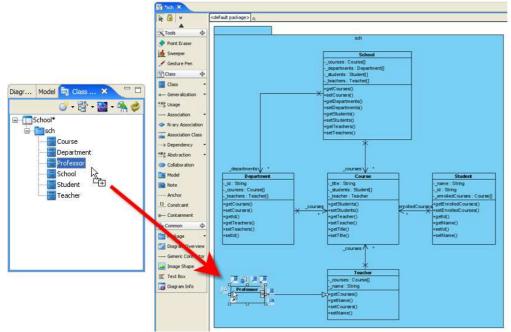


Figure 11.18 - Drag and drop to add a class model to diagram

# Select Code from Model

When editing a class or a class member such as attribute or operation, you can open up the corresponding piece of code. By doing so, the code editor will show up and the related portion of code will be highlighted. You can select code from model in different ways:

- Using popup menu of Diagram Navigator, Model Tree or Class Repository
- Using popup menu of class models in diagram

To select code from Model Tree, Class Repository or Diagram Navigator:

Right-click on a class, operation or attribute model under the tree and select Select in Code in the popup menu.

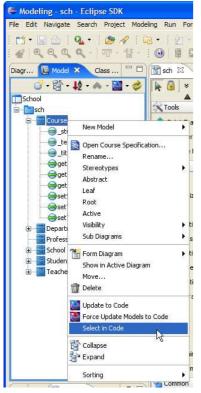


Figure 11.19 - Selecting code from class model

#### To select code from class models in diagram: Right-click on a class, operation or attribute model in the diagram and select Select in Code in the popup menu.

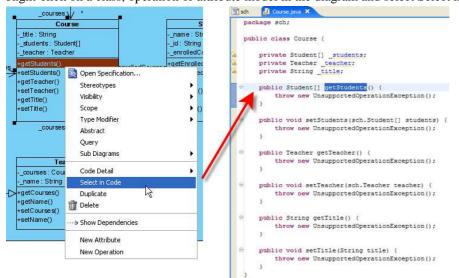


Figure 11.20 - Selecting code from operation



Selection cannot be made to project and package.

# Select Model from Code

During implementation, you can select a class model from the code. By doing so, the class model will be selected under the Model Tree and Class Repository. However, selection won't be made to class shape in any diagram. You can select model from code in different ways:

- Using popup menu of Package Explorer
- Using popup menu of code ediitor

To select code from Model Tree, Class Repository or Diagram Navigator:

Right-click on a class, operation or attribute model under the tree and select Select in Code in the popup menu.

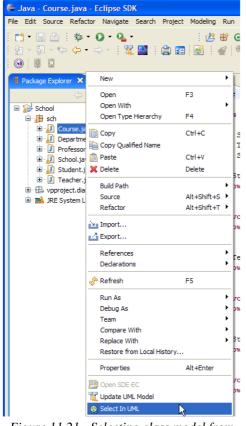


Figure 11.21 - Selecting class model from code

To select code from class models in diagram:

Right-click on a class, operation or attribute model in the diagram and select Select in Code in the popup menu.

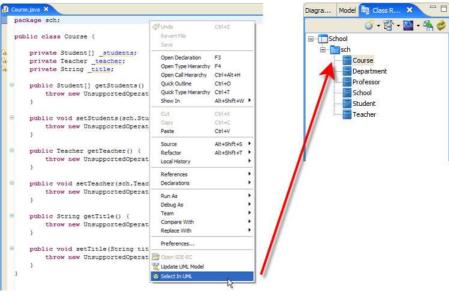


Figure 11.22 - Selecting class model from code



Selection cannot be made to project, package, attribute and operation.

# **Round-trip Code Engineering**

Here, the Java round-trip Engineering is shown.

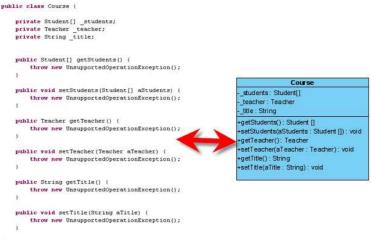


Figure 11.23 - Java round-trip Engineering

In order to demonstrate the round-trip code engineering, the source of a generated Java file is amended. First, a statement is amended in the source.



Figure 11.24 - Statement amended

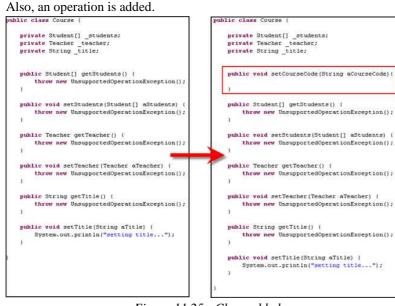


Figure 11.25 - Class added

On the other hand, the signature of a class is amended in the diagram.



Figure 11.26 - Signature amended

After all the changes have been saved, generate to code. The source has been changed. Both the changes in the source and in the diagram are retained.

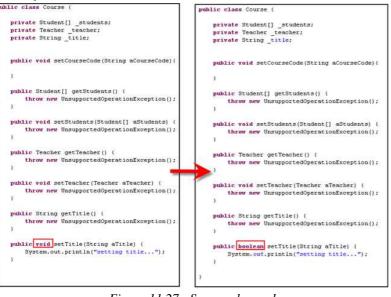


Figure 11.27 - Source changed



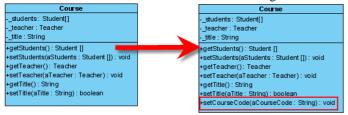


Figure 11.28 - Class changed

# **Advanced Options**

Upon generation of Java code, there are advanced options for you to configure your output with. To open the options dialog:

- 1. Select Modeling > Application Options... from to open the Options dialog box.
- 2. Open the Eclipse category.

You can enable or disable changing to Modeling Perspective when starting SDE-EC by selecting the desired option from the dropdown menu **Change to UML perspective when start SDE-EC**.

Options	
General Diagramming	Eclipse
View Instant Reverse ORM State Code Engine Office Exchange User Path Data Type	Change to UML perspective when start SDE-EC: Ask Code Brace and Indentation New Lines Ask Blank Lines in Compilation Unit Before package declaration : 0 0

Figure 11.29 - Change to UML perspective

#### There are three tabs. Code tab

Coptions	
Ceneral Diagramming View Instant Reverse ORM State Code Engine Office Exchange User Path Data Type File Types Edipse Spell Checking	Eclipse Change to UML perspective when start SDE-EC: Ask  Code Brace and Indentation New Lines Default attribute type : Int  Default attribute type : Int  Default parameter type : Int  Out or ealize interface Synchronize updated operations to subclasses : Prompt  Remove method body after changed to abstract method Deletion of Model Oelete code Ignore code Generate Import Add import statement instead of using fully qualified type name Import fully qualified type name for referenced type Java Collection Array O Collection : Java.util.Collection V Use generic collections
	Conception Connections      EJB Annotation      Generate annotation on : Property method      Generate annotation in code convention      Apply Eclipse code formatting      Reset     Reset to Default     Apply     OK     Cancel     Apply     Help

Figure 11.30 - Code tab

Name	Description
Default attribute prefix	Configure the default prefix of attribute.
Default operation return type	Configure the default return type of operation.
Default parameter type	Configure the default prefix of parameter.
Remove method body after changes to abstract method	Check the check box to remove method body after change to abstract method.
Add import statement instead of using fully qualified type name	Check the check box to add import statement.
Import fully qualified type name for referenced type	Check the check box to import fully qualified type name.
Auto realize interface	Check the check box to realize interface automatically.
Collection type	Select a collection type from the drop down menu.
Use generic collections	Check the check box to use generic collections.
Generate annotation on	Specify the code generator to generate the annotation in field-based or property-based access type.
Generate annotation in code convention	Check the checkbox so that before updating the code, SDE for Eclipse will select suitable placement strategy on either field-based or property-based access type.
System default	Select the system default type of text file encoding to type.
Other	Select other types of text file encoding to type.
Apply Eclipse code formatting	Check the check box to make the generated code follow Eclipse's code formatting. Otherwise, user can defined the code formatting on <b>Brace and Indentation and New</b> <b>Lines tabs.</b>

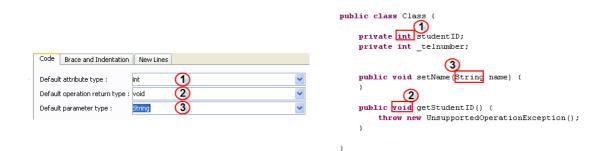


Figure 11.31 - Example illustrating options in Code tab about default type setting

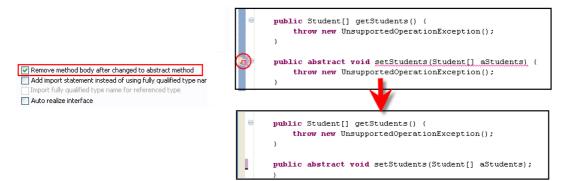


Figure 11.32 - Example illustrating options in Code tab about Remove method body

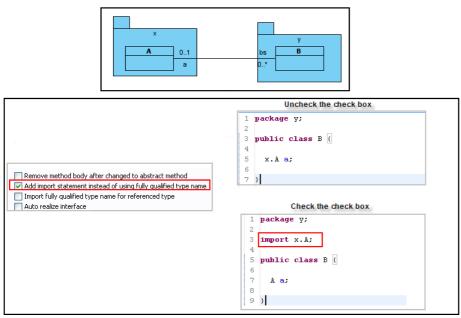


Figure 11.33 - Example illustrating options in Code tab about Add import statement

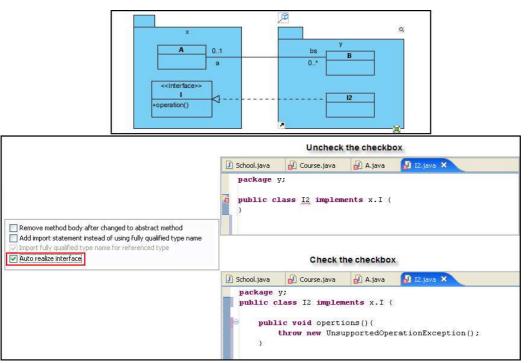


Figure 11.34 - Example illustrating options in Code tab about Auto realize interface

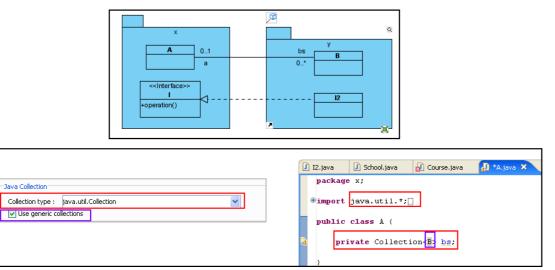


Figure 11.35 - Example illustrating options in Code tab about Java Collection

#### Brace and Indentation tab

Coptions		
General Diagramming View Instant Reverse ORM State Code Engine Office Exchange User Path Data Type File Types Eclipse Spell Checking	Constructor declaration : Same line   Method declaration : Same line  Enum declaration : Same line  Annotation type declaration : Same line  Annotation type declaration : Same line  All Same Line All Next Line  indentation	<pre>void changeType(int t); derType { FAST, SAFE, COMPLETE e LoaderAnnotationType { s ELoader implements ILoader { SomeType fType = new SomeType(); ELoader() { } void changeType(int t) { fType.setType(t); } }</pre>
	ОК	Cancel Apply Help

Figure 11.36 - Brace and Indentation tab

Name	Description
Class declaration	Select the position of Class declaration from the drop-down menu. You can place it on the same line or the next line.
Constructor declaration	Select the position of Constructor declaration drop-down menu. You can place it on the same line or the next line.
Method declaration	Select the position of Method declaration drop-down menu. You can place it on the same line or the next line.
Enum declaration	Select the position of Enum declaration drop-down menu. You can place it on the same line or the next line.
Annotation type declaration	Select the position of Annotation type declaration drop-down menu. You can place it on the same line or the next line.
All Same Line	Select to set all the brace positions to be on the same line.
All Next Line	Select to set all the brace positions to be on the same line.
Indentation policy	Select a way of indentation. You may choose Tabs and space to be the indentation.
Indentation size	If you select space as indentation, you can select the size of it.

Table 11.2

/** * Indentation and Braces */ interface ILoader {} void changeType(int t); }			/** * Indentation and Braces */ interface ILoader { vid changeType(int t);
enum LoaderType { FAST, SAFE, COMPLETE 6 @interface LoaderAnnotationType { }	Brace Positions     Class declaration :     Constructor declaration :     Method declaration :     Enum declaration :	Next line V Next line V Next line V	} 6 enum LoaderType 7 FAST, SAFE, COMPLETE 7 6 @interface LoaderAnnotationType
public class ELoader implements ILoader { SomeType fType = new SomeType(); ELoader() { } void changeType(nt t) ( fType.setType(t);	Annotation type declaration :     All Same Line     Indentation	Next line V	<pre>public class ELoader implements ILoader { SomeType fType = new SomeType(); ELoader()</pre>
} }	6 Indentation policy : Tabs Indentation size :		<pre>{     void changeType(int t)     {     Type.setType(t);     } }</pre>
Brace Positions: Same Line Indentation: Tabs			Frace Positions: Next Line Indentation: Space

Figure 11.37 - Example illustrating options in Brace and Indentation tab



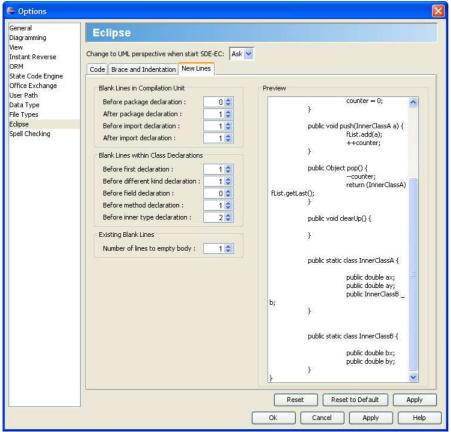


Figure 11.38 - New Lines Tab

Name	Description
Before package declaration	Type in the number of blank lines place before package declaration.
After package declaration	Type in the number of blank lines place after package declaration.
Before import declaration	Type in the number of blank lines place before import declaration.
After import declaration	Type in the number of blank lines place after import declaration.
Before first declaration	Type in the number of blank lines place before first declaration.
Before different kind declaration	Type in the number of blank lines place before different kind declaration.
Before field declaration	Type in the number of blank lines place before field declaration.
Before method declaration	Type in the number of blank lines place before method declaration.
Before inner type declaration	Type in the number of blank lines place before inner type declaration.
Number of lines to empty body	Type in the number of blank lines place to the empty body.



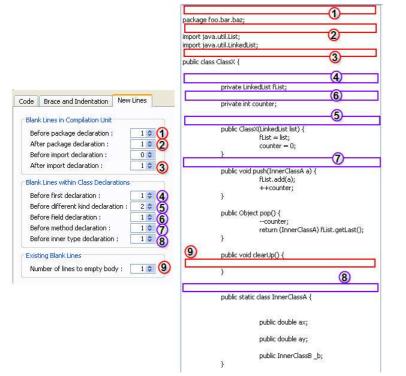


Figure 11.39 - Example illustrating options in New Lines tab

Code Brace and Indentation New Lines	Ð	Student.java ×
Code Brace and Indentation New Lines	<b>9</b> 23	
Blank Lines in Compilation Unit		import java.util.*;
Before package declaration : 0 💠 After package declaration : 1 💠		public class Student [
Before import declaration : 2 🗢		<pre>private Stringname;</pre>
After import declaration : 1 📚		<pre>private String _id;</pre>
		<pre>private Collection<course[]> _enrolledCourses;</course[]></pre>
	1	
	-	
Code Brace and Indentation New Lines	<u>ل</u> ل	Student.java ×
	Ð	Student.java × import java.util.*;
Code Brace and Indentation New Lines	Ð	
	1	
Blank Lines in Compilation Unit Before package declaration : 0 😂	1	import java.util.*;
Blank Lines in Compilation Unit Before package declaration : 0 \$ After package declaration : 1 \$	2	import java.util.*;
Blank Lines in Compilation Unit Before package declaration : 0 After package declaration : 1 Before import declaration : 1		import java.util.*; public class Student (
Blank Lines in Compilation Unit Before package declaration : 0 \$ After package declaration : 1 \$	Sa .	<pre>import java.util.*; public class Student {     private String;</pre>

Figure 11.40 - Example illustrating option in New Lines tab

# 12

# **State Machine Diagram Code Generation**

# Chapter 12 - State Machine Diagram Code Generation

SDE for Eclipse can assist you in drawing a State Machine Diagram, as well as generate a State Machine Diagram Code.

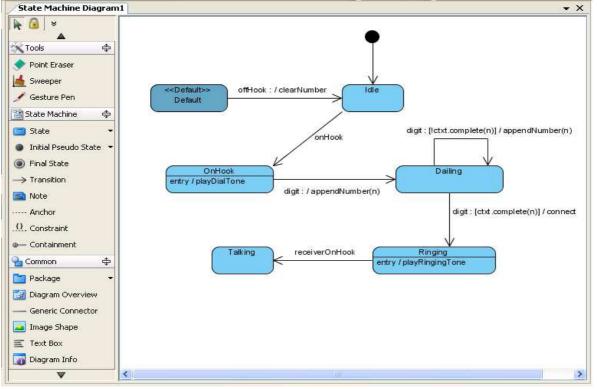


Figure 12.1 - State Machine Diagram

# **Drawing State Machine Diagram**

To generate a state machine diagram, you should first have a Class on the class diagram. Select **Sub Diagrams** > **State Machine Diagram** > **Create State Machine Diagram** from the pop-down menu of the class to create a sub diagram.

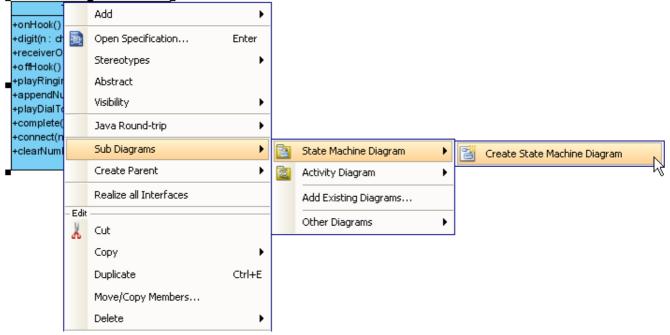


Figure 12.2 - Select Create State Machine Diagram

You will see an initial pseudo state on the state machine diagram.

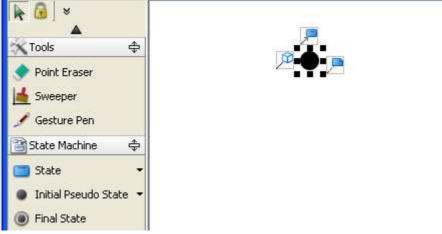
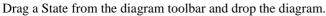


Figure 12.3 - State machine diagram with an initial pseudo state



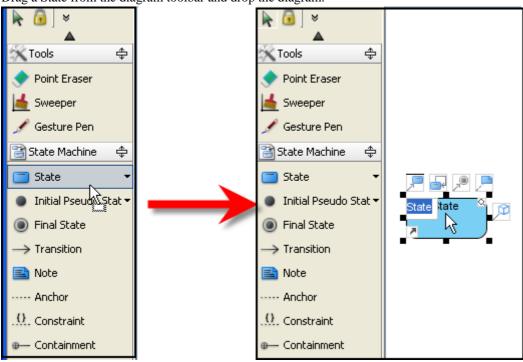


Figure 12.4 - Drag and drop a State

Alternatively, you can use the resources of the initial pseudo state.

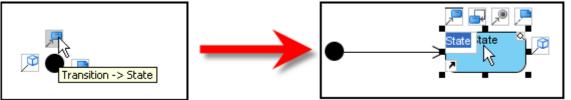


Figure 12.5 - Using resources

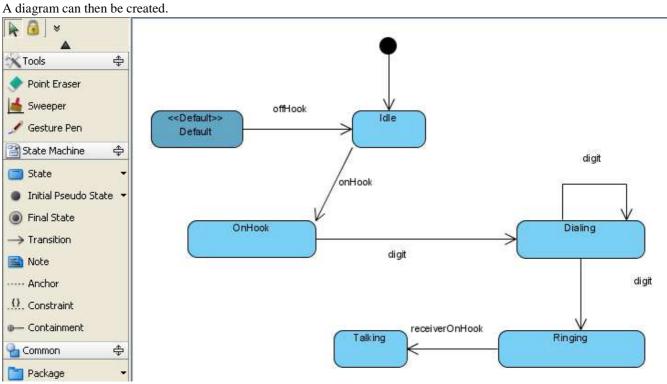


Figure 12.6 - Diagram created

# **Generate State Machine Code**

The process of creating a State Machine Code is simple. To generate a state machine code:

1. Select Modeling > State Machine Code > Generate Code from the main menu.

Modeling	Format Run Window Help	I	
🛞 Sta	rt SDE-EC		i 🕄 💟 i 🚔 🖂
Арр	blication Options		
Aut	o Synchronization		
Rep	port	•	
😭 Proj	ject Publisher		
od Edit	: Stereotypes		
Cor	nfigure Requirement Enumeration	ns	
a Use	Case Scheduling		
ORI	м	•	
EJB	l	•	
🐴 Inst	tant Reverse		
Inst	tant Generator		
Stal	te Machine Code	×.	🔁 Reverse Code
Теа	amwork	•	🧎 Generate Code
<b>&amp;</b> Sha	ape Editor		
💿 DB-	VA SQL		
Кеу	Manager		

Figure 12.7 - Select Generate Code...

2. The Generate state machine code dialog is displayed.

🖨 Generate	State Machine Code	×
Class:	Telephone	▼
State Diagram:		 ✔
Language:	Java	✓
Output Path:	C:\projects\state3	✓ …
Options	·	
Synchron	nized transition methods	Generate try/catch
Generate debug message		Re-generate transition methods
Browse output directory after generate		Auto create transition operations
🔽 Generate	e Sample	🗹 Generate diagram image
		OK Cancel

Figure 12.8 - Generate state machine code dialog

3. Select a language to generate the code in from the drop-down menu.

€	🛢 Generate	State Machine Code		×
¢	lass:	Telephone		~
2	itate Diagram:	State Machine Diagram1		~
L	anguage:	Java		~
	Output Path: Options Synchron Generate	Java C# VB.NET C++ Record ansidor methods e debug message utput directory after generate e Sample	Generate transition methods     Auto create transition operations     Generate diagram image	
			<u>Q</u> K <u>C</u> ancel	

Figure 12.9 - Select Language

4. Configure an output path by selecting ... or type in the path in the text box, and configure the options in the dialog.

🖨 Generate	State Machine Code	
Class:	Telephone	<b>▼</b>
State Diagram:	State Machine Diagram1	~
Language:	Java	~
Output Path:	C:\projects\state3	<u>~</u>
Generate	nized transition methods e debug message output directory after generate e Sample	Generate try/catch     Re-generate transition methods     Auto create transition operations     Generate diagram image
		<u>Q</u> K <u>C</u> ancel

Figure 12.10 - Configure an output path

5. The process of generation is shown. You may choose to Close Dialog when finished progress by checking the check box.

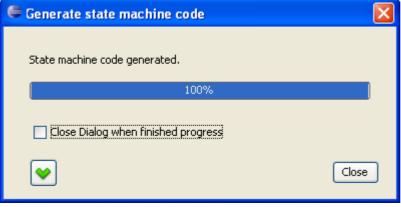


Figure 12.11 - Process of generation

#### 6. The code is generated.

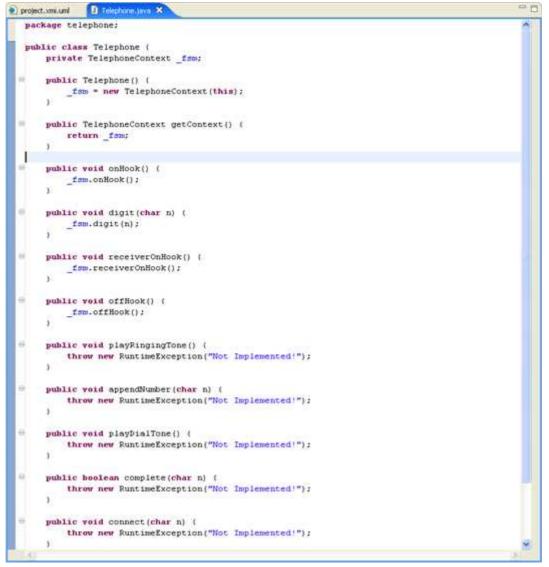


Figure 12.12 - Code generated

# **Programming with Generated State Machine Code**

SDE for Eclipse supports the generation of different types of state machine code. Since the steps for generation of codes in different languages are similar, Java will be used as an example to illustrate the steps. Before generating the code, you may want to configure the properties of states and transitions.

For state, configure by selecting **Open Specification...** from the pop-up menu.

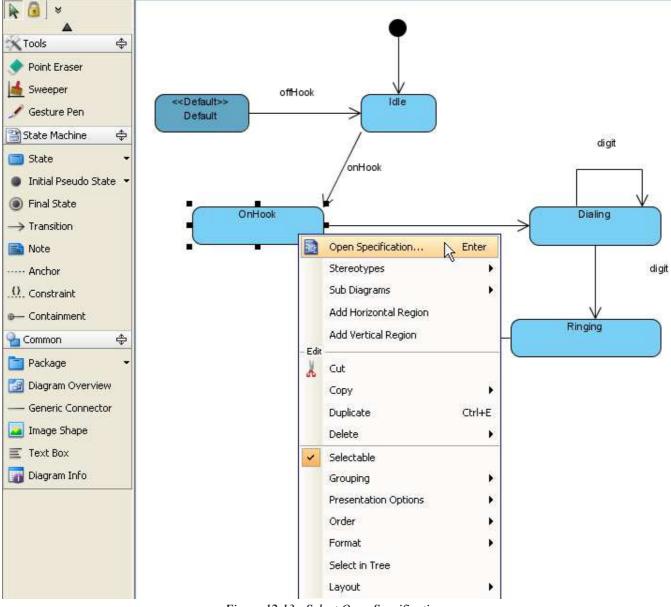


Figure 12.13 - Select Open Specification...

The **State Specification** dialog box is now open, and you can configure the state properties here. You may edit the Entry property by clicking **Edit...** .

Tagged Values	Co	onstraints	Diagrams	References	Comments
General	egions	Deferra	ble Triggers	Relations	Stereotypes
<u>N</u> ame:	OnHool				
<u>E</u> ntry:				Edit	Remove
E <u>x</u> it:				Edit	Remove
Do ac <u>t</u> ivity:				Edit	Remove
State invariant:	1				
Redefined state:	<unsp< td=""><td>ecified&gt;</td><td></td><td></td><td>¥</td></unsp<>	ecified>			¥
ocumentation:					545
HTML B	[ <u>u  </u> ]	CEE	i≡ ≔ F Fr	🥜 🕈 📑 💐	🚧 🧟 »

Figure 12.14 - State Specification dialog box

This is the Activity Specification(Entry) dialog box. After editing to suit your needs, click OK to confirm.

🖨 Activity Specification (Entry)				
Tagged Values         Constraints         Diagrams         References         Comments           General         Variables         Parameters         Relations         Stereotypes				
Name: playDialTone				
Language:				
Precondition:				
Postcondition:				
Dedu				
Body:				
Documentation:				
Single execution Read only Re-entrant				
Reset         OK         Cancel         Apply         Help				

Figure 12.15 - Activity Specification(Entry) dialog box

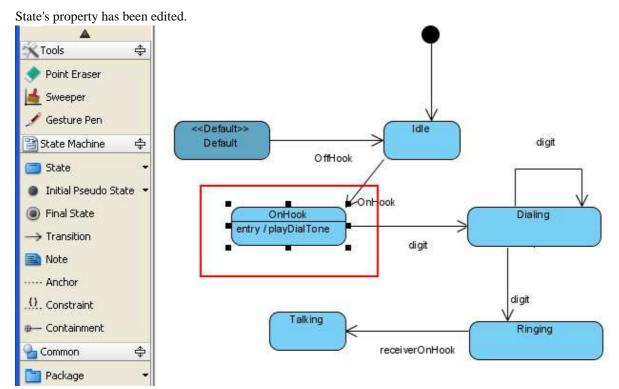


Figure 12.16 - State's property edited

#### Similarly, you can edit the transition by selecting the **Open Specification...** from the pop-up menu.

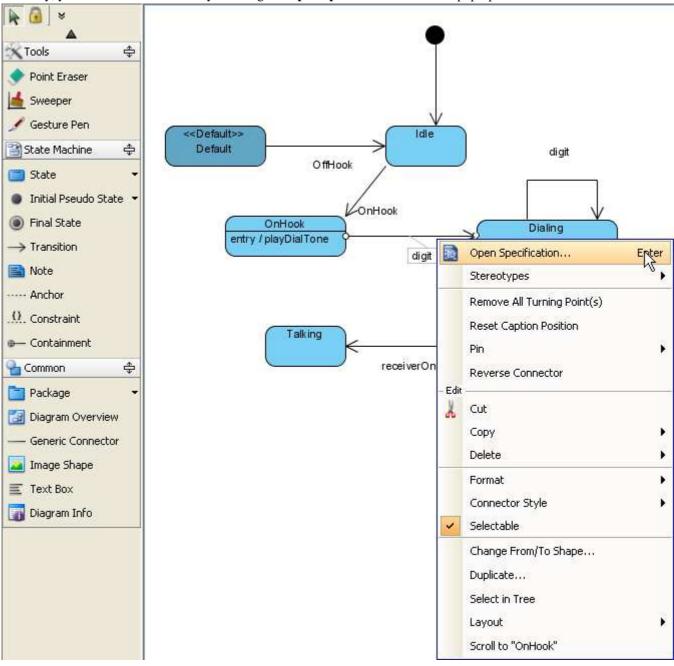
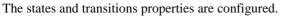


Figure 12.17 - Open Specification...

Then, edit the	properties	of transition	in the	Transition	Specification	dialog box.
----------------	------------	---------------	--------	------------	---------------	-------------

Transition Spec	ification				
Tagged Values	Constraints	References	Comments		
General	Triggers	1	eotypes		
'					
<u>N</u> ame:	digit				
Source:	OnHook				
<u>T</u> arget:	Dailing				
<u>K</u> ind:	External		~		
Effect:		Edit	Remove		
Redefined transition:	<unspecified></unspecified>		✓ …		
Guard:					
Oper <u>a</u> tion:	<unspecified></unspecified>		<b>···</b>		
Documentation:					
			1		
<u>R</u> eset	<u>o</u> k	Cancel	Apply		

Figure 12.18 - Transition Specification dialog box



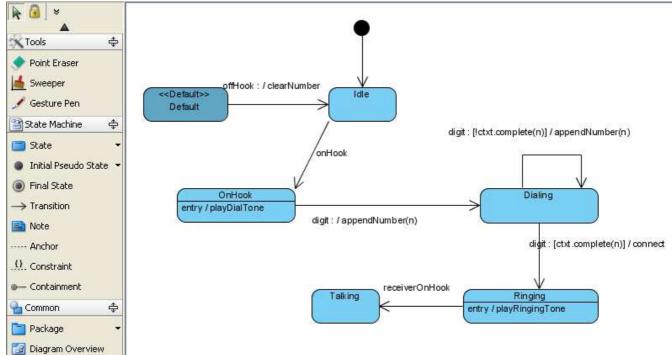


Figure 12.19 - State Machine Diagram

#### **Running sample application**

After generating Java files, you can compile and run them. Command Prompt in windows is used as an example to demonstrate the actions.

1. Run the compiler. Change the directory to the directory where the code file is generated. Type in the command for compiling. In this example, the command is *javac Name*/**java*.

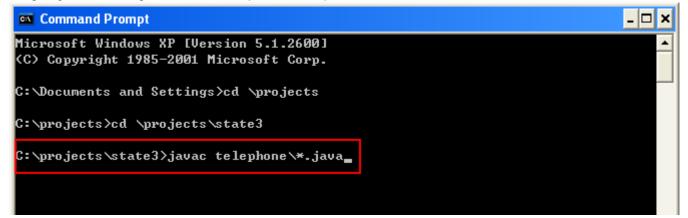


Figure 12.20 - Compile Java

2. After compiling, you can enter another command for running Java. For Windows, the command is *java -cp*. *telephone.TelephoneSample*.

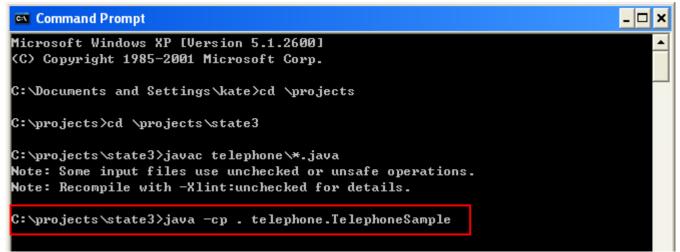


Figure 12.21 - Run Java

#### 3. The Java is run.

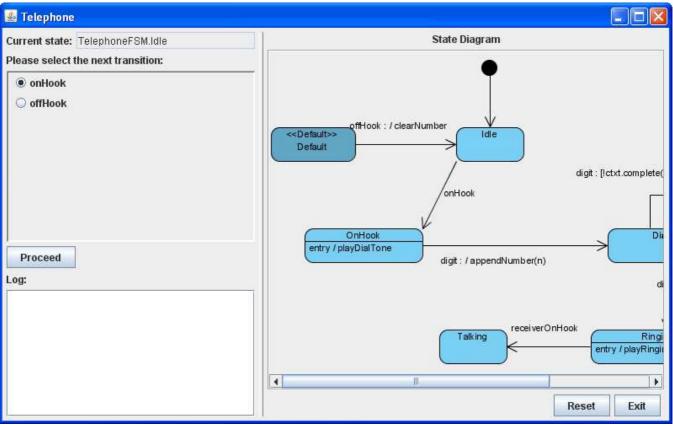


Figure 12.22 - Sample Java

#### **Insert Implementation**

If there is no implementation, the Java cannot be run because there is an error.

Teleph	one 🔀
×	java.lang.RuntimeException: Not Implemented!
	ОК

Figure 12.23 - Error message box

The original state machine diagram code generated did not have any implementation.

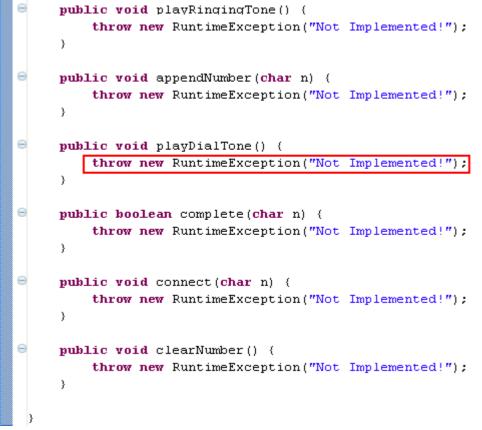


Figure 12.24 - No implementation

You can add the implementation in the source.

```
Θ
     public void playRingingTone() {
        System.out.println("Ringing tone");
     }
Θ
     public void playDialTone() {
         System.out.println("Dail tone");
     }
Θ
     public void appendNumber(char n) {
         number.append(n);
     }
Θ
     public boolean complete(char n) {
         return (number.toString() + n).equals("123");
     }
Θ
     public void connect(char n) {
         appendNumber(n);
         System.out.println("Connect to " + number.toString());
     }
Θ
     public void clearNumber() {
         number = new StringBuffer();
     }
```

Figure 12.25 - With implementation

#### The diagram sample is run with the implementation.

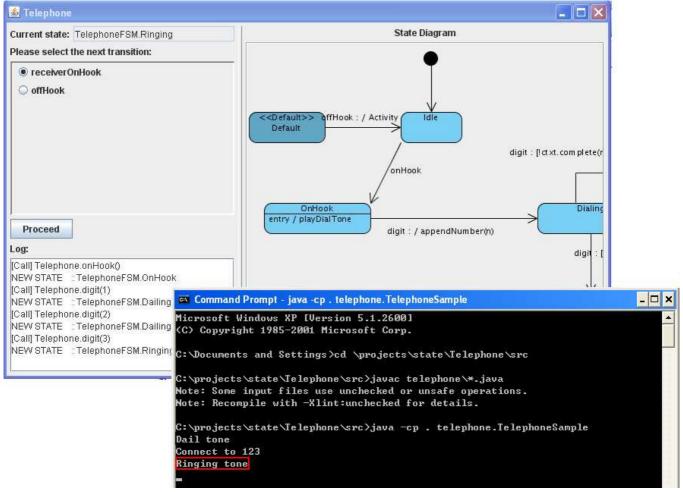


Figure 12.26 - Java sample

#### **Reverse State Machine Code**

Apart from generation of state machine code, SDE for Eclipse also supports the reversal of the state machine code file, with extension **.sm**.

```
1 %start TelephoneFSM::Idle
 2 %class Telephone
    %package telephone
 3
 -4
 5
    %map TelephoneFSM
 6
    2.2
 7
    Idle
 8
    {
        onHook OnHook ()
9
10
    3
11
12
    OnHook
    Entry (playDialTone();)
13
14
    {
15
        digit(n:char) Dailing {appendNumber(n);}
16
    }
17
18
    Dailing
19
    ł
20
        digit(n:char)[!ctxt.complete(n)]
                                          Dailing (appendNumber(n);)
21
        digit(n:char)[ctxt.complete(n)] Ringing (connect(n);)
22
    }
23
24
    Ringing
25
    Entry {playRingingTone();}
26
    {
27
        receiverOnHook Talking {}
28
    з
29
30
    Talking
31
    ł
32
    3
33
34
    Default
35
    Ł
36
        offHook Idle
                        {clearNumber();}
37
    }
38
39
    44
40
```

Figure 12.26 - A .sm file

### To reverse the .sm file:

1. Select Modeling > State Machine Code > Reverse Code... from the main menu .

Modeling	Format	Run	Window	Help						
🛞 Start SDE-EC							쀭 🖉		٢	3E
App	lication O	otions.								
Aut	o Synchro	nizatio	n							
Rep	oort				•					
Pro	ject Publis	her								
🚮 Edit	: Stereotyj	oes								
Cor	nfigure Re	quirem	ent Enume	erations						
BUse	: Case Sch	edulin	g							
ORM +				•						
EJB 🕨					•					
🐴 Insl	tant Revei	'se								
Inst	tant Genei	rator								
Sta	te Machine	e Code	)		•	🄁 Re	verse O	ode		
Teamwork •			►	💫 Gei	nerate (	Code.				
Shape Editor										
💿 DB-	🐵 DB-VA SQL									
Key	Key Manager									

Figure 12.27 - Select Reverse Code...

2. The Reverse State Machine Code dialog box is displayed. Select the Class and State Diagram.

🖶 Reverse State Machine Code 🛛 🛛 🔀					
Class:	Auto create class model 💌				
State Diagram:	Auto create state diagram 💌				
Input File:	✓ …				
	OK Cancel				

Figure 12.28 - Reverse State Machine Code dialog box

3. Configure the input file path by typing in the text box or select ... .Select **OK** to confirm.

🖶 Reverse State Machine Code 🛛 🛛 🔀				
Class:	Auto create class model 🛛 💙			
State Diagram:	Auto create state diagram			
Input File:	C:\projects\state\Telephone\bin\Telephone.sm			
	OK			

Figure 12.29 - Configure the input file path

4. The progress of reversal is shown. You can select to Close Dialog when finished progress by checking the check box.

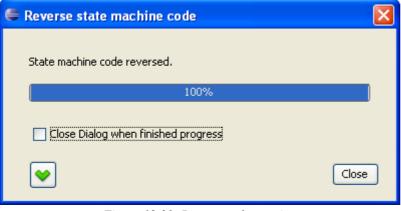


Figure 12.30- Progress of reversing

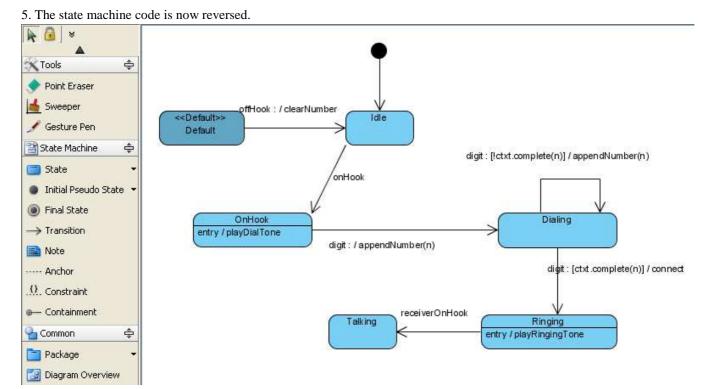


Figure 12.31 - State machine code is reversed



# **Team Collaboration with VPTS**

# Chapter 13 - Team Collaboration with VP Teamwork Server

Visual Paradigm Teamwork Server is easy to use version control and collaboration platform. With SDE for Eclipse VP Teamwork Server integration you can record and keep history of all changes in your design in your VP Teamwork Server. Other people who may need to only view your designs just need to use the free Viewer to have a look at the project. Please be reminded VP Teamwork Server integration is only available in Modeler Edition or above.

In this chapter:

- Operating projects
- Reviewing the old revisions of projects
- Comparing the differences between revisions
- Using branch and tag
- Providing suggested branch usage

#### Starting up the Server

Before you can manage projects in VP Teamwork Server, you have to start the server first. You can select the **StartTeamworkServer.exe** icon in the "bin" folder inside the Teamwork Server installation directory.

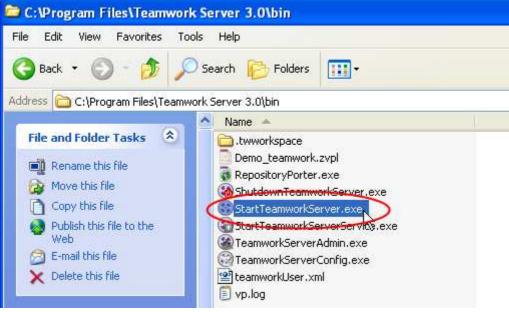


Figure 13.1 - Select StartTeamworkServer.exe

#### **Starting the Teamwork Client Dialog Box**

The Teamwork Client dialog box is the access point for all Teamwork functions, such as operating projects, reviewing and comparing projects and using branches and tags. There are three ways you can start Teamwork Client. To start using main menu, you can select **Modeling** > **Teamwork** > **Open Teamwork Client...**.

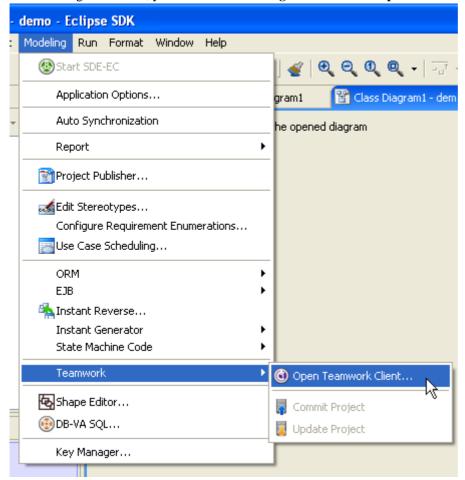


Figure 13.2 - Open Teamwork Client using main menu

If not, you may use the tool bar to open Teamwork Client dialog box.



Figure 13.3 - Open Teamwork Client using toolbar

You can also right click on the project node of different panes and select Teamwork > Open Teamwork Client... .

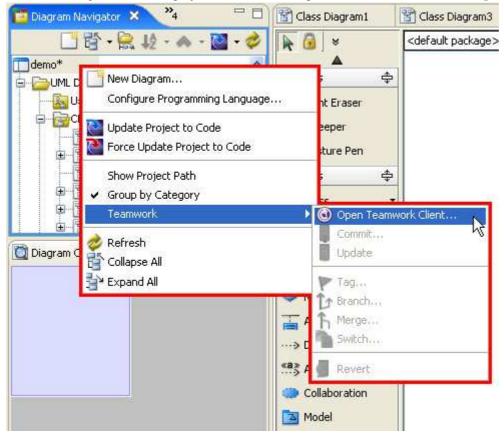


Figure 13.4 - Open Teamwork Client with project node

By using any one of these methods, the Login to the Teamwork Server dialog box is displayed.

🖨 Login to the Teamwork Server 🛛 🔀					
Login Please ente	er user name and password to login to the teamwork server.				
Server:	VP Teamwork Server				
User name:					
Password:					
Server host:	Port number: 1999				
🔽 Remembe	er password 📃 Use proxy				
	OK Cancel Help				

Figure 13.5 - Login to the Teamwork Server dialog box

Then, configure the details of server connection. Then click **OK** to confirm.

🖶 Login to the Teamwork Server 🛛 🔀					
Login Please ente	er user name and password to login to the teamwork server.				
Server:	VP Teamwork Server				
User name:	Peter				
Password:	•••••				
Server host:	localhost Port number: 1999				
Remember password 🔲 Use proxy					
	OK Cancel Help				

Figure 13.6 - Configure details of server conncetion

#### Teamwork Client dialog box is opened.

🖨 Teamwork Client - Peter		
Session Project 23		56 78 P 位 f
	Project <u>D</u> etails Project name: File path: Checkout time: Revision:	Revisions         project1         Not checked out.         Not checked out.         Recheckout         Update       Commit         Checkout       Open Project
Peter logged in.		Close

Figure 13.7 - Teamwork Client dialog box

	Name	Function	
1	Logout	Logout from the server.	
2	Checkout	Checkout projects from the server.	
3	Open	Open the selected project.	
4	Refresh projects	Refresh the projects to get the latest status of them.	
5	Tag	Create a tag for the selected project.	
6	Branch	Create a branch for the selected project.	
7	Switch	Switch your location in the project.	
8	Delete branch	Delete a branch.	

## **Checking out Project**

If you have already imported a project to server or selected a project to manage, you can checkout the project from the repository.

When you have just selected a project in the **Projects** list, the status is 'Not checked out'.

🗐 😫   📾 💊   📗	🎚 📩 🗁	j 🔍 🥏 🛛	P 🗅 ĥ 🗞 🕽	¢.
Projects:		Project <u>D</u> etails	Revisions	
project1[trunk]				
projecci[crank]		Project name:	project1	
		File path:		
		Checkout time:		
		Revision:		
		Status:	Not checked out.	
		L		

Figure 13.8 - Project not checked out

When you click **Open Project**, you can checkout the project and open it immediately.

Fearnwork Client - Peter	× * * * * * * * * * * * * * * * * * * *
Session Project	
Projecti (trunk) Project name: pr File path: Checkout time: Revision: Status: N Description:	Revisions roject1 ot checked out:
Peter logged in.	Close Help

Figure 13.9 - Select Open Project

Alternatively, you can choose to checkout the project without opening it. Checkout Project is quite different from Open Project. After checking out the project, your will stay in the Teamwork Dialog for further actions. For example, creating branch, Merge change from branch. If you select Open Project, you will open the project for viewing and modification. To checkout the project, click **Checkout** in **Teamwork Client** dialog box.

Teamwork Client - Peter	
Session Project	
41 Br   (1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1 A   1	P b h mb
Projects: Project Detail	Revisions
project1[trunk] Project name:	project1
File path:	
Checkout time	
Revision:	
Status:	Not checked out.
Description:	
	Rechectiout Update Commit Checkout Open Project
Peter logged in.	Close Help

Figure 13.10 - Checkout the project

The status of the project is changed and you have checkout the project successfully.

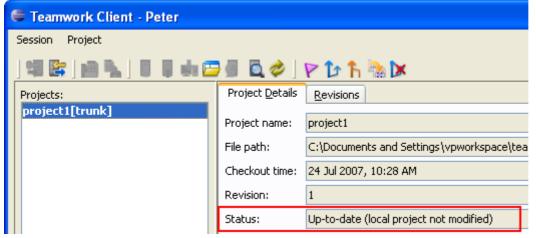


Figure 13.11 - Project checked out

### **Committing Project**

After you have modified the project, you can share your local changes with other team member by committing the project to server.

You may commit project in the toolbar.

Eclipse SDK	
t Modeling Format Run Windo:	ow Help
' ] *>	) 🐮 🔛   😂 🖂   ×
- 🔛 - 🤣 🗼 🙆 👻	<default package=""> 🧔</default>
<i>Figure 13.12</i>	- Commit project

A Commit Project dialog box will show you the progress of commit.

🖨 Commit Project	
Preparing to commit, please wait	
Cancel	

Figure 13.13 - Commit project dialog box

A dialog box will be displayed and you may enter a description of the changes. Then, click OK.

Commit Pro	ject 🔀
Project name:	testing4
Checkout version:	1
Checkout time:	01 Jul 2007, 11:57 PM
Current time:	10 Jul 2007, 10:55 AM
Description:	
I	
<choose a="" previo<="" td=""><td>usly entered comment&gt;</td></choose>	usly entered comment>
	OK Cancel Help

Figure 13.14 - Enter description of commit change

#### A Commit Model(s) dialog box shows the models you have modified. You can click OK to commit.

🖨 Commit Model(s)	
0. 0 0 0 0	
Composed (models)	
Entity2 :DBTable	
Ciagrams)	
Entity Relationship Diagram1 :ERDiagram	
	 • • • • • • • • • • • •

Figure 13.15 - Commit Model(s) dialog box

Sometimes, you may encounter conflict when committing models.

🖨 Commit Model(s)			×
(models) Actor : Actor (diagrams) Case Diagram1 : UseCaseDiagram Actor : Actor FillColor Color1	Name: Conflict Name: Revision: Conflict Revision: DiagramElement f		Overwrite Revert
background Conflict(s) found		Iame Color ckground	Value [gradientStyle, trans [128, 128, 128, 255]
		ОК	Cancel Help

Figure 13.16 - Commit with conflict

You can choose to revert or overwrite to solve. For more details, please refer to the section 'Resolving Conflict'.

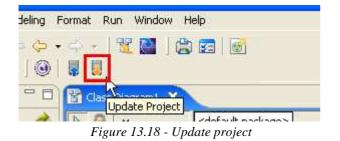
🖨 Commit Model(s)			
(models) Actor : Actor (diagrams) Colori C	Name: Conflict Name: Revision: Conflict Revision: DiagramElement I Properties: Ver. Local Local		Value [gradientStyle, trans [128, 128, 128, 255]
		OK	Cancel Help

Figure 13.17 - Select overwrite or revert

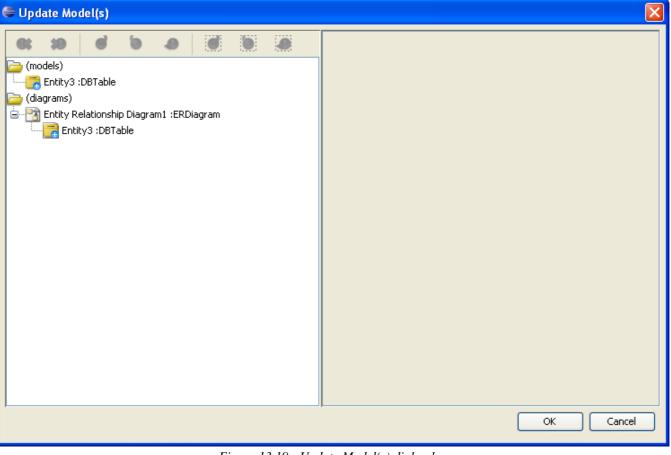
### **Updating Project**

Apart from committing the project you have changed to the server, you can also get other teammates' changes in the server to local by updating project.

To update project, you can click the icon for update in toolbar.



Update Model(s) dialog box is displayed. The models changed by others are shown. You can click OK to update the models.



*Figure 13.19 - Update Model(s) dialog box* 

### **Reverting Project**

You may encounter the situation that you have made a lot of changes in the project just to find there are a lot of mistakes. In this case, you may want to rollback all the changes and redo the whole project. Here, you can revert all local changes by clicking the **Revert** button.

- 🔛 🖻 | 💁 - | 🥭 🛷 | 🏷 🗭 - 🔶 - | (4 🔛 | 🚔 🗺 | 🎯 0 »4 習 Class Diagram1 🛛 F Diagram Navigator 0 × <default package> A E 0 testing1 [test \$ New Diagram... 🖨 🔁 UML Diag Configure Programming Language... Use raser 🖨 📄 Clas Update Project to Code er B 18 Force Update Project to Code e Pen Show Project Path \$ Group by Category Teamwork ( Open Teamwork Client... < Commit... 👂 Refresh Update 🔘 Diagram Ove E Collapse All ¥ Expand All 🔽 Tag... 🚹 Branch... Merge... Asso Switch... ···> Dep «a» Abs Revert Collaboration

Figure 13.20 - Revert project

A dialog box will show and ask if you want to revert. Click Yes to confirm and the project is reverted.



Figure 13.21 - Confirm revert project

## **Checking for Update**

If the project you are managing is not up-to-date, the status in Teamwork Client dialog box will change.

🖨 Teamwork Client		
Session Project		
] 41 📴 jai 🗛 j 🖬 🖶 🖬 🖻	🧧 🗖 🤣	ዮ 🗅 ĥ 🗟 🗵
Projects:	Project <u>D</u> etails	Revisions
project1[trunk]	Project name:	project1
	File path:	C:\Documents and Settings\serverclient2\teamwork_clien
	Checkout time:	24 Jul 2007, 05:06 PM
	Revision:	14
	Status:	Has update (local project not modified)

Figure 13.22 - Status changed

Alternatively, you can check if the local project has a newer version in teamwork server repository by clicking the **Check for Update** button.

Teamwork Client		
<b>13 📴   10 🐁   🥫  eta 1</b> Projects:	Project Metaile	PD h
project1[branch1]	Project name:	project1

Figure 13.23 - Select Check for Update

A message will tell you what the latest revision is. You can then select **Update** to get the modification from the server. For more details, please refer to the section 'Updating project'.

🖶 Teamwork Client	
Session Project	
41 📴   🖻 🐂   🛛 🖗 🗰 🚽 🔯	2 P D h 🐘 🔀
Projects: Project [	etails <u>R</u> evisions
project1[trunk] Project n	me: project1
File path	C:\Documents and Settings\serverclient2\teamwork_client\projects\project1\project1.vpp
Checkoul	time: 24 Jul 2007, 05:06 PM
Revision:	14
Status:	Has update (local project not modified)
Description	1:
	Recheckout Update Commit Checkout Open Project
The project latest version is 15.	Close Help

Figure 13.24 - Message showing the latest version

### **Resolving Conflict**

Sometimes, you may modify the same model as your teammate with different changes. In this way, the server may not know which revision should be preserved and it shows conflict. Conflicts can happen when you commit the project.

Commit Model(s)			×
et 10 et 10 a et 10 a	Name: Conflict Name:	new use OLD new use OLD (Deleted)	
Package :Package	Revision: Conflict Revision:	Local	
(diagrams) - 🏹 Use Case Diagram1 :UseCaseDiagram - 😭 new use OLD :UseCase - 😭 fillColor	DiagramElement h		Overwrite Revert
Conflict(s) fo	e resolve the conflict(s).	iame Iolor ckground	Value [gradientStyle, trans [192, 192, 192, 255]
		Ę	\$
			OK Cancel

Figure 13.25 - Conflict found in merging

Conflict may also happen when you update your project.

😂 Update Model(s)	×
📧 🐲 🥑 🕭 🧭 🦉 🥘 Name: new use OLD	
(models) Conflict Name: new use OLD (Deleted)	
Package :Package Revision: Local	
Conflict Revision: 2	
DiagramElement has no model.	
🖻 🔀 Use Case Diagram1 :UseCaseDiagram	Overwrite Revert
mew use OLD :UseCase     mew use OLD :UseCase     memory	
Conflict(s) found	Value
background	[gradientStyle, trans]
Planes yearship the section of the s	[192, 192, 192, 255]
ОК	
	N
	R
	OK Const
	OK Cancel

Figure 13.26 - Conflict found in updating

When you face conflict, you can solve it by selecting the conflict model and clicking **Overwrite** or **Revert**. **Overwrite** is to keep local changes while **Revert** is to accept changes from server.

Commit Model(s)			
Commit Model(s) (models) Package :Package new use OLD :UseCase (diagrams) New Use OLD :UseCase fillColor FillColor Package :Package ContainedDiagramElements	Name: Conflict Name: Revision: Conflict Revision: DiagramElement I Properties: Ver.		Value [gradientStyle, trans [192, 192, 192, 255]
		l	OK Cancel

Figure 13.27 - Solving conflict

## **Viewing Revision History**

From time to time, there may be a lot of changes made by you and your teammates. In SDE for Eclipse, you can view back the previous revisions of the project.

To view the history of committed changes, open the Teamwork Client dialog box and select Revisions tag.

🖨 Teamwork Client		
Session Project		
] 41 📴 ] 10 💫 ] 🛛 🖓 🖬 🗇	🔄 📮	🖻 🏠 ĥ 🗞 🕨
Projects:	Project <u>D</u> etails	Revisions
project1[trunk]	Project name:	لمخ project1
	File path:	C:\Documents and Settings'
	Checkout time:	24 Jul 2007, 10:33 AM
	Revision:	2
	Status:	Up-to-date (local project no

Figure 13.28 - Select Revisions

You can see the different revisions of the project.

🗲 Teamwork Client				
Session Project				
	A & P to h MA	8		
Projects: Pro project1[trunk]	ject <u>D</u> etails <u>Revisions</u>			
	splay: Last 10 🔽		Modified model elem	entsi
	Project revisions:		Name	
	Ver. User	Date Time		
		2007/07/24 11:10		
		2007/07/24 10:32 2007/07/24 09:51		
			Modified diagrams:	
			Name	
			we alter a state of the second second	
	Open Project	Compare Project	Modified diagram ele	Diagram
				, oragi ani
	neckin Description:			
				Close Help

Figure 13.29 - Different revisions of the project

You can see the model, diagram and diagram elements modified in that version. You can also see the checkin description in that version.

🗧 Teamwork Client
Session Project
] 48 📾 🐁 ] 🖩 🖶 📾 🖪 🖻 🧇 ] 🖓 🕑 ĥ 🐁 💌
Projects:       Project Datais       Revisions         Display:       Last 10       Modified model elements:       Name         Project revisions:       User       Date Time       UseCase         3/Peter       2007/07/24 11:10       Project according to the second to the sec

Figure 13.30 - Changes of different revisions

## **Checking Out Old Revision**

You can checkout the old revision of project and make changes in it. Afterwards, you can commit your changes to the server. To check out a revision of a project, you can select a revision and click **Open Project**.

Project <u>D</u> etails <u>R</u> evisions	
Display: Last 10 🗸	
Project revisions:	
Ver. User	Date Time
3 Peter	2007/07/24 11:10
2 Peter	2007/07/24 11:10
1 Admin	2007/07/24 09:51
Open I	Project Compare Project
Checkin Description:	-

Figure 13.31 - Check out old revision

## **Comparing Between Revisions**

You may want to see the differences between different revisions here in SDE for Eclipse. To achieve, first you may select a revision.

Project <u>D</u> etails <u>R</u> evisions	]
Display: Last 10 💌	
Project revisions:	
Ver. User	Date Time
3 Peter	2007/07/24 11:10
2 Peter	2007/07/24 10:32
1 Admin	2007/07/24 09:51
	Feter
	Pusiest Compare Draight
Upen	Project Compare Project
Checkin Description:	
,	,

Figure 13.32 - Select one revision

#### Then, you may press Ctrl and click on the revision you want to compare with.

Project Details Revisions
Display: Last 10 🗸
Project revisions:
Ver. User Date Time
3 Peter 2007/07/24 11:10
2 Peter 2007/07/24 10:32
1 Admin 2007/07/24 09:51
Open Project Compare Project
Checkin Description:

Figure 13.33- Select another revision

#### Afterwards, click Compare Project to compare.

Project Details Revisions	
Display: Last 10 🗸	
Project revisions:	
Ver. User	Date Time
3 Peter	2007/07/24 11:10
2 Peter	2007/07/24 10:32
1 Admin	2007/07/24 09:51
	Project Compare Project
Checkin Description:	
I	

Figure 13.34 - Select Compare Project

A Compare Projects from revision dialog box appears and shows you the differences between your selected revisions.

Compare Projects from revision 2 to 3	
a: 10 d b a d b a	
a (models)	
UseCase :UseCase	
🗁 (diagrams)	
😑 🎦 Use Case Diagram1 :UseCaseDiagram	
UseCase2 :UseCase	
	Close He

Figure 13.35 - Compare Project dialog box

#### **Branch and Tag Project**

Branch is a technique to separate the development of project from trunk. You can modify the project in branch while keep the most stable version design in trunk.

In this way, you can perform some research or time-taking task in branch and merge the changes to trunk only when the branch is proven to be stable.

Tag provides a convenient technique to manage and label a stable version. You can go back to check the stable version by switching to Tag.

#### **Creating a Branch**

You can create a branch by clicking the icon for branch in toolbar.

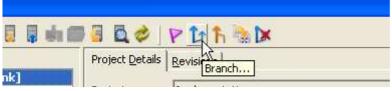


Figure 13.36 - Select branch

Create Branch dialog box is displayed and you can enter the name of branch you want to create.

🖨 Create Branch 🛛 🔀
Branch Please input the name for the new branch. You can start working at the new branch or keep working at the trunk.
Branch Name:
Start working in branch
OK Cancel

Figure 13.37 - Create Branch dialog box

Then, select a status of branch from the drop-down menu.

🖨 Create Branch	X
Branch Please input the name for the new branch. You can start working at the new branch or keep working at the trunk.	
Branch Name: branch1	
Start working in branch	~
Start working in branch	
Stay in trunk	
OK Cance	

Figure 13.38 - Select from drop-down menu

Then, click OK to confirm creating branch.

🖨 Create Branch	×
Branch	٦
Please input the name for the new branch. You can start working at the new branch or keep working at the trunk.	
	4
Branch Name: branch1	
Start working in branch	-
OK Cancel	

Figure 13.39 - Confirm creating branch

#### **Managing a Branch**

In VP Teamwork Server, you can manage a branch by switching to that branch. To switch, you can select the **Switch...** icon in the toolbar.



Figure 13.40 - Select Switch...

Swtich to dialog box is opened. You can select a branch to switch.

Switch	to	×
?	Please select a branch/tag to switch	
- 4	trunk	
	(branch1 tag1	

Figure 13.41 - Select a branch to switch

Afterwards, click OK to switch.



Figure 13.42 - Confirm switch

#### **Creating a Tag**

You can label the stable version of project by creating a tag there. To create a tag, select **Tag...** in the toolbar.

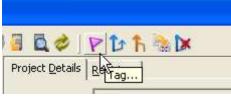


Figure 13.43 - Select Tag...

Then, you can enter tag name in the Create Tag dialog box.

🖨 Create Tag	×
Tag Please input the name for the new tag. You can start working at the new tag or keep working at the head.	
Tag Name:	
Start working in tag	*
OK Cancel	

Figure 13.44 - Create Tag dialog box

Afterwards, you can select your location after creating tag.

🖨 Create Tag	×
Tag Please input the name for the new tag. You can start working at the new tag or keep working at the tag.	
	_
Tag Name: tag1	
Start working in tag	~
Start working in tag	
Stay in tag が	
OK Cancel	

Figure 13.45 - Select location after creating tag

Tag is created.



Figure 13.46 - Tag created

#### Managing a Tag

Similar to managing a branch, you can manage a branch by switching to that branch. To switch, you can select the **Switch...** icon in the toolbar.

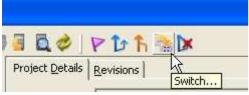


Figure 13.47 - Select Switch...

Swtich to dialog box is opened. You can select a branch to switch.

Switch	to	×
2	Please select a branch/tag to switch.	
$\checkmark$	trunk	~
	trunk	
	branch1	
	tag1	

Figure 13.48 - Select a branch to switch

Afterwards, click OK to switch.

Switch	to	
?	Please select a branch/tag to swite	ch,
2.14	tagi	Ň
	OK Cancel	
	OK Cancel	

Figure 13.49 - Confirm switch

### **Usage of Merge**

When you have modified your project in branch, you can merge the changes you made to trunk. To merge, you can select the icon for merging in the toolbar.

3 🗋 🤣 ]	P b <u>h</u> 🐁 🕨
Project <u>D</u> etails	

Figure 13.50 - Icon for merging

Merge dialog box is displayed. You can select the URL you want to merge from by typing in the text box or select ... . You can also select the revision which take part in the merging.

😂 Merge 🔀
From:
branch1 👻
<ul> <li>All revisions except those merged</li> </ul>
From revision     To revision
То:
HEAD
OK Cancel

Figure 13.51 - Merge dialog box

The progress of merging is shown.

🖨 Merge Project	×
Preparing to merge, please wait	
Cancel	

Figure 13.52 - Progress of merging

Then, a dialog box tells you what models and diagrams are going to be merged. You can click OK to confirm merging.

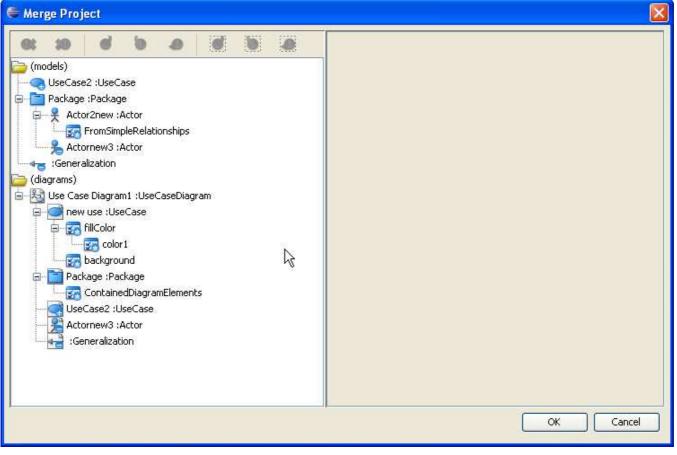


Figure 13.53 - Models and diagrams which are going to merge

## Suggested Branch Usage

This section will show you the suggested usage of the Branch with VP Teamwork Server integration. Here, you will learn how to create a single branch called "supportWebService". However, you can choose to have multiple branch running at the same time.

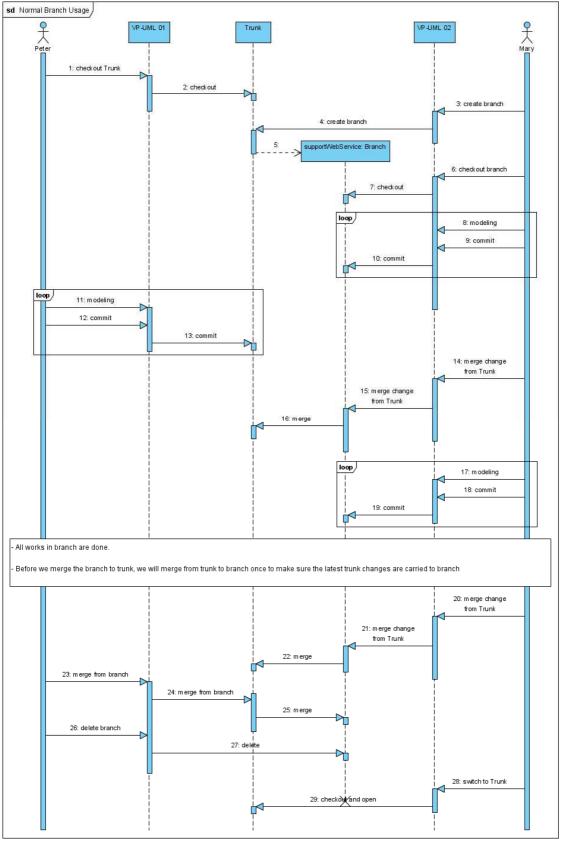


Figure 13.54 - Suggested branch usage

# **4 Team Collaboration with CVS**

# Chapter 14 – Team Collaboration with CVS Repository

CVS is widely adopted version control and collaboration platform. With SDE for Eclipse CVS repository integration you can record and keep history of all changes in your design in your CVS repository. Moreover, your designs are stored along with source codes in the same repository. This allows both design and source code to be backed up together, and also saves administration cost by needing only a single repository in your team. Other people who may need to only view your designs just need to use the free Viewer to have a look at the project. Please be reminded CVS repository is only available in Standard Edition or above.

In this chapter:

- Importing and managing projects
- Operating projects
- Reviewing the old revisions of projects
- Comparing the differences between revisions
- Using branch and tag
- Providing suggested branch usage

#### **Starting the Teamwork Client Dialog Box**

The Teamwork Client dialog box is the access point for all Teamwork functions, such as importing and managing projects, operating projects, reviewing and comparing projects and using branches and tags. There are three ways you can start Teamwork Client.

To start using the main menu, you can select Modeling > Teamwork > Open Teamwork Client... .

Modeling	Run	Window	Help									
🛞 Start SDE-EC			1	0		٢	3E		<u>,</u>	 ť		
App	plication	) Options.										
Aut	to Sync	hronizatio	n									
Rep	port			•								
Pro	iject Pul	blisher										
🚮 Edil	t Stered	btypes			-							
Cor	nfigure	Requirem	ent Enumerat	ions								
🚬 Use	e Case S	5cheduling	J									
ORM			•									
EJB	}			•								
🐴 Ins	tant Re	verse										
Ins	tant Ge	nerator		•								
State Machine Code			•	_								
Теа	amwork			•	٢	Open	Теа	amw	ork C	lient		
🚱 Shape Editor					Comm	nit P	roje	ct			-0-	
🛞 DB-VA SQL				Updat	te P	roje	ct					
Key Manager												

Figure 14.1 - Open Teamwork Client using main menu

If not, you may use the tool bar to open the Teamwork Client dialog box.



Figure 14.2 - Open Teamwork Client using toolbar

You can also right click on the project node of different panes and select Teamwork > Open Teamwork Client... .

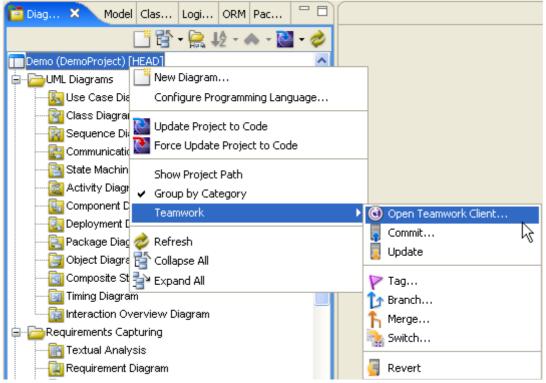


Figure 14.3 - Open Teamwork Client with project node

By using any one of these methods, the Login to the Teamwork Server dialog box will be displayed.

🖶 Login to the Teamwork Server 🛛 🔀						
Login						
Please enter user name and password to login to the teamwork server.						
Server:	VP Teamwork Server					
User name:	La construction de la constructi					
Password:						
Server host:	Port number: 1999					
🔽 Remembe	er password 📃 Use proxy					
	OK Cancel Help					

Figure 14.4 - Login to the Teamwork Server dialog box

#### You can select CVS as the server.

🖶 Login to the Teamwork Server 🛛 🔀						
Login Please ente	er user name and password to login to the teamwork server.					
Server: User name: Password: Server host:	VP Teamwork Server VP Teamwork Server Subversion CVS Port number: 1999					
	er password Use proxy OK Cancel Help					

Figure 14.5 - Login to the Teamwork Server dialog box

Configure the details of the server connection, then click **OK** to confirm.

🖶 Login to the Teamwork Server 🛛 🔀							
Login							
Please enter user name and password to login to the CVS.							
Server:	cvs 💌						
User name:	cvsuser						
Password:	*****						
CVS path:	C:\eclipse\sde\vp_windows\cvs\cvs.exe						
Connection type:	pserver 💌						
Host:	cvs.testrepository						
Repository path:	/home/cvsroot						
Port:	⊙ Use default ○ User port:						
Remember password							
	OK Cancel Help						

Figure 14.6 - Configure details of server conncetion

The Teamwork Client dialog box is opened.

Teamwork Client	ma	<u>aa</u>
	PDA	
Show all user	Project Details	Revisions 13
Repository: All	Project name:	DemoProject
Projects: DemoProject [cvs.testrepository]	File path:	C:\test\eclipse 610\workspace3\Demo\vpproject\Demo.vpp
	Checkout time:	22 Jul 2007, 01:13 PM
	Revision:	1
	Status:	Up-to-date (local project not modified)
	Branch:	HEAD
	Description:	
		Update Commit Checkout Open Project
logged in.	1	Close Help

Figure 14.7 - Teamwork Client dialog box

	Name	Function
1	Logout	Logout from the server.
2	Manage project	Manage projects in the server.
3	Import project	Import a project into the server.
4	Open	Open the selected project.
5	Check for Update	Check for updates in the selected project.
6	Refresh projects	Refresh the projects to get the latest status.
7	Tag	Create a tag for the selected project.
8	Branch	Create a branch for the selected project.
9	Merge	Merge the modification of branch to head.
10	Switch	Switch your location in the project.
11	Delete branch	Delete a branch.
12	Project Details	Show details of the selected project.
13	Revision	Modification history of the selected project.
14	Projects list	Show projects selected to be managed.

### **Importing Project to the Repository**

You can import your project to the repository by clicking the **Import Project to Repository** icon in the **Teamwork Client** dialog box.

🖶 Teamwork Client		
] 41 📴 j 🔁 💁 🛛 🗧 🖬 📾 🖥 🙋 🤣 j '	PDA	
Show all user Import Project to Repository Pr	roject <u>D</u> etails	Revisions
Repository: All	roject name:	DemoProject
Projects: DemoProject [cvs.testrepository]	ile path:	C:\test\eclipse 610\workspace3\Demo\vpproject\Demo.vpp
	heckout time:	22 Jul 2007, 01:13 PM
R	evision:	1
St	tatus:	Up-to-date (local project not modified)
Br	ranch:	HEAD
P	escription:	1
		Update Commit Checkout Open Project
logged in.		Close Help

Figure 14.8 - Select Import Project to Repository

The Import Project dialog box will be displayed. You can edit the project name and the type of project file you want to import.

🚝 Import Project	
Project name: untitled 5 1 2 Project file: 3 Import existing project	Create folder for project
Repository :	: . ho
CustomerAndInvoice CustomerAndI	~
	~
URL: pserver:cvsuser1@cvs.testrepository:/home/cvsroot/Demo/untitled/untitled.vpp	1
	DK Cancel

Figure 14.9 - Import Project dialog box

	Name	Function				
1	Project name	Edit the name of the imported project.				
2	Currently opened project	Import the project you have opened				
3	Import existing project	Import an existing project from the local file system.				
4	Create new project	Create a new project in the repository.				
5	Create folder for project	Create a folder for an imported project automatically.				
	Table 14.2					

Table 14.2

You can then select the repository where your project will be imported to. You may right-click on a folder and select **New Remote Folder** from the popup menu to create another folder inside it.

🖨 Import Project	
Project name: untitled	Create folder for project
Project file:   Create new project  Create new project Import existing project	
Repository : CustomerAndInvoice CustomerAndInvoice Refresh New Remote Folder	
	>
URL: pserver:cvsuser1@cvs.testrepository:/home/cvsroot/Demo/untitled/untitled.vpp	
	OK Cancel

Figure 14.10 - Open a new remote folder

#### **Managing Teamwork Project**

Only the first project user, who usually is Project Leader or Business Analyst, needs to import project to repository. Other team members may use the **Manage Project** dialog box to manage these working projects. To open the **Manage Project** dialog box, you can right-click on the Projects List in the Teamwork Client dialog box, and select **Manage Project** in the popup menu.

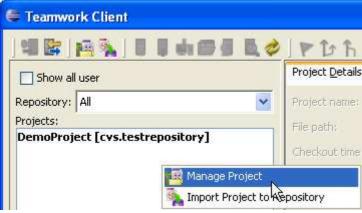


Figure 14.11 - Select Manage Project

Select a project in the repositories and click **Add selected** to add the project to the **Projects** list. You may manage more than one teamwork project at the same time by selecting different projects and clicking **Add selected**.

🖶 Manage Project	
Repositories:	Projects:
Repositories: CustomerAndInvoice CustomerOpiect DemoProject.vpp DemoProject2. CustomerOpiect2.vpp	Projects: DemoProject [cvs.testr Add selected
	OK Cancel

Figure 14.12 - Manage Project dialog box

If you want to remove a project which is added to your **Projects** list, select **Remove selected** to remove the project selected in the list.

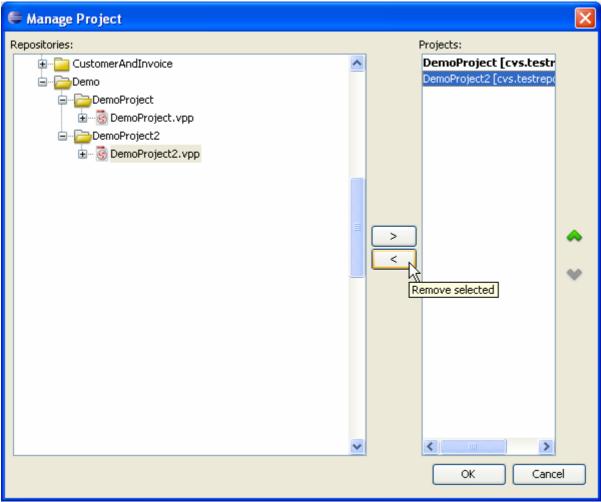


Figure 14.13 - Remove selected project

#### **Checking Out Project**

If you have already imported a project to server or selected a project to manage, you can checkout the project from the repository.

When you have just selected a project in the Projects list, the status is 'Not checked out'.

🖨 Teamwork Client					
] 41 🔄 ] 😰 💫 ] 🗉 🛛 📥 🗁 🖉 🔍 🤣	🖉 🕶 ĥ 🐘 🔀				
5how all user	Project Details Revisions				
Repository: All	Project name: DemoProject2				
Projects:	File path:				
DemoProject [cvs.testrepository]					
DemoProject2 [cvs.testrepository]	Checkout time:				
	Revision:				
	Status: Not checked out.				
	Branch: HEAD				

Figure 14.14 - Project not checked out

#### Clicking **Open Project** will checkout the project and open it immediately.

🗧 Teamwork Client		
]41 B; [A ],	PDA	
5how all user	Project <u>D</u> etails	
Repository: All	Project name:	DemoProject2
Projects:	File path:	
DemoProject [cvs.testrepository] DemoProject2 [cvs.testrepository]	Checkout time:	
	Revision:	
	Status:	Not checked out.
	Branch:	HEAD
	Description:	
	-	
		Update Commit Checkout Open Project
logged in.		Close Help

Figure 14.15 - Open the project

Alternatively, you can choose to checkout the project without opening it. Checkout Project is quite different from Open Project. After checking out the project, your will stay in the Teamwork Dialog for further actions. For example, creating branch, Merge change from branch. If you select Open Project, you will open the project for viewing and modification. To checkout the project, click **Checkout** in **Teamwork Client** dialog box.

🖶 Teamwork Client		
] 41 🕼 ] 👩 💫 ] 🛛 🖬 💩 🗁 🖪 🔍 🤣 ] 1	P 12 B 4	
	oject <u>D</u> etails	
	roject name:	DemoProject2
Projects: DemoProject [cvs.testrepository]	le path:	
DemoProject2 [cvs.testrepository] Ch	heckout time:	
Re	evision:	
st	atus:	Not checked out.
Br	ranch:	HEAD
De	escription:	
		Update Commit Checkout Open Project
logged in.		Close Help

Figure 14.16 - Checkout the project

The status of the project is now changed and the project has been checked out successfully.

🖨 Teamwork Client		
) 41 📴 j 🐴 💫 🛛 🗧 🖬 🗁 🖉 💆 🤣	PDh	
Show all user	Project <u>D</u> etails	Revisions
Repository: All	Project name:	DemoProject2
Projects:	File path:	C:\test\eclipse 610\workspace3\Demo2\vpproject\Demo2.vpp
DemoProject [cvs.testrepository] DemoProject2 [cvs.testrepository]	Checkout time:	30 Jul 2007, 04:44 PM
	Revision:	1
	Status:	Up-to-date (local project not modified)
	Branch:	HEAD

Figure 14.17 - Project checked out

#### **Committing Project**

After the project has been modified, you can share your local changes with other team members by committing the project to a server.

You may commit project in the toolbar.



Figure 14.18 - Commit project

A Commit Project dialog box will show you the committing progress.

🖶 Commit Project 🛛 🔁	<
Preparing to commit, please wait	
Cancel	

Figure 14.19 - Commit project dialog box

A dialog box will be displayed and you may enter a description of the changes. Click OK.

🛢 Commit Proj	ect 🛛 🔀
Project name:	DemoProject2
Checkout vevision:	1
Checkout time:	30 Jul 2007, 04:44 PM
Current time:	30 Jul 2007, 04:45 PM
Description:	
<choose a="" previou<="" td=""><td>usly entered comment&gt;</td></choose>	usly entered comment>
	OK Cancel Help

Figure 14.20 - Enter description of commit change

#### A Commit Model(s) dialog box shows the models you have modified. Click OK to commit.

🖨 Commit Model(s)	
Commit Model(s)	
	OK Cancel Help

Figure 14.21 - Commit Model(s) dialog box

Sometimes, you may encounter conflict when committing models.

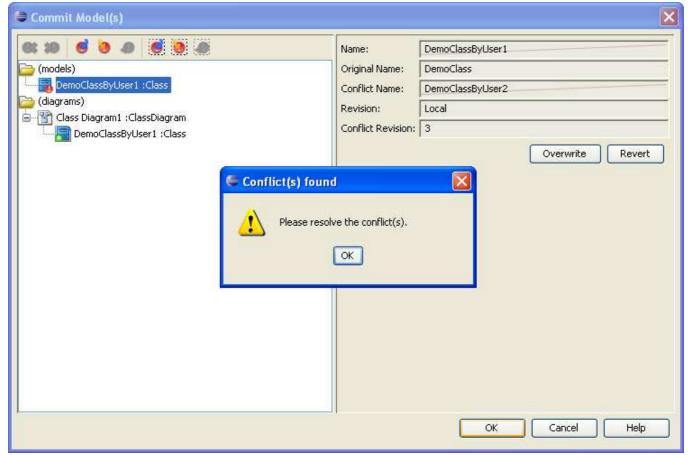


Figure 14.22 - Commit with conflict

You can choose to revert or overwrite to solve. For more details, please refer to the section 'Resolving Conflict'.

🖨 Commit Model(s)		
(models) Class Diagram1 : ClassDiagram Class Diagram1 : ClassDiagram DemoClassByUser1 : Class DemoClassByUser1 : Class	Name: Original Name: Conflict Name: Revision: Conflict Revision:	DemoClassByUser1 DemoClass DemoClassByUser2 Local
		OK Cancel Help

Figure 14.23 - Select overwrite or revert

#### **Updating Project**

Apart from committing the modified project to the server, you can also get teammates' changes on the server to your local area by updating teh project. To update a project, click the icon for update in the toolbar.



Figure 14.24 - Update project

Update Model(s) dialog box is displayed. The models changed by others are shown. Click OK to update.

🖨 Update Model(s)	
(models) Class2 : Class : Association DemoClassByUser1 : Class : Class Diagram1 : ClassDiagram : Class Diagram1 : ClassDiagram : DemoClassByUser1 : Class : Width : CaptionUIModel : Width : CaptionUIModel : ShowOperationType : Association : Class2 : Class	OK Cancel Help

Figure 14.25 - Update Model(s) dialog box

#### **Reverting Project**

You may encounter a situation when you have made a lot of changes in the project just to find there are a lot of mistakes. In this case, you may want to rollback all the changes and redo the whole project. Here, you can revert all local changes by clicking the **Revert** button.

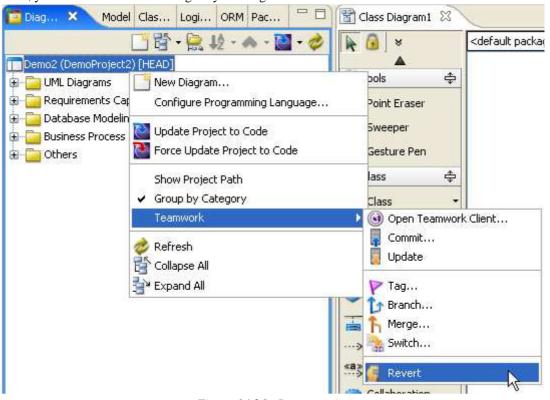


Figure 14.26 - Revert project

A dialog box will show and ask if you want to revert. Click Yes to confirm and the project will be reverted.



Figure 14.27 - Confirm revert project

### **Resolving Conflict**

Sometimes, you may modify the same model as your teammate with different changes. In this case, the server will not know which revision should be preserved and it will show a conflict. Conflicts may happen when you commit the project.

😂 Commit Model(s) × 6: 19 6 9 4 6 9 4 Name: firstName 🚞 (models) Original Name: name E DemoClassByUser1 :Class Conflict Name: name2 🎧 firstName :Attribute Revision: Local 🗄 👩 lastName :Attribute Conflict Revision: 6 🚞 (diagrams) 😑 🔡 Class Diagram1 :ClassDiagram Overwrite Revert :Association 🚝 Conflict(s) found 😑 🛜 captionUIModel X ES DemoClassByUser1 :Class Ē Please resolve the conflict(s). Reight OK Cancel QK Help

Figure 14.28 - Conflict found in merging

Conflict may also happen when you update your project.

😂 Update Model(s)		×
G: 20 6 9 0 6 9 0	Name:	firstName
🗁 (models)	Original Name:	name
😑 📑 DemoClassByUser1 :Class	Conflict Name:	name2
firstName :Attribute	Revision:	Local
setName :Operation	Conflict Revision:	7
ia (diagrams) ⊕ (diagrams)		·
Glass Diagram1 :ClassDiagram		Overwrite Revert
Association Conflict(s) fo	und	
Please n	esolve the conflict(s).	
		QK <u>Cancel H</u> elp

Figure 14.29 - Conflict found in updating

If a conflict appears, you can solve it by selecting the conflicting model and clicking **Overwrite** or **Revert**. **Overwrite** keeps the local changes while **Revert** accepts changes from the server.

🖶 Update Model(s)		
(diagrams) Class Diagram1 : ClassDiagram Class Diagram1 : Cl	Name: Original Name: Conflict Name: Revision: Conflict Revision:	firstName name name2 Local
		OK Cancel Help

Figure 14.30 - Solving conflict

### **Viewing Revision History**

From time to time, there may be a lot of changes made by you and your teammates. In SDE for Eclipse, you can view previous revisions of the project.

To view the history of committed changes, open the Teamwork Client dialog box and select Revisions tag.

🖨 Teamwork Client		
] 11 📴 ] 12 🙀 🛼 ] U U U 🖬 🗁 🖉 🔍 🤣	P 🗅 ĥ 🖣	à 🔀
Repository: All	Project <u>D</u> etails	Revisions
Projects: DemoProject [Demo/trunk/DemoProject]	Project name:	DemoProject
centor ojece [oemo/ cento/ benor ojece]	File path:	C:\test\eclipse 610\w
	Checkout time:	22 Jul 2007, 02:11 PM
	Revision:	5293
	Status:	Up-to-date (local proj

Figure 14.31 - Select Revisions

You can see the different revisions of the project.

🖩 📴   🎼 %   📮 📮 🗰 💷 🚽 🔍 🤇	_	↑			
pository: All	Display:	Last 10 💌		Modified model e	iements:
moProject [cvs.testrepository]		revisions:	N 2007 9852 111		
moProject2 [cvs.testrepository]	Ver.	User 7 cvsuser3	Date Time 2007/07/22 13:28		
		6 cvsuser3	2007/07/22 13:28		
		5 cvsuser3	2007/07/22 13:27		
		4 cvsuser1	2007/07/22 13:24		
		3 cvsuser3	2007/07/22 13:23		
		2 cvsuser1	2007/07/22 13:21	Modified diagram	¢i
		1 cvsuser1	2007/07/22 13:19	Name	
				Modified diagram	
		Ones Duris	A Common During		elements:
		Open Proje	ct Compare Project	Name	
	Checkin	Open Proje	ct Compare Project	Name	Diagram
	Checkin		ct Compare Project	Name	

Figure 14.32 - Different revisions of the project

You can see the model, diagram and diagram elements modified in that version. You can also see the check in description in that version.

Show all user	Project D	etails <u>R</u> evisions			
pository: All				Modified model ele	ments:
ojects:	Display:	Last 10 💌		Name	
emoProject [cvs.testrepository]	Project	revisions:		DemoClassByL	lser1
moProject2 [cvs.testrepository]	Ver.	User	Date Time	Class2	5353475
		7 cvsuser3	2007/07/22 13:28		
		6 cvsuser3	2007/07/22 13:27	0	
		5 cvsuser3	2007/07/22 13:25		
		4 cvsuser1	2007/07/22 13:24		
		3 cvsuser3	2007/07/22 13:23		
		2 cvsuser1	2007/07/22 13:21	Modified diagrams	1
		1 cvsuser1	2007/07/22 13:19	Name	
				Class Diagram	18
		Open Project	Compare Project	Modified diagram e	elements:
		open Project		Name	Diagram
	Checkin	Description:		- DemoClassB	. Class Diagra
					Class Diagra
				Class2	
				(Jace2	Class Diagra

Figure 14.33 - Changes of different revisions

## **Comparing Between Revisions**

To see the differences between different revisions in SDE for Eclipse, select a revision.

Project Details Revisions	
Display: Last 10 💌	
Project revisions:	
Ver. User	Date Time
7 cvsuser3	2007/07/22 13:28
6 cvsuser3	2007/07/22 13:27
5 cvsuser3 人	2007/07/22 13:25
4 cvsuser1	2007/07/22 13:24
3 cvsuser3	2007/07/22 13:23
2 cvsuser1	2007/07/22 13:21
1 cvsuser1	2007/07/22 13:19
Open Project	Compare Project

Figure 14.35 - Select one revision

Then press Ctrl and click on the revision you want to compare with.

Project Details Revisions	
Display: Last 10 💌	
Project revisions:	
Ver. User	Date Time
7 cvsuser3	2007/07/22 13:28
6 cvsuser3	2007/07/22 13:27
5 cvsuser3	2007/07/22 13:25
4 cvsuser1	2007/07/22 13:24
3 cvsuser3	ん 2007/07/22 13:23
2 cvsuser1	2007/07/22 13:21
1 cvsuser1	2007/07/22 13:19

Figure 14.36 - Select another revision

#### Click Compare Project to compare.

P	Project Details Revisions						
	Display: Last 10 💌						
	Project re	visions:					
	Ver.	User	Date Time				
	7	cvsuser3	2007/07/22 13:28				
	6	cvsuser3	2007/07/22 13:27				
	5	5 cvsuser3	2007/07/22 13:25				
	4	cvsuser1	2007/07/22 13:24				
	3	3 cvsuser3	2007/07/22 13:23				
		2 cvsuser1	2007/07/22 13:21				
	1	cvsuser1	2007/07/22 13:19				
		Open Project	Compare Project				
			- V				

Figure 14.37 - Select Compare Project

A Compare Projects from revision dialog box will appear and show you the differences between your selected revisions.

Compare Projects from revision 4 to 6	
(models) Class2 :Class : Association DemoClassByUser1 :Class : ToString :Operation : ToString : ToString :Operation : ToString : ToSt	
	Close Help

Figure 14.38 - Compare Project dialog box

#### **Branch and Tag Project**

Branch is a technique to separate the development of project from head. You can modify the project in branch while keep the most stable version design in head.

In this way, you can perform some research or time-taking task in branch and merge the changes to head only when the branch is proven to be stable.

Tag provides a convenient technique to manage and label a stable version. You can go back to check the stable version by switching to Tag.

#### **Creating a Branch**

Create a branch by clicking the icon for branch in toolbar.

🖨 Teamwork Client	
] 41 📴 j 🐴 j 🖥 🖉 🖬 📾 🖥 🔩 🥔	PDhak
Show all user	Project Devails Revisio Branch
Repository: All	Project name: Demo

Figure 14.39 Select branch

The Create Branch dialog box is displayed. Enter the name of branch you want to create.

🖨 Create Branch	×
Branch Please input the name for the new branch. You can start working at the new branch or keep working at the head.	
Branch Name:	
Start working in branch	*
	el

Figure 14.40 - Create Branch dialog box

Then, select a status of branch from the drop-down menu.

🖨 Create Branch	×
Branch	
Please input the name for the new branch. You can start working at the new branch or keep working at the head.	
Branch Name: demo_branch	
Start working in branch	*
Start working in branch	
Check out branch 🧏	
Stay in head	
OK Cancel	

Figure 14.41 - Select from drop-down menu

#### Click OK to confirm creating the branch.

🖨 Create Branch 🛛 🗙
Branch
Please input the name for the new branch. You can start working at the new branch or keep working at the head.
Branch Name: demo_branch
Start working in branch
OK Cancel

Figure 14.42 - Confirm creating branch

#### **Managing a Branch**

Similar to managing a project, you can manage a branch in the **Manage Project** dialog box. First, select a branch under a project.

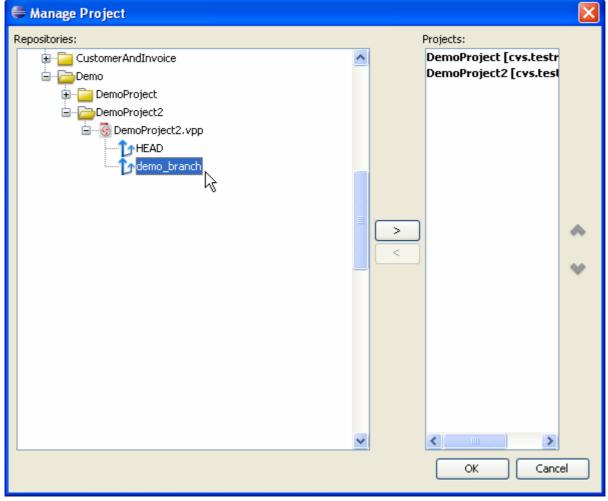


Figure 14.43 - Manage project dialog box

Click **Add selected** to add the branch to your **Projects** list.

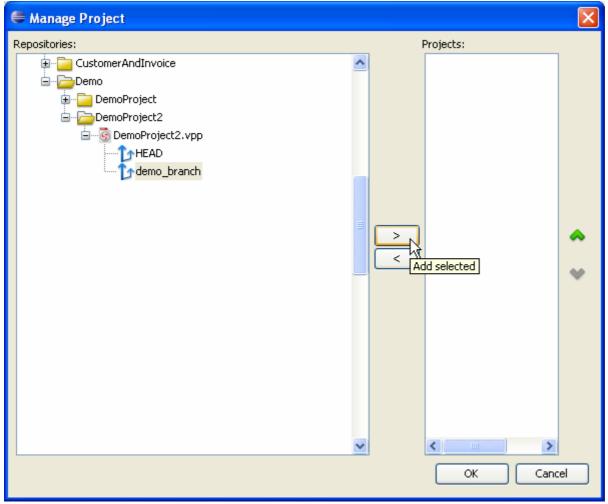


Figure 14.44 - Add selected branch

🖨 Manage Project		
Repositories:		Projects: DemoProject2 [cvs.tesl
	<u> </u>	
👜 🧰 DemoProject		
- Component 2		
DemoProject2.vpp		
HEAD		
D demo_branch		
		Remove selected
	~	<
		OK Cancel

You can also click **Remove selected** to remove the branch from the **Projects** list.

Figure 14.45 - Remove selected branch

#### **Creating a Tag**

You can label the stable version of project by creating a tag there. To create a tag, select **Tag...** in the toolbar.

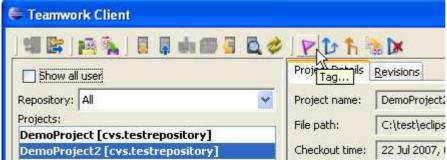


Figure 14.46 - Select Tag...

Then, edit the name of tag in Create Tag dialog box.

🖨 Create Tag	
Tag Please input the name for the new tag. You can start working at the new tag or keep workin	ng at the head.
Tag Name:	
Start working in tag	*
	OK Cancel

Figure 14.47 - Create Tag dialog box

Next, you can select the status after creating tag from the drop-down menu.

🖨 Create Tag	<
Tag Please input the name for the new tag. You can start working at the new tag or keep working at the head.	
Tag Name: demo_tag	
Start working in tag	
Start working in tag Check out tag Stay in head OK Cancel	

Figure 14.48 - Select the status after creating tag

After you have select **OK**, a message will show you that tag has been created.

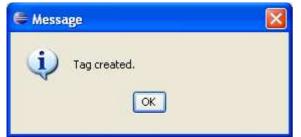


Figure 14.49 - Message showing tag created

#### Managing a Tag

Similar to managing a branch, you can select a tag and click **Add Selected** in **Manage Project** dialog box to add the project to **Projects** list.

🖨 Manage Project	
Repositories:	Projects:
<ul> <li>Cinema_Booking</li> <li>Cinema_Booking_System</li> <li>CommitOldVersion</li> <li>CustomerAndInvoice</li> <li>Demo</li> <li>DemoProject2</li> <li>DemoProject2.vpp</li> <li>HEAD</li> <li>demo_branch</li> <li>demo_tag</li> </ul>	Add selected
	OK Cancel

Figure 14.50 - Add selected project

#### You may remove the tag from Projects list by click Remove selected.

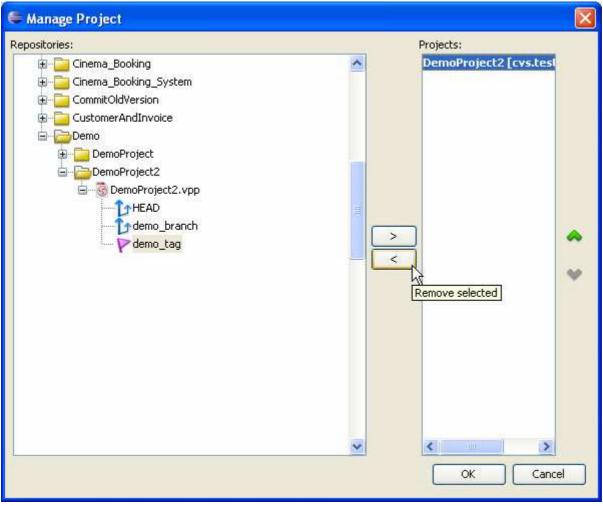


Figure 14.51 - Select Remove selected

#### **Usage of Merge**

When the project in your branch has been modified, you can merge the changes made to the head. To merge, select the icon for merging in the toolbar.

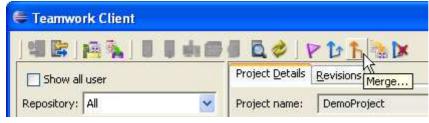
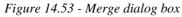


Figure 14.52 - Icon for merging

The Merge dialog box is displayed. Select a branch to merge to, and select the revision you want to merge.

🖶 Merge 🔀
From:
demo_branch
⊙ All revisions except those merged
From revision     To revision
То:
HEAD
OK Cancel



The progress of merging is shown.

🛡 Merge Project 🛛 🔀
Preparing to merge, please wait
Cancel

Figure 14.54 - Progress of merging

Then, a dialog box tells you what models and diagrams are going to be merged. Click OK to confirm the merge.

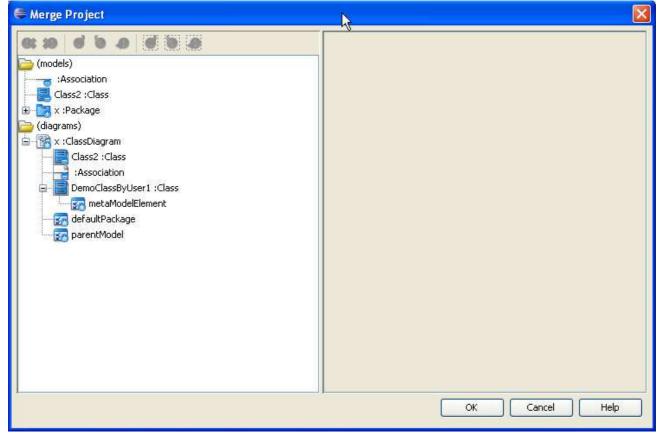


Figure 14.55 - Models and diagrams which are going to merge

# Suggested Branch Usage

This section will show you the suggested usage of the Branch with SDE for Eclipse CVS integration. Here, you will learn how to create a single branch called "supportWebService". However, you can choose to have multiple

branch running at the same time.

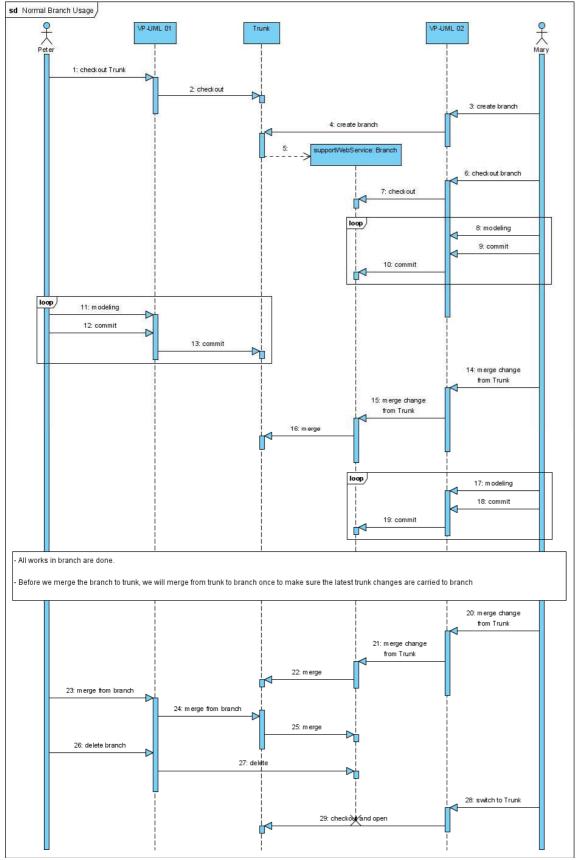


Figure 14.56 - Suggested branch usage

# 15

# **Team Collaboration with Subversion**

# Chapter 15 - Team Collaboration with Subversion Repository

More and more development team adopt Subversion as version control and collaboration platform. With SDE for Eclipse Subversion repository integration you can record and keep history of all changes in your design in your Subversion repository. Moreover, your designs are stored along with source codes in the same repository. This allows both design and source code to be backed up together, and also saves administration cost by needing only a single repository in your team. Other people who may need to only view your designs just need to use the free Viewer to have a look at the project. Please be reminded that Subversion server is only available in Standard Edition or above.

In this chapter:

- Importing and managing projects
- Operating projects
- Reviewing the old revisions of projects
- Comparing the differences between revisions
- Using branch and tag

## **Starting the Teamwork Client Dialog Box**

The Teamwork Client dialog box is the access point for all Teamwork functions, such as importing and managing projects, operating projects, reviewing and comparing projects and using branches and tags. There are three ways you can start Teamwork Client.

To start using main menu, you can select Modeling > Teamwork > Open Teamwork Client... .

t	Modeling Run Window Help		
8	🛞 Start SDE-EC	🐮 🎑 🗄 🚖 🖂 📝 🗄 🧉 🗌	Q
gi	Application Options		
• •	Auto Synchronization		
	Report >		
	Project Publisher		
	Edit Stereotypes Configure Requirement Enumerations Use Case Scheduling		
	ORM FIBER STATES CONTRACT ORM FIBER STATES CONTRACT FIBER STATES CONTRACT FIBER STATES AND CONTRACT OF CONTRACT.		
	Teamwork 🕨	🔞 Open Teamwork Client 📉	
	█ Shape Editor ⊚DB-VA SQL	Commit Project	
	Key Manager		
ag	gram O Stencil		

Figure 15.1 - Open Teamwork Client using main menu

If not, you may use the tool bar to open Teamwork Client dialog box.



Figure 15.2 - Open Teamwork Client using toolbar

You can also right click on the project node of different panes and select Teamwork > Open Teamwork Client... .

🗙 Model Clas Logi ORM Pac 🖓 🗖			
. X Model Clas Logi ORM Pac 💆 🗖			
📑 😫 • 🚉 🎼 - 🐟 - 🔛 • 🤣			
(DemoProject) [HEAD]	_		
4L Diagrams 📑 New Diagram			
Use Case Dia Configure Programming Language			
🖥 Class Diagrai	_		
Sequence Dia			
Communicatic Strate Update Project to Code			
State Machin Show Project Path			
Activity Diagr Group by Category			
Component D Teamwork	Open Teamwork Client		
Deployment [			
🖥 Package Diag 🥏 Refresh	· · · · · · · · · · · · · · · · · · ·		
🖥 Object Diagra 🚔 Collapse All			
🛿 Composite St 🚽 Expand All	ႃ Tag		
🛽 Timing Diagram	franch		
Interaction Overview Diagram	Kerge		
equirements Capturing			
Textual Analysis			
Requirement Diagram	🔄 Revert		
Basic Diagram			
CRC Card Diagram			
Class Diagrat       Update Project to Code         Sequence Dia       Force Update Project to Code         Communication       Show Project Path         Activity Diagrat       Group by Category         Component D       Teamwork         Package Diagrat       Collapse All         Object Diagrat       Collapse All         Composite St       Expand All         Interaction Overview Diagram       Interaction Overview Diagram         Interaction Overview Diagram       Requirement Diagram         Basic Diagram       Basic Diagram	Branch Merge Switch		

Figure 15.3 - Open Teamwork Client with project node

By using any one of these methods, the Login to the Teamwork Server dialog box is displayed.

🖶 Login to the Teamwork Server 🛛 🔀				
Login				
Please ente	er user name and password to login to the teamwork server.			
Server:	VP Teamwork Server			
User name:	4			
Password:				
Server host:	Port number: 1999			
Remember password 🔲 Use proxy				
	OK Cancel Help			

Figure 15.4 - Login to the Teamwork Server dialog box

#### You can select Subversion as server.

🖨 Login to the Teamwork Server 🛛 🔀				
Login Please ente	er user name and password to login to the teamwork server.			
Server:	VP Teamwork Server			
User name:	VP Teamwork Server			
Password:	Subversion CVS			
Server host:	Port number: 1999			
Remember password 🔲 Use proxy				
	OK Cancel Help			

Figure 15.5 - Select subversion as server

Then, configure the details of server connection. Then click **OK** to confirm.

🖶 Login to the Teamwork Server 🛛 🔀						
Login	Login					
Please enter user name and password to login to the Subversion.						
Server:	Subversion 💌					
User name:	svnuser1					
Password:	*****					
Repository:	http://svn.testrepository/Design					
SVN path:	C:\test\eclipse 610\sde\vp_windows\svn\bin\svn.exe					
Remember password						
	OK Cancel Help					

Figure 15.6 - Configure details of server conncetion

#### Teamwork Client dialog box is opened.

🖨 Teamwork Client		×		
Session Prot 3 4 56 789001				
Repository: All		Revisions 13		
Projects: 14	?roject name:	DemoProject		
DemoProject [Demo/trunk/DemoProject]	File path:	C:\test\eclipse 610\workspace5\Demo\vpproject\Demo.vpp		
	Checkout time:	22 Jul 2007, 02:11 PM		
	Revision:	5293		
	Status:	Up-to-date (local project not modified)		
	URL;	http://svn.testrepository/Design/Demo/trunk/DemoProject		
	Description:			
		Update Commit Checkout Open Project		
Checkout done.				

Figure 15.7 - Teamwork Client dialog box

	Name	Function
1	Logout	Logout from the server.
2	Manage project	Manage projects in the server.
3	Import project	Import a project into the server.
4	Open	Open the selected project.
5	Check for Update	Check if there is any update in the selected project.
6	Refresh projects	Refresh the projects to get the latest status of them.
7	Tag	Create a tag for the selected project.
8	Branch	Create a branch for the selected project.
9	Merge	Merge the modification of branch and trunk.
10	Switch	Switch your location in the project.
1	Delete branch	Delete a branch.
12	Project Details	The details of the selected project is shown.
13	Revision	History of modification of the selected project.
14	Projects list	The projects which have been selected to be managed is shown.

# **Importing Project to the Repository**

You can import your project to the repository by clicking the **Import Project to Repository** icon in the **Teamwork Client** dialog box.

🖶 Teamwork Client	
	P to fi 🐂 🔯
Repository: All Import Project to Repository	Project Details Revisions
Projects:	Project name:
	File path:
	Checkout time:
	Revision:
	Status:
	JURE:
	Description:
	Update Commit Checkout Open Project
logged in.	Close Help

Figure 15.8 - Select Import Project to Repository

Import Project dialog box will be displayed. You can edit the project name and the type of project file you want to import.

🖨 Import Project 🛛 🔀				
Project name:	untitled	✔ Create folder for project		
Project file:	Currently opened project     Create new project     Import existing project			
Repository :				
	CemoProject.vpp			
URL:		<b>v</b>		
		OK Cancel		

#### Figure 15.9 - Import Project dialog box

	Name	Function	
1	Project name	Edit the name of imported project.	
2	Currently opened project	Import the project you have opened.	
3	Import existing project	Import an existing project from the local file system.	
4	Create new project	Create a new project in the repository.	
5	Create folder for project	When import a project, create a folder for that project automatically.	
Table 15.1			

Table 15.1

Then, you can select the repository where your project will be imported to. You may right-click on a folder and select **New Remote Folder** from the popup menu to create another folder in it.

🖨 Import Project 🛛 🔀			
Project name: untitled	Create folder for project		
Project file:    Ourrently opened project  Create new project  Import existing project			
Repository : CZC Courier Refresh New Remote Folder			
New Tag k Mew Branch New Trunk New Project Structure			
F1 URL: http://svn.testrepository/Design/Demo/untitled/untitled.vpp	<u> </u>		
	OK Cancel		

Figure 15.10 - Open a new remote folder

## **Managing Teamwork Project**

Only the first project user, who usually is Project Leader or Business Analyst, needs to import project to repository. Other team members may use the **Manage Project** dialog box to manage these working projects. To open the **Manage Project** dialog box, you can right-click on the Projects List in the Teamwork Client dialog box, and select **Manage Project** in the popup menu.

🗧 Teamwork Client	
]41 📴 [12 🗞 ] 🛛 🖬 🛶 📾 🖉 🔍 🤇	IF
Repository: All	Proje
Projects:	Proje
Manage Project	ry
	Revis
	Statu
	URL:
	Descr

Figure 15.11 - Select Manage Project

You can select a project in the repositories and click **Add selected** to add the project to the **Projects** list. You may manage more than one teamwork project at the same time by selecting different projects and click **Add selected**.

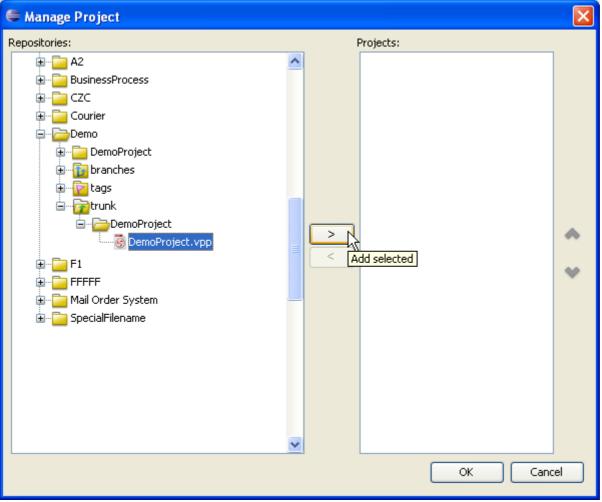


Figure 15.12 - Manage Project dialog box

If you want to remove a project which is added to your **Projects** list, you can select **Remove selected** to remove the project selected in the list.

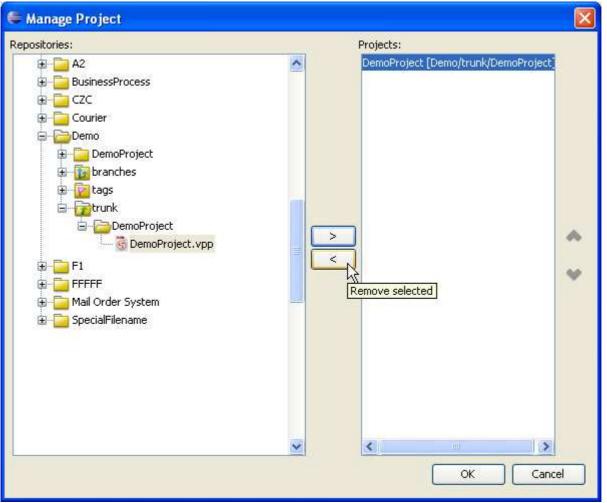


Figure 15.13 - Remove selected project

## **Checking Out Project**

If you have already imported a project to server or selected a project to manage, you can checkout the project from the repository.

When you have just selected a project in the Projects list, the status is 'Not checked out'.

Project <u>D</u> etails	Revisions
Project name:	DemoProject
File path:	
Checkout time:	
Revision:	
Status:	Not checked out.
URL:	http://svn.testrepository/Design/Demo/trunk/DemoProject
Description:	

Figure 15.14 - Project not checked out

You click Open Project, yo	a can checkout the pro	pject and open it immediately
----------------------------	------------------------	-------------------------------

🖨 Teamwork Client		
	PDA	×
	Project Details	and the second
	Project name:	DemoProject
Demorroject (Demojoruni) Demorroject j	File path:	
	Checkout time:	
	Revision:	
	Status:	Not checked out.
	URL: Description:	http://svn.testrepository/Design/Demo/trunk/DemoProject
	Description:	
		Update Commit Checkout Open Project
l logged in.		Close Help

Figure 15.15 - Open Project

Alternatively, you can choose to checkout the project without opening it. Checkout Project is quite different from Open Project. After checking out the project, your will stay in the Teamwork Dialog for further actions. For example, creating branch, Merge change from branch. If you select Open Project, you will open the project for viewing and modification. To checkout the project, click **Checkout** in **Teamwork Client** dialog box.

E Teamwork Client		
	PDA	X
Repository: All	Project Details	
Projects: DemoProject [Demo/trunk/DemoProject]	Project name:	DemoProject
Demorroject (Demo) oruna (Demorroject)	File path:	
	Checkout time:	
	Revision:	P140012012101210101
	Status:	Not checked out.
	URL: Description:	http://svn.testrepository/Design/Demo/trunk/DemoProject
	a a su para a	
		Update Commit Checkout pen Project
logged in.		Close Help

Figure 15.16 - Checkout the project

The status of the project is changed and you have checkout the project successfully.
Project Details Revisions

Project name:	DemoProject
File path:	C:\test\eclipse 610\workspace5\Demo\vpproject\Demo.vpp
Checkout time:	30 Jul 2007, 05:55 PM
Revision:	5287
Status:	Up-to-date (local project not modified)
URL:	http://svn.testrepository/Design/Demo/trunk/DemoProject

Figure 15.17 - Project checked out

## **Committing Project**

After you have modified the project, you can share your local changes with other team member by committing the project to server.

You may commit project in the toolbar.



Figure 15.18 - Commit project

A Commit Project dialog box will show you the progress of commit.

Commit Project	
Preparing to commit, please wait	

Figure 15.19 - Commit project dialog box

A dialog box will be displayed and you may enter a description of the changes. Then, click OK.

🖨 Commit Project		
Project name:	DemoProject	
Checkout version:	5269	
Checkout time:	30 Jul 2007, 05:31 PM	
Current time:	30 Jul 2007, 05:32 PM	
Description:		
Choose a previously entered comment>		
OK <u>C</u> ancel <u>H</u> elp		

Figure 15.20 - Enter description of commit change

#### A Commit Model(s) dialog box shows the models you have modified. You can click OK to commit.

🖨 Commit Model(s)	
(project) (models) (diagrams) (diagrams) Class Diagram1 : ClassDiagram Diagram Order	
	QK <u>C</u> ancel <u>H</u> elp

Figure 15.21 - Commit Model(s) dialog box

Sometimes, you may encounter conflict when committing models.

Commit Model(s)		×
(models) (models) (diagrams) Class Diagram1 :ClassDiagram DemoClassByUser1 :Class DemoClassByUser1 :Class	Name: Original Name: Conflict Name: Revision: Conflict Revision:	DemoClassByUser1 DemoClass DemoClassByUser2 Local 5274 Overwrite Revert
Conflict(s) four Please res	nd olve the conflict(s). OK	

Figure 15.22 - Commit with conflict

Commit Model(s)			
e: 10 e e b e: 10	Name:	DemoClassByUser1	
Control (models)	Original Name:	DemoClass	
	Conflict Name:	DemoClassByUser2	
<mark>湊 (</mark> diagrams) 🖮 📸 Class Diagram1 :ClassDiagram	Revision:	Local	
DemoClassByUser1 :Class	Conflict Revision:	5274	
		Overwrite	
		OK <u>C</u> ancel <u>H</u> elp	

#### You can choose to revert or overwrite to solve. For more details, please refer to the section 'Resolving Conflict'.

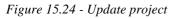
Figure 15.23 - Select overwrite or revert

# **Updating Project**

Apart from committing the project you have changed to the server, you can also get other teammates' changes in the server to local by updating project.

To update project, you can click the icon for update in toolbar.





Update Model(s) dialog box is displayed. The models changed by others are shown. You can click OK to update the models.

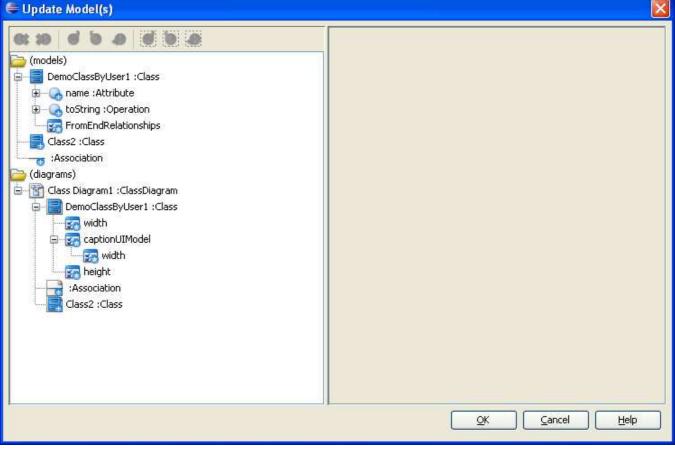


Figure 15.25 - Update Model(s) dialog box

# **Reverting Project**

You may encounter the situation that you have made a lot of changes in the project just to find there are a lot of mistakes. In this case, you may want to rollback all the changes and redo the whole project.

Here, you can revert all local changes by clicking the Revert button. F * × Model Clas... Logi... ORM Pac... Class Diagram1 🔀 Diag... E <default 8 Demo (De New Diagram... \$ Tools 🖨 🔁 UML C Configure Programming Language... S.U Point Eraser 🕀 📴 C 🞑 Update Project to Code Sweeper S S Force Update Project to Code Gesture Pen C Show Project Path S \$ Class Group by Category A 4 Teamwork Open Teamwork Client... C D 4 D Commit... Refresh Update E Collapse All C Expand All 🔽 Tag... C Tr Branch... 🚺 Timing Diagram Б Merge... 🔚 Interaction Overview Diagram Switch... Requirements Capturing 0.0 📑 Textual Analysis Revert R 🔊 Requirement Diagram Basic Diagram Collaboration 骗 CRC Card Diagram Z Model Database Modeling

Figure 15.26 - Revert project

A dialog box will show and ask if you want to revert. Click Yes to confirm and the project is reverted.



Figure 15.27 - Confirm revert project

## **Resolving Conflict**

Sometimes, you may modify the same model as your teammate with different changes. In this way, the server may not know which revision should be preserved and it shows conflict.

Conflicts can happen when you commit the project.

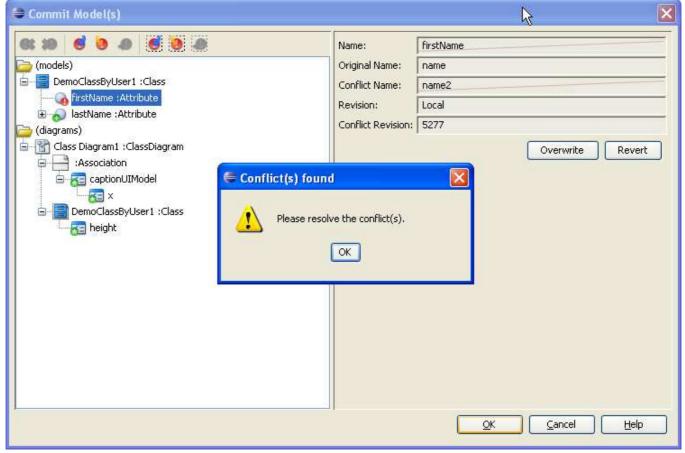


Figure 15.28 - Conflict found in merging

Conflict may also happen when you update your project.

🖨 Update Model(s)		×
(models) (models) DemoClassByUser1 :Class (models) DemoClassByUser1 :Class (models) DemoClassByUser1 :Class (models) DemoClassByUser1 :Class (models) DemoClassByUser1 :Class (models) DemoClassByUser1 :Class (models) (model	Name: Original Name: Conflict Name: Revision: Conflict Revision:	firstName name Local 5278
e-Gonflict(s) for (diagrams) Class Diagram1 :ClassDiagram Association CaptionUIModel For a captionUIModel Please rest Please rest Width For a captionUIModel		Overwrite Revert
		QK <u>C</u> ancel <u>H</u> elp

Figure 15.29 - Conflict found in updating

When you face conflict, you can solve it by selecting the conflict model and clicking **Overwrite** or **Revert**. **Overwrite** is to keep local changes while **Revert** is to accept changes from server.

🖶 Update Model(s)		
(diagrams) Class Diagram1 : ClassDiagram Class Diagram1 : ClassDiagram ClassDiagram1 : ClassDiagram ClassDiagram1 : ClassDiagram ClassDiagram1 : Class	Name: Original Name: Conflict Name: Revision: Conflict Revision:	firstName name name2 Local
		QK <u>C</u> ancel <u>H</u> elp

Figure 15.30 - Solving conflict

# **Viewing Revision History**

From time to time, there may be a lot of changes made by you and your teammates. In SDE for Eclipse, you can view back the previous revisions of the project.

То	view	the history	of of	committed	changes,	open the	Teamwork	Client d	lialog	box and	select	Revisions	tag

🖨 Teamwork Client		
] 41 🔄 <u>16</u> 🔌 ] 🗉 🖬 🛶 🗁 🖉 💆 🤣	] 🖻 🏠 🐧	k 🔀
Repository: All	Project <u>D</u> etails	Revisions
Projects: DemoProject [Demo/trunk/DemoProject]	Project name:	DemoProject
Demorroject [Demo/traik/Demorroject]	File path:	C:\test\eclipse 610\workspace!
	Checkout time:	22 Jul 2007, 02:11 PM
	Revision:	5293
	Status:	Up-to-date (local project not m
	URL:	http://svn.testrepository/Desig
	Description:	

Figure 15.31 - Select Revisions

You can see the different revisions of the project.

🖶 Teamwork Client			
Repository: All	Project Details Revisions		
DemoProject [Demo/DemoProject]	Display: Last 10 🔽		Modified model elements:
	Project revisions:		Name
	Ver. User	Date Time	
	5278 synuser2	2007/07/22 13:56	
	5277 svnuser2	2007/07/22 13:54	
	5276 svnuser2	2007/07/22 14:01	
	5275 svnuser1	2007/07/22 14:02	
	5274 svnuser2	2007/07/22 13:54	
	5272 svnuser1	2007/07/22 13:59	Modified diagrams:
	5258 svnuser1	2007/07/22 13:49	Name
	Open Projec	: Compare Project	Modified diagram elements; Name Diagram
Select a project revision to view its detail.			

Figure 15.32 - Different revisions of the project

You can see the model, diagram and diagram elements modified in that version. You can also see the checkin description in that version.

epository: All	Project Details Revisions		
ojects: emoProject [Demo/DemoProject]	Display: Last 10 💌 Project revisions:		Modified model elements: Name DemoClassByUser1
	Ver.         User           5278         svnuser2           5277         svnuser2           5276         svnuser2           5275         svnuser2           5275         svnuser1           5274         svnuser2	Date Time           2007/07/22 13:56           2007/07/22 13:54           2007/07/22 14:01           2007/07/22 14:02           2007/07/22 13:54	Class2
	5272 svnuser1 5258 svnuser1	2007/07/22 13:59 2007/07/22 13:49	Modifi <u>e</u> d diagrams: Name Class Diagram1
	Open Proje	ct Compare Project	Modifi <u>e</u> d diagram elements: Name Diagram DemoClassB Class Diagra Class Diagra

Figure 15.33 - Changes of different revisions

# **Comparing Between Revisions**

You may want to see the differences between different revisions here in SDE for Eclipse. To achieve, first you may select a revision.

P 🔓 ĥ	🂫 💌	
Project <u>D</u> etails	Revisions	
Disp <u>l</u> ay: La	əst 10 🔽	
Project revis	ions:	
Ver.	User	Date Time
5278 s	vnuser2	2007/07/22 13:56
5277 s	vnuser2	2007/07/22 13:54
5276 s	vnuser2 🕏	2007/07/22 14:01
5275 s	vnuser1	2007/07/22 14:02
5274 s	vnuser2	2007/07/22 13:54
	vnuser1	2007/07/22 13:59
5258 s	vnuser1	2007/07/22 13:49
	Open Project	Compare Project
Checkin Des	cription:	

Figure 15.34 - Select one revision

Then, you may press Ctrl and click on the revision you want to compare with.

] 🖻 🔓 ĥ 🐘 🔀
Project Details Revisions
Display: Last 10 🔽
Project revisions:
Ver. User Date Time
5278 svnuser2 2007/07/22 13:56
5277 svnuser2 2007/07/22 13:54
5276 svnuser2 2007/07/22 14:01
5275 svnuser1 2007/07/22 14:02
5274 svnuser2 2007/07/22 13:54
5272 svnuser1 2007/07/22 13:59
5258 svnuser1 2007/07/22 13:49
Open Project Compare Project
Checkin Description:

Figure 15.35 - Select another revision

#### Afterwards, click Compare Project to compare.

	P [2 ]	ት 📸 🔀								
Pr	oject <u>D</u> eta	ails <u>R</u> evisions								
1	Disp <u>l</u> ay:	Last 10 🔽								
	Project revisions:									
	Ver.	User	Date Time							
	5278	svnuser2	2007/07/22 13:56							
	5277	svnuser2	2007/07/22 13:54							
	5276	svnuser2	2007/07/22 14:01							
		svnuser1	2007/07/22 14:02							
		svnuser2	2007/07/22 13:54							
		svnuser1	2007/07/22 13:59							
	5258	svnuser1	2007/07/22 13:49							
		Open Project	Compare Project							
	Checkin D	escription:	NE							
1										

Figure 15.36 - Select Compare Project

A Compare Projects from revision dialog box appears and shows you the differences between your selected revisions.

Compare Projects from revision 5276 to 5277			D	×
	Name:	name2		-
🗁 (models)	Original Name:	name		1
Emperature English Eng	Revision:	5277		1
hame2 :Attribute				
4				
				,
			<u>C</u> lose <u>H</u> elp	J
	<b>.</b> .			

Figure 15.37 - Compare Project dialog box

## **Branch and Tag Project**

Branch is a technique to separate the development of project from trunk. You can modify the project in branch while keep the most stable version design in trunk.

In this way, you can perform some research or time-taking task in branch and merge the changes to trunk only when the branch is proven to be stable.

Tag provides a convenient technique to manage and label a stable version. You can go back to check the stable version by switching to Tag.

#### **Creating a Branch**

You can create a branch by clicking the icon for branch in toolbar.



Figure 15.38 - Select branch

Create Branch dialog box is displayed and you can enter the name of branch you want to create.

🖨 Create Branch 🛛 🔀
Repository
Eorm URL:
http://svn.testrepository/Design/Demo/DemoProject
Branch:
Cefault Branch Folder Branch Name:
branches/

Figure 15.39 - Create Branch dialog box

Thom	calact o	atatua	of 1	haanah	fraces	the	duce	. down	
i nen,	select a	status	OI I	Dianch	nom	uie	urop	J-dOwn	menu.

🖨 Create Branch	×
Repository	h
Eorm URL:	
http://svn.testrepository/Design/Demo/DemoProject	
Branch:	
Default Branch Folder Branch Name: demo_branch	
branches/demo_branch	
Create copy in repository from:	
http://svn.testrepository/Design/branches/demo_branch <ul> <li>HEAD revision in the repository</li> </ul>	
Specific revision in the repository	
Start working in branch	~
Start working in branch	
Check out branch 👋 Stay in trunk	
	-
<choose a="" comment="" entered="" previously=""></choose>	~
	2

Figure 15.40 - Select from drop-down menu

#### Then, click OK to confirm creating branch.

🖨 Create Branch 🛛 🔀
Repository Form URL:
http://svn.testrepository/Design/Demo/DemoProject
Branch:
Default Branch Folder Branch Name: demo_branch
branches/demo_branch
Create copy in repository from: http://svn.testrepository/Design/branches/demo_branch
Specific revision in the repository
Start working in branch 💌
Edit the branch/tag comment:
<choose a="" comment="" entered="" previously=""></choose>

Figure 15.41 - Confirm creating branch

#### **Managing a Branch**

Similar to managing a project, you can manage a branch in the **Manage Project** dialog box. First, you may select a branch under your desired project.

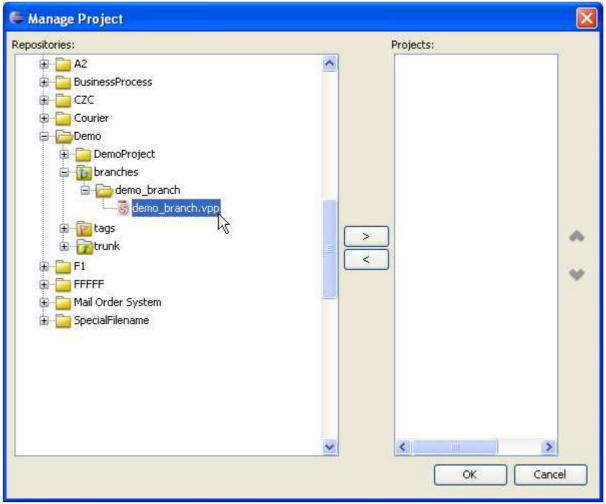


Figure 15.42 - Manage project dialog box

You can click **Add selected** to add the branch to your **Projects** list.

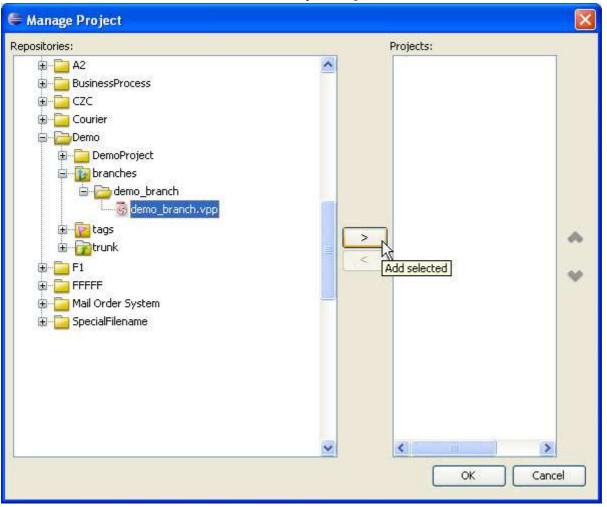


Figure 15.43 - Add selected branch

On the other hand, you can click **Remove selected** to remove the branch from **Projects** list.

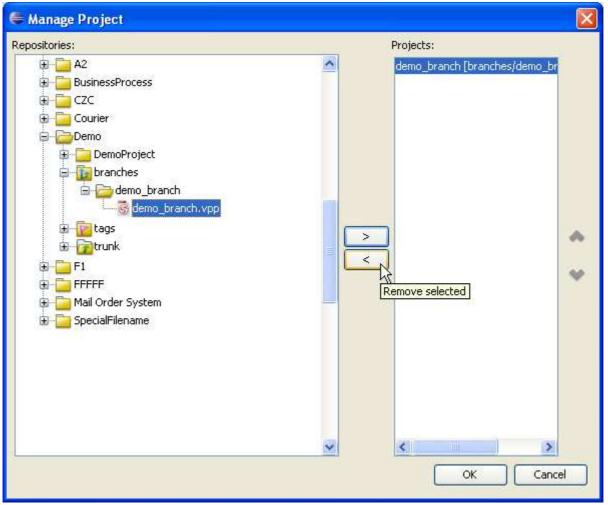


Figure 15.44 - Remove selected branch

### **Creating a Tag**

You can label the stable version of project by creating a tag there. To create a tag, select **Tag...** in the toolbar.



Figure 15.45 - Select Tag...

Then, you can enter tag name in the Create Tag dialog box.

🖨 Create Tag 🛛 🗙
Repository Form URL:
http://svn.testrepository/Design/Demo/trunk/DemoProject
Tag:
Default Tag Folder Tag Name:
Demo/tags/
Create copy in repository from: http://svn.testrepository/Design/Demo/tags/
O Specific revision in the repository Show Log
Start working in tag
Edit the branch/tag comment:
<choose a="" comment="" entered="" previously=""></choose>
OK Cancel

Figure 15.46 - Create Tag dialog box

Afterwards, you can select your location after creating tag.

🖨 Create Tag 🛛 🔀
Repository Form URL:
http://svn.testrepository/Design/Demo/trunk/DemoProject
Tag:
Default Tag Folder Tag Name: demo_tag
Demo/tags/demo_tag
Create copy in repository from: http://svn.testrepository/Design/Demo/tags/demo_tag
O Specific revision in the repository Show Log
Start working in tag
Start working in tag
Check out tag ¹ N Stay in trunk
<choose a="" comment="" entered="" previously=""></choose>
OK Cancel

Figure 15.47 - Select location after creating tag

### Managing a Tag

Similar to managing a branch, you can select a tag and click **Add Selected** in **Manage Project** dialog box to add the project to **Projects** list.

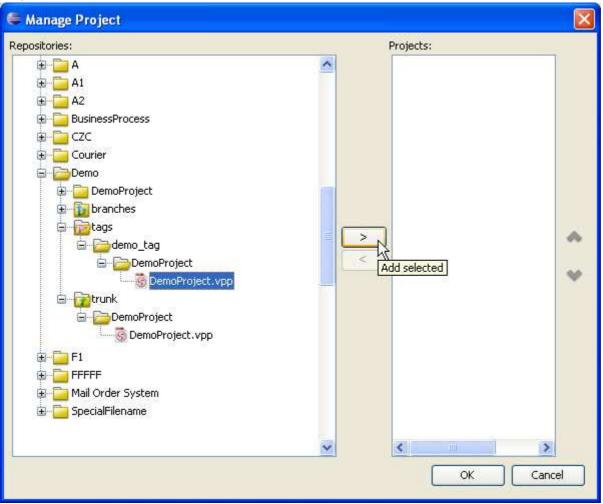


Figure 15.48 - Add selected project

#### You may remove the tag from Projects list by click Remove selected.

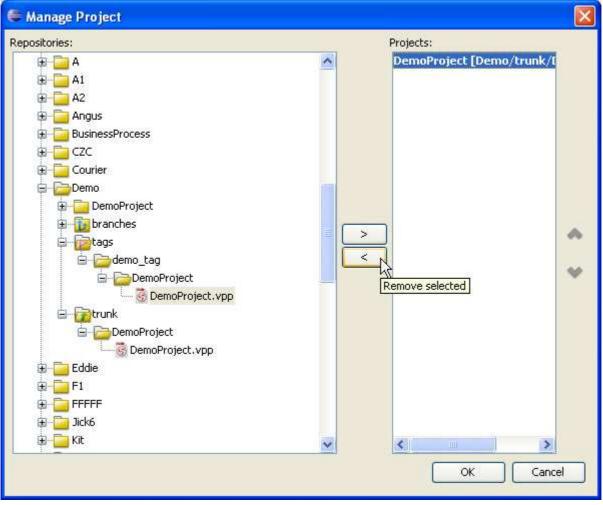


Figure 15.49 - Select Remove selected

## **Usage of Merge**

When you have modified your project in branch, you can merge the changes you made to trunk. To merge, you can select the icon for merging in the toolbar.

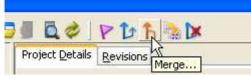


Figure 15.50 - Icon for merging

Merge dialog box is displayed. You can select the URL you want to merge from by typing in the text box or select ... . You can also select the revision which take part in the merging.

🖨 Merge
Specify the revision range which you want to merge: From:(start URL and revision of the range to merge)
://svn.testrepository/Design/Demo/branches/demo_branch/DemoProject/DemoProject.vpp
O Revision Show Log
To:(end revision of the range to merge)
O Head Revision
Revision Show Log
The result of the merge is stored in the working copy at:
C:\test\eclipse 610\workspace5\Demo\vpproject
which points to the repository at URL:
http://svn.testrepository/Design/Demo/trunk/DemoProject
OK Cancel

Figure 15.51 - Merge dialog box

The progress of merging is shown.

🖶 Merge Project 🛛 🗙
Preparing to merge, please wait
Cancel

Figure 15.52 - Progress of merging

Then, a dialog box tells you what models and diagrams are going to be merged. You can click OK to confirm merging.

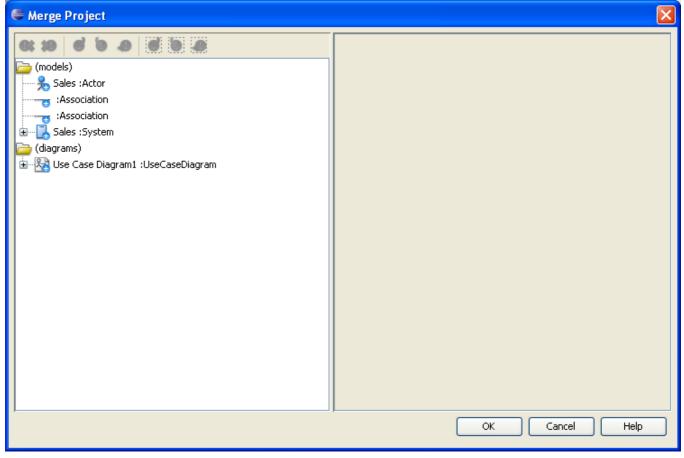


Figure 15.53 - Models and diagrams which are going to merge

# **Suggested Branch Usage**

This section will show you the suggested usage of the Branch with SDE for Eclipse SVN integration. Here, you will learn how to create a single branch called "supportWebService". However, you can choose to have multiple branch running at the same time.

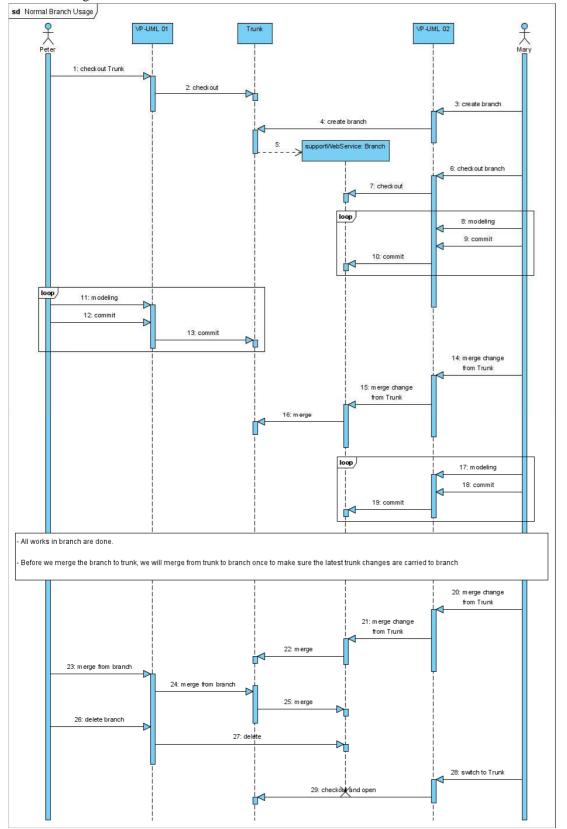


Figure 15.54 - Suggested branch usage



# **Configuring Application Options**

# **Appendix A - Configuring Application Options**

This chapter will describe the configurable Application Options and how they can be configured.

# **Configuring Application Options using the Application Options Dialog Box**

The Application Options can be configured in the **Application Options** dialog box. To invoke the application dialog, choose **Tools > Options...**from main menu. The Application Options dialog consists of five pages: **General**, **Diagramming**, **Diagram/Model View**, **Instant Reverse** and **ORM**. Each page represents a category of options whose descriptions are described below.

# General

The **General** page of the Application Options dialog box contains general application options, such as auto save options, look and feel configuration and proxy server settings.

🌾 Options	
General Diagramming View Instant Reverse ORM	General         Project       Appearance       Connection       Printing         Auto Save       Image: Auto save project       Auto save interval (mins) : 10       Image: Auto save interval (mins) : 10         Delete no referenced model       Image: Ask Image: Delete without ask Image: Don't delete       Delete without ask Image: Don't delete         Backup level :       Image: Delete diagram       Image: Don't delete diagram         Image: Confirm delete diagram       Image: Don't delete         Image: Open last project on startup       Image: Don't delete diagram
	Reset Restore Default Apply
	<u>OK</u> <u>Cancel</u> Apply <u>H</u> elp

Figure A.1 - Application Option (General)

Option	Description
Project	
Auto save project	Check/Uncheck 'Auto save' project to enable/disable to auto-saving of project file.

Auto save interval (mins):	Click on the <b>Auto save interval (mins)</b> drop down menu and select a time interval for performing an auto-save at regular time interval.
Backup level	Set the number of backup copies of the project file to maintain.
Confirm close project	Select this option if you want a dialog asking for confirmation every time you try to close a project.
Confirm delete diagram	Select this option if you want a dialog asking for confirmation every time you try to delete a diagram.
Confirm delete shape	Select this option if you want a dialog asking for confirmation every time you try to delete shapes.
Open last project on startup	Select if you want VP-UML to load the last opened project on startup.
Appearance	
Look and Feel	Click on the Look and feel drop down menu and select a look and feel for the program interface.
Theme	Click on the Theme drop down menu and select the theme for the selected Look and Feel. The theme setting is only available for "Office 2003 LookAndFeel".
User Language	Click on the <b>User Language</b> drop down menu and select a language. This is used for changing the language of the VP-UML program interface.
Connection	
Email	Enter the <b>Email</b> field to specify your email address.
Use Proxy	Check/Uncheck <b>Use Proxy</b> to enable/disable the need of using a proxy server for connecting to the Internet.
Host	Enter the <b>Host</b> field to specify the host of the proxy server.
Port	Enter the <b>Port</b> field to specify the port of the proxy server.
Login name	Enter the <b>Login name</b> field to specify the user name of the proxy server (if the proxy server required the user to login).
Password	Enter the <b>Password</b> field to specify the password of the proxy server (if the proxy server required the user to login).
Printing	·
Use gradient color when print diagram	Select to use gradient color in printing diagrams.

Table A.1

# Diagramming

The **Diagramming** page of the Application Options dialog box contains diagram-related options, such as grid settings and antialiasing options.

🌾 Options	
General Disgramming View Instant Reverse ORM	Diagramming         Appearance       Environment       Model Generation       Shape       Class       ERD         Grid       Color:       Light gray        10       Diagram       Diagram       Total and a start and
	Reset Restore Default Apply
	<u>OK</u> <u>Cancel</u> Apply <u>H</u> elp

Figure A.2 - Application Option (Diagramming)

Option	Description
Appearance	·
Show grid	Check/Uncheck Show grid to show/hide grid lines.
Color	Click on the <b>Color</b> field or thebutton beside it to adjust the grid color.
Width	Enter the <b>Width</b> field to specify the width of the grid.
Height	Enter the <b>Height</b> field to specify the height of the grid.
Snap to grid	Check/Uncheck <b>Snap to grid</b> to set whether diagram elements should/should not stick to grid lines when moving in the diagram
Graphics anti-aliasing	Check/Uncheck Graphics anti-aliasing to enable/disable smoothing of edges on graphics.
Text Anti-Aliasing	Check/Uncheck Text anti-aliasing to enable/disable smoothing of text.
Documentation type	Select to use either HTML (rich-text) or plain text format in documentation of models and diagrams.
Diagram background	Click on the <b>Diagram background</b> field or thebutton beside it to adjust the default background color of all diagrams.
Environment	

Connector Style	Select either <b>Rectilinear</b> or <b>Oblique</b> or <b>Curve</b> for connector style.
Connection Point Style	Select either <b>'Round the shape'</b> or <b>'Follow center'</b> to specify how the connecting points of the connectors should move if the shape is being moved.
Textual Analysis Highlight Option	Select either <b>Case insensitive</b> or <b>Case sensitive</b> to specify the highlight option in Textual Analysis. This determines whether words which are the same as the entered word or/and with same case are highlighted.
Clear opposite side content in flow of event	Select <b>Yes</b> to enable clearing of the opposite side content in flow of event, i.e. In a row within a flow of events, entering text on either <b>Actor Input</b> or <b>System Response</b> result sin removing the content of the opposite side). Click <b>No</b> to disable clearing of the opposite side content in flow of event. Click <b>Prompt</b> to enable prompting for clearing opposite side content every time you enter text on one side for which its opposite side has existing content.
Alignment Guide	Select the diagram alignment guide style to either <b>Show edges</b> (show guides at edges of the closest shape) or <b>Show center</b> (show a guide that lies on the center of the closest shape).
Delay of show Quick Preview in Diagram Navigator (second)	Enter the time (secs) needed for the Quick Preview for being displayed after the mouse is hovering on any diagram node in Diagram Navigator.
Default Copy Action	Select the default copy action (the action that will be performed when user presses hotkey Ctrl+C in diagram).
Show sequence number in collaboration diagram.	Check/Uncheck to enable/disable showing sequence numbers for messages display in the collaboration diagram.
Show sequence number in sequence diagram.	Check/Uncheck to enable/disable showing sequence numbers for messages displayed in the sequence diagram.
Show shape content when dragging	Check/Uncheck to enable/disable showing the content of shapes and not just the outline.
Show diagram alignment guide	Check/Uncheck to enable/disable showing the guide which helps aligning shapes on a diagram.
Show Message Operation Signature for Sequence Diagram and Communication Diagram (diagram-based)	Select to show operation signature of messages in Sequence Diagrams and Communication Diagrams.
Model Generation	
Generate Sequence Diagram from Use Case Description Overwrite Existing Diagram	Select to allow overwrite of sequence diagrams generated from use case description without prompt.
Generate Diagram from Scenario Overwrite Existing Diagram	Select to allow overwrite of diagrams generated from scenarios (activity diagrams) without prompt.
Overwrite Flow of Events when Synchronize from Sequence Diagram	Select to allow overwrite of flow of events of use case description is synchronized from sequence diagram without prompt.
Default generate diagram type from scenario	Select the default type of diagram to be generated from scenario (activity diagram).
Shape	
Font	Enter the font family of shape text.
Size	Enter the font size of shape text.
Bold	Check/Uncheck to set the shape text to/not to be bold.
Italic	Check/Uncheck to set the shape text to/not to be italic.
Color	Click on the <b>Color</b> field or thebutton beside it to adjust the default font color of all shapes.
Show extra resources	Check/Uncheck to enable/disable extra resource icons in addition to those originally supported.
Auto hide resource delay (second)	Enter the time interval for hiding resources icons after they have lost focus.
Shape foreground	Click on the <b>Color</b> field or thebutton beside it to adjust the default color of all shapes.

Shape background	Click on the <b>Color</b> field or thebutton beside it to adjust the default background color of all shapes.
Auto fit size (diagram-based)	Select to keep shapes in diagram fit-to-size.
Pin from	Select to pin the "from" end of connector by default.
Pin to	Select to pin the "to" end of connector by default.
Class	
Use model assist	Check/Uncheck <b>'Use model assist'</b> to enable/disable the Model Assist feature that allows automatic class name completion.
Show package structure on model assist	Check/Uncheck to enable/disable displaying the package name of the list of available models when using the Model Assist feature.
Show attribute option	Set the default option for displaying attributes of classes to one of the following: Hide all: All attributes are hidden. Show all: All attributes are shown. Show public only: Only public attributes are shown.
Show operation option	Set the default option for displaying operations of classes to one of the following: Hide all: All operations are hidden. Show all: All operations are shown. Show public only: Only public operations are shown.
Visibility style	The default visibility style for Class. It can either be: Icon - Visibilities are represented by icons). UML - Visibilities are represented by UML visibility symbols, e.g. + for public, - for private. Off - Visibility is not shown.
Show attribute initial value	Check/Uncheck to enable/disable the display of initial value of attributes
Show attribute multiplicity	Check/Uncheck to enable/disable the display of multiplicity of attributes
Show operation signature	Check/Uncheck to enable/disable the display of operation signature of attributes
Show class member stereotype	Check/Uncheck to enable/disable the display of stereotype of class members (e.g. attributes and operations)
Show owner of class/package	Check/Uncheck to enable/disable the display of the owner of classes and packages (e.g. package)
Show template parameter	Check/Uncheck to enable/disable the display of template parameter of classes.
Display as Robustness Analysis icon	Check/Uncheck to enable/disable displaying classes as robustness analysis icon.
Display as stereotype icon	Check/uncheck to enable/disable displaying classes as stereotype icon (if any).
Auto-synchronize role name	Select to enable auto synchronization of role names of associations.
Auto-generate role name	Select to enable auto generation of role names when creating associations.
ERD	
Show column type	Select to show the data type of table columns in ERD and ORM diagram by default.

Table A.2

## View

The **View** page of the Application Options dialog box contains options related to the view of Diagram Navigator, Model Tree and Class Repository.

🎁 Options		×
General Diagramming	View	
View Instant Reverse ORM	Diagram Navigator Sort Type Sort by name Sort by type	
	Model Pane Sort Type O No sort O Sort by name O Sort by type	
	Class Repository Sort Type Sort by name Sort by type	
	<ul> <li>Show data types</li> <li>Show relationships</li> <li>Show sub diagrams</li> <li>Show Activation in Diagram Navigator</li> </ul>	
	Reset Restore Default Apply	)
	<u>OK</u> <u>Cancel</u> Apply <u>H</u> elp	

Figure A.3 - Application Option (View)

Option	Description
Diagram Navigator Sort Type	Specifies the sort type to use for the <b>Diagram Navigator</b> . It can either be <b>Sort by name</b> (sort by the element name, which is the default option) or <b>Sort by type</b> (sort by the element type).
Model Pane Sort Type	Specifies the sort type to use for the <b>Model Pane</b> . It can either be <b>No sort</b> , <b>Sort by name</b> (sort by the element name, which is the default option) or <b>Sort by type</b> (sort by the element type).
Class Repository sort type	Specifies the sort type to use for the <b>Class Repository</b> . It can either be <b>Sort by name</b> (sort by the element name, which is the default option) or <b>Sort by type</b> (sort by the type).
Show data types	Check/Uncheck to enable/disable the display of data types in the Model Pane.
Show relationships	Check/Uncheck to enable/disable the display of relationships in the Model Pane.
Show sub diagrams	Select to show sub diagrams of diagram elements in <b>Diagram Navigator</b> .
Show Activation in Diagram Navigator	Select to show activations (sequence diagram) in <b>Diagram Navigator</b> .

Table A.3

## **Instant Reverse**

The **Instant Reverse** page of the Application Options dialog box contains options related to instant reverse for a specific language.

🌾 Options	
General Diagramming View Instant Reverse ORM	Instant Reverse          .NET         ③ Not specified ③ Enabled ③ Disabled         C++         ③ Not specified ④ Enabled ④ Disabled
	Reset Restore Default Apply <u>O</u> K <u>Cancel Apply H</u> elp

Figure A.4 - Application Option (Instant Reverse)

Option	Description
.NET	Select the availability of Instant Reverse on .NET. It can either be Not Specified, Enabled or Disabled.
C++	Select the availability of Instant Reverse on C++. It can either be <b>Not Specified</b> , <b>Enabled</b> or <b>Disabled</b> .

Table A.4

# ORM

The **ORM** page of the Application Options dialog box contains options related to ORM code generation.

🎁 Options	
Ceneral Diagramming View Instant Reverse ORM	ORM Quote SQL Identifier ⊙ Auto ○ Yes ○ No
	Reset Restore Default Apply OK Cancel Apply <u>H</u> elp

Figure A.5 - Application Option (ORM)

Option	Description
	Allows you to specify the usage of quoted name on reserved word. By using Quote SQL Identifier, the reserved word will be quoted when generating the data definition language and used as an ordinary word.

Table A.5

# B

# **Configuring Stereotypes and Tagged Value**

# Appendix B - Configuring Stereotypes and Tagged Value

This chapter explains in detail how to apply Stereotypes and Tagged Value to categorize model elements.

# Introduction

Stereotypes allow you to categorize different kinds of model elements. It may specify additional constraints and tag definitions for the models, and also be used to indicate a difference in meaning or usage between two model elements with an identical structure. An icon or formatting (fill, line and font) can be specified to a stereotype to present the elements that apply to that stereotype.

We know that everything in UML contains its own properties. Tagged values let you add properties for specifying keyword-value pairs of model elements. You can define tags that apply to a model element or a stereotype.

# Adding Stereotype to a Model Element



Figure B.1 - Class with Stereotypes

To add stereotype for a model element:

- 1. Select the desired model element from the diagram.
- 2. Right-click on the selection and choose Stereotypes > Stereotypes...from the popup menu.

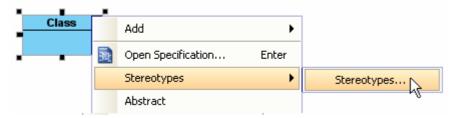


Figure B.2 - Select Stereotype in popup menu

3. This displays the **Stereotypes** page of the **Class Specification** dialog box.

🛞 Class Specification 🛛 🛛 🔀			
General Attributes Operations Relati ORM Query Stereotypes Tagged Va			
Image: Typedef       Image: Type Typedef       Image: Type Type Type Type Type Type Type Type	Cancel Apply Help		

Figure B.3 - Class specification dialog (stereotypes)

- 4. Select a stereotype listed under the All list.
- 5. Press > to assign the stereotype to the model element.



To assign multiple stereotypes to a model element, press on the Ctrl key and select the desired stereotypes and press >> to assign them to the model element.

6. Press **OK** to apply the setting.

# **Configuring Stereotypes**

Apart from using existing stereotypes, you can create new stereotypes to suit your need. Similarly, you can edit stereotypes to change their properties and appearance in a diagram. To configure stereotypes, you must first display the **Configure Stereotypes** dialog box. Select from main menu **Tools** > **Configure Stereotypes...**to display the dialog box.

S Configure Stereotypes	
Model elements:	<u>Stereotypes:</u>
I → Core	🖘 metaclass
Grand Case     Actor	es powertype
Extend	rocess
	≪  thread
System	🖘 utility
⊕ - Class	
🗄 📲 🔤 Sequence	
⊡…o Collaboration	
🗄 📲 🚺 Component	
	Apply changes to stereotypes in current project
	Add Edit Remove
Import Export	OK <u>C</u> ancel <u>H</u> elp

Figure B.4 - Configure Stereotypes dialog

Command	Description	
Add	Allows you to create a new stereotype for a particular model element by displaying the <b>Stereotype Specification</b> dialog box of the new stereotype. Fill in the details of the new stereotype from that dialog box and confirm the changes to create a new stereotype.	
Edit	Allows you to edit an existing stereotype by displaying the <b>Stereotype Specification</b> dialog box of the selected stereotype. Fill in the details of the stereotype from that dialog box and confirm the changes to edit the properties of the stereotype	
Remove	Remove a stereotype available to a particular model element.	
OK	Close the dialog box by committing all changes made.	
Cancel	Close the dialog box without saving any changes made.	
Help	Display the Help content of the Configure Stereotypes dialog box.	

Table B.1

# **Creating a New Stereotype**

To create a new stereotype:

- 1. Displays the **Configure Stereotypes** dialog box.
- 2. Select the model element for which the new stereotype is to be available to.

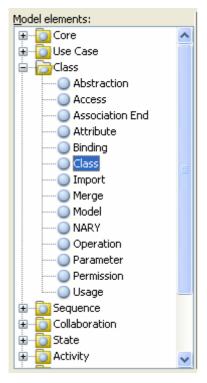


Figure B.5 - Model Elements

3. Press on the **Add...** button. This displays the **Stereotype Specification** dialog box for specifying the details of the new stereotype.

Stereotype	e Specification	
General Ta	gged Value Definitions Files Comments	
Name:	MyStereotype	
Icon path:		
Fill:	Use (122, 207, 245)	
Line:	Use Black	
Font:	Use Dialog	
Documentation:		
☑ HTML B I Щ = Ξ Ξ 등 Η F Fr 🛷 I 🚮 📲 🚧		
This is my stereotype!		
Abstract Leaf Root		
Reset	OK Cancel Apply Help	

Figure B.6 - Stereotypes Specification dialog

- 4. Specify the details of the stereotype such as its name, documentation and its icon. (For more details on the use of **Stereotype Specification** dialog box, please refer to the following section in this chapter)
- 5. Click **OK** to confirm the changes.

The new stereotype is now available to the selected model element.



Figure B.7 - User defined stereotypes

# **Editing a Stereotype**

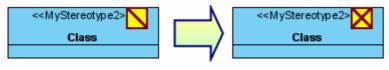


Figure B.8 - Modify stereotype

To edit a stereotype:

- 1. Display the **Configure Stereotypes** dialog box.
- 2. Select a stereotype from the **Stereotypes** list for editing. The stereotype can be a predefined one or one defined by you.

	Stereotypes:
📨 Delegate	^
🚧 entity	
📨 Entity Bean	
🖘 Enum	
🚧 focus	
implementationClass	=
📨 Message Driven Bean	
🚧 metaclass	
MyStereotype	_
MyStereotype2	
🖙 ORM Persistable	
🚧 Session Bean	
🚧 Struct	_
kass type	×
Apply changes to stereotypes in current p	roject
<u>A</u> dd <u>E</u> dit	<u>R</u> emove
<u>OK</u> <u>C</u> ancel	Help

Figure B.9 - Select stereotype from the Stereotype list

3. Press on the **Edit...**button. This displays the **Stereotype Specification** dialog box for specifying the details of the new stereotype.

6 Stereotype	Specification		
General Tag	gged Value Definitions Files Comments		
Name:	MyStereotype2		
Icon path:			
Fill:	Use (122, 207, 245)		
Line:	Use Black		
Font:	Use Dialog		
Documentation:			
☑ HTML B I U = Ξ Ξ 등 Η F Fr 🛷 I 🚮 🐙 🚧			
This is my stereotype!			
Abstract Leaf Root			
Reset	OK Cancel Apply Help		

Figure B.10 - Edit Stereotype

- 4. Specify the details of the stereotype such as its name, documentation and its icon. (For more details on the use of **Stereotype Specification** dialog box, please refer to the following section in this chapter)
- 5. Click **OK** to confirm the changes.

If the stereotype is in use by a model element, the appearance of that stereotype needs to be refreshed by pressing **OK** from the Configure Stereotypes dialog box in order to commit the changes made.

# Using the Stereotype Specification Dialog Box

When creating or editing a stereotype you will come across the Stereotype Specification dialog box.

🕲 Stereotype Specification 🛛 🔀				
General	Tagged Value Definitions Files Comments			
Name:	Stereotype			
Icon path				
Fill:	Use (122, 207, 245)			
Line:	Use Black			
Font:	Use Dialog			
Document	Documentation:			
🔽 НТМ	└ B/ │ ☰´ ☰  ̄≡│ ☵│ FFァ ~ ゲ 📫 쾢️ 肿			
Abstract Leaf Root				
Reset	OK Cancel Apply Help			

#### Figure B.11 - Stereotype specification dialog

Field	Description		
Name	The name of the stereotype.		
Icon Path	An image assigned to this stereotype. Click to select the path of the image, or click 🛅 to discard the icon.		
Fill, Line, Font	To specify the appearance of the stereotyped shapes. Their usages will be described in detail in the <b>Stereotype Formats</b> section later in this chapter.		
Documentation	The description or any information relevant to the stereotype.		
Abstract	To specify the stereotype as abstract.		
Leaf	To specify the stereotype as leaf.		
Root	To specify the stereotype as root.		
Reset	Reset all changes made.		
ОК	Close the dialog box by committing all changes made.		
Cancel	Close the dialog box without saving any changes made.		
Apply	Committing all changes made.		
Help	Display the Help content of Stereotypes Specification dialog box.		

Table B.2

# Adding Tagged Value to a Stereotype

To add Tagged Value definitions to a stereotype:

- 1. Select **Tools > Configure Stereotypes...**from main menu. This displays the **Configure Stereotypes** dialog box.
- 2. Select the desired stereotype and click Edit...

Struct			
🖘 type			
Typedef	<b>Y</b>		
Apply changes to stereotypes in current project			
Add Edit Remove			
OK <u>C</u> ancel <u>H</u> elp			

Figure B.12 - Press Edit button to open Stereotype specification

3. The Stereotype Specification dialog box is displayed. Switch to the Tagged Value Definitions tab.

Stereotype Specification				
General	Tagged Value Definitions	References	Comments	
Name	Туре		Default Value	
			Add Remove	e
<u>R</u> eset		Cancel		p

Figure B.13 - Tagged value definitions

4. Click Add. This displays two kind of tags for selection, Text or Model Element. Click on the desired one.



Figure B.14 - Tag options

#### Adding Text Tag to stereotypes

From the Stereotype Specification dialog box, press Add and then select Text Tag from the popup menu.



Figure B.15 - Add Text tag

This displays a new Tag entry.

Name	Туре	Default Value
Tag	Text	

Figure B.16 - A new text tag entry

To change the name of the Tag, double click to the Name field and enter a new name.



#### Figure B.17 - Rename the tag

You can also change the type of Tag from Text to Model Element. To change the type, click on **Type** field and select a type from the popup menu.



#### Figure B.18 - Change the type of tag

To specify a default value of the Tag, double click to the Default Value field and enter a value.

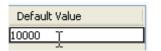


Figure B.19 - Enter the value

#### Adding Model Element Tag to a stereotype

From the Stereotype Specification dialog box, press Add and then select Model Element Tag from the popup menu.



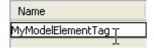
Figure B.20 - Add Model Element Tag

This displays a new Tag entry.

Name	Туре	Default Value
Tag	Model element	N/A

Figure B.21 - A new model element tag

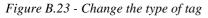
To change the name of the Tag, double click to the Name field and enter a new name.



#### Figure B.22 - Rename the model element tag

You can also change the type of Tag from Text to Model Element. To change the type, click on **Type** field and select a type from the popup menu.

Туре	
Model element	~
Text	N
Model element	13



To specify a default value of the Tag, double click to the **Default Value** field and enter a value.



Figure B.24 - Enter the value of tag

## Adding Tagged Value to a Model Element

To add Tagged Value definitions to a model element:

1. Right-click on a model element and select **Open Specification...** from the popup menu.



Figure B.25 - Open specification

2. The specification dialog box is displayed. Switch to the Tagged Value Definitions tab.

S Actor Specific	ation			×
General	Attributes	Opera		Relations
Stereotypes	Tagged Values	Diagrams	References	Comments
			Add	Remove
<u>R</u> eset	<u>o</u> k	<u>C</u> ancel	Apply	

Figure B.26 - Actor Specification dialog

3. Click Add. This displays two kind of tag for selection. One is **Text** Tag and another is **Model Element** Tag. Click on the desired one.

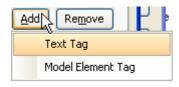


Figure B.27 - Add Tag options

#### Adding Text Tag to Model Element

From the Stereotype Specification dialog box, press Add and then select Text Tag from the popup menu.



Figure B.28 - Add text tag

This displays a new Tag entry.

<user-defined tags=""></user-defined>			
Name	Туре	Value	[
Tag	Text		

Figure B.29 - The new text tag

To change the name of the Tag, double click to the Name field and enter a new name.



#### Figure B.30 - The name of tag

You can also change the type of Tag from Text to Model Element. To change the type, click on **Type** field and select a type from the popup menu.

~
5

Figure B.31 - the type of tag

To specify a default value of the Tag, double click to the Value field and enter a value.



Figure B.32 - The value of tag

#### Adding Model Element Tag to a Model Element

From the Stereotype Specification dialog box, press Add and then select Model Element Tag from the popup menu.

Add	Remove	
Text		
Model Element		

Figure B.33 - Add Model element Tag

This displays a new Tag entry.

<user-defined tags=""></user-defined>		
Name	Туре	Value
Tag	Model element	<b>~</b>

Figure B.34 - The blank new model element tag

To change the name of the Tag, double click to the Name field and enter a new name.



Figure B.35 - The name of tag

You can also change the type of Tag from Text to Model Element. To change the type, click on **Type** field and select a type from the popup menu.

Туре	
Model element	*
Text	N
Model element	ЧŠ

Figure B.36 - The type of tag

To specify a default value of the Tag, double click to the Value field and enter a value.

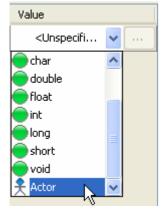


Figure B.37 - The tag value

# **Stereotype Formats**

You can configure the formats of stereotypes including fill, line and font, so that stereotyped elements can be easily distinguished and emphasized in the diagram.

## **Configuring Stereotype Formats**

- 1. To configure stereotype formats, select menu Tools > Configure Stereotypes....
- 2. In the **Configure Stereotypes** dialog box, select a model type in **Model elements** and the target stereotype in **Stereotypes**. Click the **Edit...** button.

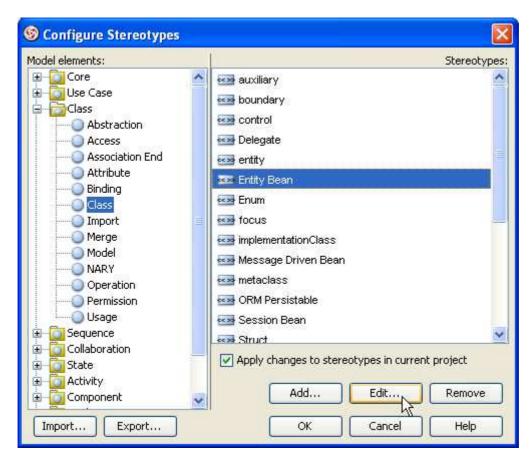


Figure B.38 - Configure Stereotype dialog

3. The **Stereotype Specification** is shown.

🌀 Stereotype	Specification 🔀
General Tago	ed Value Definitions Files Comments
Name:	Entity Bean
Icon path:	
Fill:	Use (122, 207, 245)
Line:	Use Black .
Font:	Use Dialog
Documentation:	
HTML B	I Щ   Ξ Ξ Ξ   ☵ ∷   F Fr 🛹 I 📑 📲 🚧
Abstract	Leaf Root
Reset	OK Cancel Apply Help

Figure B.39 - Stereotype Specification dialog

## **Applying Fill Color**

1. To apply fill color to stereotype, select the Use checkbox and click the ... button of the Fill property.

Fill:	🕑 Use 📃 (122, 207, 245)	
Line:	Use Black	¹ S
Font:	Use Dialog	

Figure B.40 - Edit fill of stereotype

2. Select a fill color in the Format Fill dialog box and click OK.

🎯 Format Fill		
Fill style: Transparency: Color 1: Color 2:	<ul> <li>Solid ● Gradient</li> <li>I I I I I I I I I I I I I I I I I I I</li></ul>	0 %
Gradient Color The Violet Blue Green Gray Gray Yellow Red	Add to Themes Remove Rename ellow	Gradient Style
		OK Cancel

Figure B.41 - Format Fill dialog

### **Applying Line Style**

1. To apply line style to stereotype, select the Use checkbox and click the ... button of the Line property.

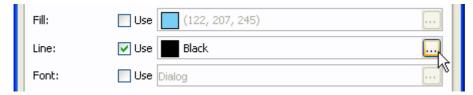


Figure B.42 - Edit line of stereotype

2. Configure the line style in the Format Line dialog box and click OK.

🎯 Format Line	•
Style: Weight: Color:	1: Preview
Transparency:	
	OK Cancel

Figure B.43 - Format Line dialog

# **Applying Font**

1. To apply font to stereotype, select the Use checkbox and click the ... button of the Font property.

Fill:	Use (122, 207, 245)	
Line:	Use Black	
Font:	✓ Use Dialog	
Documentation:		45

Figure B.44 - edit Font

2. Select a font in the Select Font dialog box and click OK.

Select Font				
Font Name:	Font Style:	Font Size		
Bookman Old Style	Bold	14		
Book Antiqua	Regular	11 🔨		
Bookman Old Style	Italic	12		
Browallia New 🔓 💼	Bold	14		
BrowalliaUPC	Bold Italic	16		
Century		18		
Century Gothic		20 =		
Comic Sans MS		22		
Cordia New 💌		24 💌		
Font Color : Black				
Preview				
Aa Bb Cc				
OK Cance	el			

Figure B.45 - Select Font dialog

After setting a stereotype to a shape, the formats of the stereotype will be applied to the shape immediately.

EJB Class Code Details Class Code Details ORM Query General Attributes Operations Relations Template Parameters Stereotypes Tagged Values Diagrams Files Comments All: Selected: Diagram Entity Bean Class	Class Spec	cification	E .				8	Class	
Stereotypes Tagged Values Diagrams Files Comments All: Selected: Comments C	EJB C	ass Code De	tails	0	lass Code Details		ORM Query		
Al: Selected:	General	Attributes	s Ope	ations	Relations	Templa	te Parameters		
Emity Bean	Stereotypes Tagged Values		Diagrams	Files	Comments				
	100000000000000000000000000000000000000			^		y Bean			
	control								
	+ Delegate								

Figure B.46 - The Modified stereotype

# **Changing Stereotype Formats**

1. Just like configuring stereotype formats, open the 'Configure Stereotypes' dialog box and select a model type in Model elements and the target stereotype in Stereotypes. Click the Edit... button to edit its fill, line and font in the Stereotype Specification.

🎯 Stereotype	Specification
General Tago	ged Value Definitions Files Comments
Name:	Entity Bean
Icon path:	
Fill:	Use Orange
Line:	Use Black
Font:	Use Monospaced
Documentation:	
HTML B	· I u   = = =   = :=   F Fr 🛷 🕈 📑 📲 🚧
Abstract	Leaf Root
Reset	OK Cancel Apply Help

Figure B.47 - Edit the format of stereotype

2. After changing stereotype formats, it is important that you ensure the 'Apply changes to stereotypes in current **project**' option is selected, otherwise the stereotypes used in the current project will not be updated.

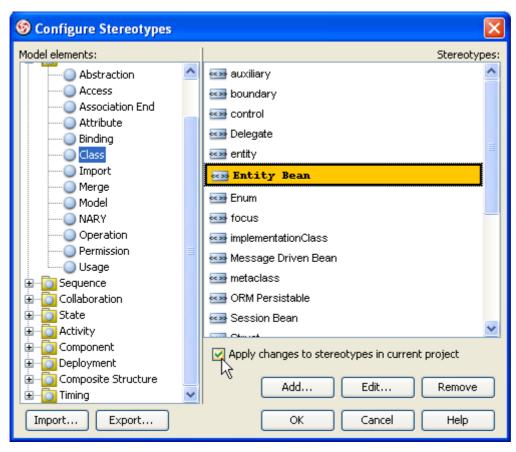


Figure B.48 - apply the change to current project

3. The appearances of shapes assigned to the changed stereotype are updated.



Figure B.49 - Model style updated



# **Supported Mouse Gestures**

# **Appendix C - Supported Mouse Gestures**

#### **General Commands**



Layout Diagram

**Open Diagram Specification** 

#### Activity Diagram (UML 2.0)





Close Diagram



Show Diagrams Thumbnail View



Decision Node

Swimlane



Initial Node/Final Node (If there is no Initial Node, an Initial Node will be created. Likewise if there is no Final Node, a Final Node will be created)



Activity

Activity Diagram (UML 1.x)



Action State



Vertical Synchronization Bar

#### **Class Diagram**



Synchronize to ERD

#### **Communication Diagram**



Synchronize to Sequence Diagram

Sub-Activity

Initial State/Final State(If there is no Initial State, an Initial State will be created. Likewise if there is no Final State, a Final State will be created)



Class



Lifeline



Package



Actor



Horizontal Synchronization Bar





Package

#### **Component Diagram**





Instance Specification

Interface

Component

Entity Bean

#### **Composite Structure Diagram**

Component



Class

#### **Deployment Diagram**



Node

#### EJB Diagram



Synchronize to ERD



Package

#### **Entity Relationship Diagram**



Synchronize to Class Diagram

#### **Interaction Overview Diagram**



Interaction

Decision Node

Entity



Package



Collaboration



Node Instance



Message-Driven Bean



Collaboration Use

Ъ

Package



Session Bean



Initial Node/Final Node(If there is no Initial Node, an Initial Node will be created. Likewise if there is no Final Node, a Final Node will be created)

#### **Object Diagram**

**ORM Diagram** 



Instance Specification

Class





Entity





Class

Diagram Overview

#### Package Diagram



Package

#### **Sequence Diagram**



Synchronize to Communication Diagram



Loop Combined Fragment

#### State Machine Diagram (UML 2.0)





Lifeline

State

Submachine State



Package



Package



5

Actor

Alt Combined Fragment



Initial Node/Final Node(If there is no Initial Node, an Initial Node will be created. Likewise if there is no Final Node, a Final Node will be created)

#### State Machine Diagram (UML 1.x)



State





**Concurrent State** 

Initial State/Final State(If there is no Initial State, an Initial State will be created.

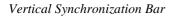
Likewise if there is no Final State, a Final State will be created)

6



Submachine State

Horizontal Synchronization Bar



### **Timing Diagram**



Frame

#### Use Case Diagram



Use Case



Actor



Package



## **Appendix D - Keyboard Shortcuts**

Action	Hot Key	Description
New Project	Ctrl-N	To create either a new UML 1.x or a new UML 2.0 project. The Create New Project dialog box will appear, which allows you to create a blank project, a project created from existing project templates, or import a project from other CASE tool project files.
Open Project	Ctrl-O	To open an existing project.
Save Project	Ctrl-S	To save the current project. If the project is a new one, this operation is equivalent to "Save Project as
New Diagram	Ctrl-Shift- N	To create a new diagram.
Print	Ctrl-P	To print selected diagrams in the current project. A new dialog box will be presented, allowing you to select the diagrams to be printed, as well as configuring various printing options.
Undo	Ctrl-Z	To undo the last action that you performed.
Redo	Ctrl-Y	To redo the last action that you performed.
Repeat Create	F3	To repeat create last shape.
Cut	Ctrl-X	To cut the selected diagram elements from the diagram and copy them to the application clipboard.
Default Copy	Ctrl-C	To perform the copy action as configured in the VP-UML application options (Options dialog box -> Diagramming category -> Environment page). The default "default copy" action is Copying within VP-UML.
Copy to Clipboard as OLE	Ctrl-Shift- C	To copy the selected diagram elements from the diagram to the system clipboard. The diagram elements can then be pasted to OLE containers like Word, Excel and PowerPoint, which can be edited directly.
Copy to Clipboard as Image (JPG)	Ctrl-Alt-C	To copy the selected diagram elements as a JPG image to the system clipboard.
Copy to Clipboard as Image (EMF)	Ctrl-Alt- Shift-C	To copy the selected diagram elements as an EMF image to the system clipboard.
Duplicate	Ctrl-E	To duplicate the selected diagram elements.
Paste View	Ctrl-V	To paste the contents of the application clipboard to the drawing pane.
Delete	Delete	To delete the selected diagram elements from the diagram.
Select All	Ctrl-A	To select all the diagram elements from the current diagram.
Deselect	Ctrl-D	To deselect all diagram elements.
Find	Ctrl-F	To find elements (model elements and diagram elements) in the current project.
Jump to Element in Active Diagram	Ctrl-J	To jump to an element in the active diagram.
Jump to Element	Ctrl-Shift-J	To jump to an element in the project. If the selected element belongs to a diagram, this diagram will be opened, and the element will be selected and centered in the diagram. If the selected element is a model that does not have a view, it will be selected in the Model pane.
Group	Ctrl-G	To organize shapes in group. The group can manipulate related shapes together at the same time (select, deselect, move, align and resize).
Ungroup	Ctrl-Shift- G	To ungroup the grouped shapes in a diagram.
Align Shapes	F12	To display the Align Shapes dialog box that allows you to configure the top/bottom, left/right alignments and same width/same height options all at a time.
Show Diagram Navigator	Ctrl-Shift-I	To open/activate the Diagram Navigator.

Show Model Pane	Ctrl-Shift- O	To open/activate the Model Pane.
Show Class Repository	Ctrl-Shift- L	To open/activate the Class Repository Pane.
Show Logical View	Ctrl-Shift- A	To open/activate the Logical View Pane.
Show ORM Pane	Ctrl-Shift- R	To open/activate the ORM Pane.
Show Stencil Pane	Ctrl-Shift- S	To open/activate the Stencil Pane.
Show Property Pane	Ctrl-Shift- P	To open/activate the Property Pane.
Show Diagram Overview Pane	Ctrl-Shift- V	To open/activate the Diagram Overview Pane.
Show Documentation Pane	Ctrl-Shift- U	To open/activate the Documentation Pane.
Show Message Pane	Ctrl-Shift- M	To open/activate the Message Pane.
Toggle Show Resources	Ctrl-R	To toggle the visibility of resources.
Full Screen	F11	To toggle the full screen mode (display only the Toolbar and the Diagram Pane, all the other UI components will be hidden).
Zoom In	Ctrl-Equals	To magnify the diagram by 10%.
Zoom Out	Ctrl-Minus	To diminished the diagram by 10%.
Zoom 100% (Actual Size)	Ctrl-0	To view the diagram in its actual size.
Previous Diagram	Alt-Left	To switch to the previous diagram.
Next Diagram	Alt-Right	To switch to the next diagram.
Switch to Diagram	Ctrl-Shift- E	To manage windows by selecting windows to close, and/or activate a selected window.
Close Active Window	Ctrl-W	To close the active window.
Close All Windows	Ctrl-Shift- W	To close all opened the windows.
Open Specification	Enter	To open the specification of active diagram or diagram element

Table D-1

## Classes

Action	Hot Key	Description
Add Attribute	Alt-Shift-A	To add a attribute to a currently selected Class
Add Operation	Alt-Shift-O	To add an operation to a currently selected Class

Table D-2

### Entities

Action	Hot Key	Description
New Column	Alt-Shift-C	To add a new column to an currently selected Entity or ResultSet

Table D-3



# Glossary

## **Appendix E - Glossary**

Α		
Activity diagram	Activity diagrams are an amalgamation of a number of techniques: Jim Odell's event diagrams, SDL state modeling techniques, workflow modeling and petri-nets. They can also be considered as variants of state diagrams. Activity diagrams are organized according to actions and mainly target towards representing the internal behaviors of a method or a use case. They describe the sequencing of activities, with support for both conditional and parallel behaviors.	
Actor input	In editing the flow of events, an actor input is the input from an actor to the system.	
Align to grid	Whether diagram elements should align to the grid when being moved.	
Anti-aliasing	A method which handles the staircase pixels of slanted lines and curves to make them look smoother.	
Application Options	The global options in VP-UML.	
Auto save	VP-UML provides an auto save feature that saves a copy of the current project periodically. If the application terminates abnormally, with this feature turned on, when you start VP-UML again the system will check if an auto save file exists. If so, it will ask you whether you want to recover the project.	
Automatic containment rule detection	A facility to automatically detect the containment rule for a container. For example, an Actor will not be contained in the System Boundary even if they are moved into the container's region.	
В		
Backup files	Every time you save a project a backup file will be created. The backup file name is determined by the original project file name, followed by a "~" and the version number. A backup file with a larger version number means that it is more recent than those with smaller version numbers.	
Button group	The diagram toolbar groups some of the diagram elements that are similar in nature together. For example, Package and Subsystem are grouped into a single button group. Buttons that are grouped are indicated by a small triangle on the lower-right-hand corner. To view the list of items under the group, click on the small triangle or click and hold the button until the selection list appears.	
С		
Candidate Class Pane	The candidate class pane, located at the upper-right corner of the textual analysis pane, displays the candidate classes as rectangle shapes.	
Candidate class view	In performing textual analysis, the Candidate Class View hides the Problem Statement Editor and only displays the Candidate Class Pane and the Data Dictionary Table. It allows you to concentrate on further editing of the identified candidate classes, such as specifying the candidate class type or creating models.	
Cascade	Arranges the opened windows diagonally, with the active window on top.	
Class diagram	Class diagrams are the most common diagrams used for modeling object-oriented systems. They are used to describe the types of objects and their relationships by providing a static, structural view of a system. They are important not only for visualizing, specifying, and documenting structural models, but also for constructing executable systems through forward and reverse engineering.	
Class repository	A project may contain many classes. The Class Repository View lists all the classes within the current project.	
Collaboration diagram	Collaboration diagrams emphasize the organization of objects that are involved in an interaction. Collaboration is a mechanism composed of both structural and behavioral elements. Two important features - the concept of a path and the sequence number - distinguish collaboration diagrams from sequence diagrams.	
Component diagram	Component diagrams show the various components (physical modules of code) in a system and their dependencies. A component may often be the same as a package.	
Copy as image	To copy the selected diagram elements to the system clipboard as an image. This feature is supported in both the Windows and the Linux platform.	
Copy to system clipboard	To copy the selected diagram elements to the system clipboard as OLE objects so that the copied content can be pasted to OLE containers like Microsoft Word/Excel/PowerPoint, as well as directly edit the OLE object inside the document. This feature is supported in the Windows platform only.	

Copy within VP- UML	To copy the selected diagram elements to the application clipboard. You can then paste the diagram elements to other VP-UML diagrams.	
D		
Data dictionary table	The data dictionary table, which is located at the lower-right area of the textual analysis pane, provides a table view for the candidate classes. It displays all the information of a candidate class. You can edit its name and type, as well as adding description to the candidate class.	
Data dictionary view	In performing textual analysis, the Data Dictionary View displays only the Data Dictionary Table. It allows you to concentrate on filling the candidate class information in the data dictionary.	
Deployment diagram	Deployment diagrams show the physical layout and relationships among software and hardware components in the implemented system. It shows how components and objects are routed and moved around a distributed system.	
Diagram base layout	In the print preview pane, if the Fit to Pages option is selected, and there are multiple pages in the printout, selecting Diagram Base Layout will cause the distribution of pages to be diagram-oriented. Note that this option affects the preview only, the order of the printout remains unchanged.	
Diagram element	A diagram element is a shape or a connector that represent the view of its underlying model element.	
Diagram exporter	The diagram exporter allows you to export selected diagrams as images in JPG, PNG or SVG format.	
Diagram pane	The diagram pane contains the opened diagrams; it allows you edit multiple diagrams at the same time.	
Diagram toolbar	The diagram toolbar contains the buttons of the diagram elements available for developing the active diagram.	
Diagram navigator	A project may consist of many diagrams. The Diagram Navigator lists all the diagrams within the project. Through the use of a folding tree structure, you can browse the names of these diagrams by expanding or collapsing the folders and perform sorting by diagram type.	
Document info	When generating HTML/PDF reports, the document info (such as title, author, keywords) you specified becomes the meta data of the report. Users can open the HTML source/PDF document summary to view this information.	
Documentation pane	The Documentation pane allows you to enter a description about a diagram or a diagram element.	
Ε		
Extra Resource- Centric	By default, the resource-centric interface displays the most commonly used resources of a diagram element. The least commonly used resources are hidden by default, and they are called the extra resources.	
F		
Flow of event	A section in the use case description for editing the base paths and the alternative paths in a use case.	
Н		
HTML report generation	To generate report for the VP-UML project in HTML format.	
J		
Java-enabled platforms	Any platforms that have Java runtime installed and thus are able to run Java programs.	
L		
Layout diagram	A feature to layout the shapes so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap, and to layout the connectors so that they do not overlap.	
License key	The license key is a file that you import using the License Key Manager so that you can start using VP-UML.	
License Key Manager	The License Key Manager allows you to manage the license key files of Visual Paradigm products.	
Logical View	The Logical View refers to a user's view of the way project is organized. It provides another view of creating, structuring and sharing the UML diagrams and models apart from the traditional Diagram Navigator, Model Tree View and Class Repository.	
Look and Feel	The appearance of VP-UML user interface.	

Μ		
Message pane	The message pane logs the messages for the operations that you performed. For example, Java language syntax checking, model validation, report generation, etc.	
Model element	A model element stores the model data. A diagram element associates with a model element, and a model element may be associated with more than one diagram element (multiple views).	
Model repository	The repository where the model elements are stored.	
Model tree view	The Model Tree View lists all the model elements within the current project. Model elements can be dragged to appropriate diagrams to create a new diagram element.	
Model validation	A process to validate the models against UML syntax.	
0		
OLE	An object that supports the OLE protocol for object linking and embedding.	
Open specification dialog	The open specification dialog of a diagram allows you to configure the diagram settings, such as the diagram name and grid settings; while the open specification dialog of a model element allows you to configure its model data.	
ORM Pane	Display a list of classes and database tables from the specified classpath (s) and database (s). You can click <b>Refresh</b> to update the content under Class View and DataBase View whenever there are changes to source code or database. You can drag classes or entities onto diagrams and generate source code/database from them when necessary.	
Р		
Paper base layout	If the Fit to Pages option is selected, and there are multiple pages in the printout, selecting Paper Base Layout will cause the distribution of pages to be paper-oriented (the diagram size is ignored in arranging the preview). Note that this option affects the preview only; the order of the printout remains unchanged.	
Paper place style	To change the order of the printout. Consider a large diagram divided into many pages. Selecting 'From left to right' will arrange the printout order from the pages on the left to the pages on the right, while selecting 'From top to bottom' will arrange the print order from the pages on the top to the pages on the bottom.	
Pattern watermark	The watermark that repeats the product name diagonally in the printout, exported image or copied content.	
PDF report generation	To generate report for the VP-UML project in PDF format.	
Preview pane	The Preview pane, also known as the Diagram Monitor, shows an overall view of the diagram. The Diagram Monitor allows you to navigate the whole diagram pane when the diagram is larger than the display area of the diagram pane.	
Print preview pane	The print preview pane allows you to configure various print settings, preview the printout and print the diagrams.	
Problem statement	A description about the problem to investigate.	
Problem statement editor	The problem statement editor is the text editor located on the left of the text analysis pane, which allows you to view and edit the problem statement.	
Problem statement view	The Problem Statement View displays the Problem Statement Editor, the Candidate Class Pane and the Data Dictionary Table; allows you to concentrate on editing the problem statement.	
Project explorer	The project explorer pane contains three views: the Diagram Navigator, the Model Tree View, and the Class Repository View. Each view shows different perspectives of the project.	
Properties pane	There are four pages associated with the Properties Pane: the Property page, the Preview page, the Documentation page and the Element Viewer page.	
Property pane	Every diagram and diagram element has its own properties. The Property pane in the Properties Pane allows you to view and edit its various properties.	
Q		
Quick Print	Prints diagrams without previewing them; speeds up the print job.	
R		
Realistic containment interaction	A specific effect to indicate a diagram element moving in/out of a container.	

	Т	
Reference shape for alignment	When there are multiple shapes selected, the last selected shape will be used as the referenced shape for alignment. That is, the alignment methods will be performed based on the position/size of the referenced shape. The referenced shape will be rendered with its resize handles surrounded by black rectangles.	
Report Writer	A feature for performing agile report creation.	
Resource-centric	A user interface based on the Resource-Centric approach is adopted in VP-UML to enable UML diagrams to be constructed intuitively with minimal efforts. With the novel interface, only valid editing resources are grouped around a graphical entity, totally eliminating invalid operations during diagram construction.	
Rose importer	The Rose importer allows you to import a Rational Rose project file and convert it into diagrams and models in your VP-UML project.	
Round trip engineering	Round trip engineering is the process to convert from diagram to code, and to convert from code to diagram.	
S		
Scrollable toolbar	If you have resized the diagram pane to the extent that some of the buttons on the diagram toolbar are not visible, an "Up" button and a "Down" button will appear. You can click on these buttons to scroll up or down to the desired buttons on the toolbar.	
Sequence diagram	Sequence diagram captures the behavior of a single use case and displays a number of example objects, as well as the messages that are passed between these objects within the use case from a temporal standpoint. There are two important features, the object lifeline and the focus of control, that distinguish them from collaborative diagrams.	
Single line watermark	The watermark that prints a single line of the product name in the printout, exported image or copied content.	
State diagram	State diagrams, sometimes referred to as state chart diagrams, are a common technique to describe the dynamic behavior of a system. They represent state machines from the perspective of states and transitions, describing all the possible states that a particular object can get into and how the object's state changes as a result of events that affect the object. In most Object-Oriented techniques, state diagrams are drawn for a single class to show the lifetime behaviors of a single object.	
Stencil Pane	Although the original UML notations are rich, they may still not be expressive enough to represent your idea. The stencils in VP-UML provides a large variety of shapes apart from the ordinary UML notations, and you can place the stencils in UML diagrams to express your own ideas. The Stencil Pane is a repository where imported shapes are stored.	
Stereotype	The stereotype concept provides a way of classifying (marking) elements so that they behave in some respects as if they were instances of new "virtual" metamodel constructs.	
Sub-diagrams	A facility to associate a diagram with other lower level UML diagrams to facilitate levels of abstraction and increase the traceability among UML diagrams.	
System response	In editing the flow of events, this is the response from the system to an actor input.	
Т		
Textual analysis	Textual analysis is a process to analyze the system domain. It helps to identify the candidate classes in a problem statement.	
Tile	Arrange the opened windows so that all windows are visible at the diagram pane.	
Tile horizontally	Arrange the opened windows horizontally. The windows are resized to share the available workspace height without overlapping each other.	
Tile vertically	Arrange the opened windows vertically. The windows are resized to share the available workspace width without overlapping each other.	
U		
UML	The Unified Modeling Language (UML) is a language for specifying, visualizing, constructing, and documenting the artifacts of software systems, as well as for business modeling and other non-software systems. The UML represents a collection of the best engineering practices that have proven to be successful in the modeling of large and complex systems.	
Use case description	A use case description describes the use case, including the preconditions, post-conditions, flow of events, etc.	
Use case detail	A use case detail holds one or more use case description.	
	1	

Use case diagram	Use case diagrams, together with activity diagrams, state diagrams, sequence diagrams and collaboration diagrams, are the five diagrams in UML for modeling the dynamic aspects of a system. Invented by Ivar Jacobson, use case diagrams are central to modeling the behaviors of the system, a sub-system or a class, providing a means to visualize, specify and document the behaviors of an element. They describe the behavior of a system from a user's perspective by using actions and reactions. A use case shows the relationships between actors and objects, and between the system and its environment.
Use case scheduling	To schedule the use cases by assigning priorities.
V	
Visio integration	VP-UML allows you to create Visio drawing in UML diagrams. Besides, you can also import Visio stencil into VP-UML and use the Visio shape in UML diagrams.
Visual Paradigm Suite	Abbreviated as VP-Suite, Visual Paradigm Suite allows you to install all Visual Paradigm leading CASE Tools.
Х	
XMI importer	The XMI importer imports the models from an XMI file into a VP-UML project.

Table E.1