



IBM Software Group

Essentials of Rational XDE

Getting Familiar with XDE

Rational software



Objectives: Getting Familiar with XDE

- ◆ Define the relationship between:
 - Rational XDE, Eclipse, and the IBM WebSphere Studio Workbench
- ◆ Describe Rational XDE's:
 - Windows (“views”)
 - Perspectives
- ◆ Demo of Rational XDE
- ◆ Exercise: Getting Familiar with Rational XDE

What is Rational XDE?

- ◆ XDE is an e**X**tended **D**evelopment **E**nvironment.
- ◆ It offers the developer a single tool for model and code development.
- ◆ It allows the user to quickly change between two disciplines.

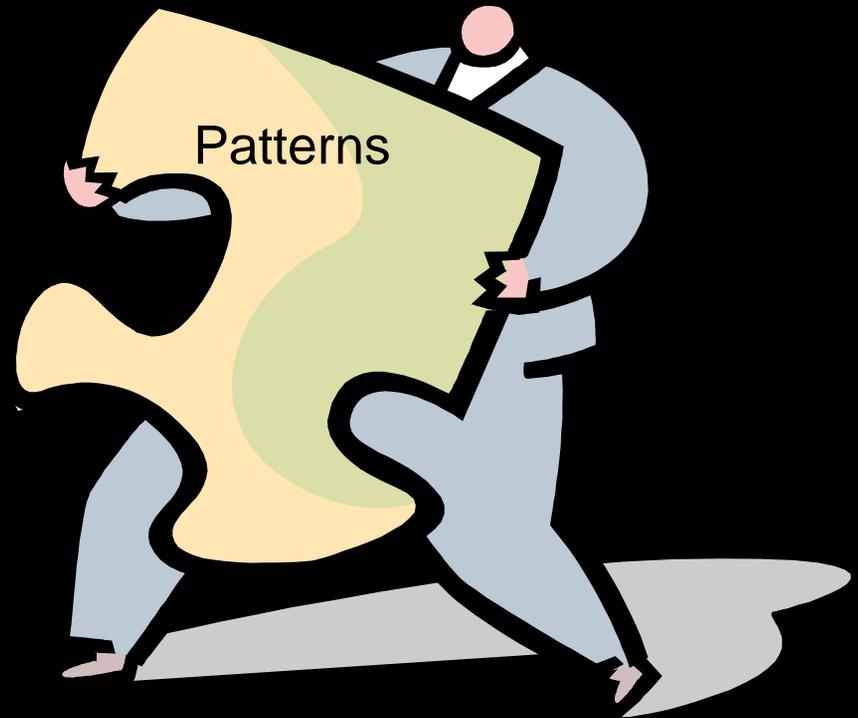
Up Until Now, Developers ...

- ◆ Thought they had to know how to:
 - Design and code
 - Switch between tools
 - Verify consistency between code and model
- ◆ Found it difficult to start with a “blank slate” on every new project

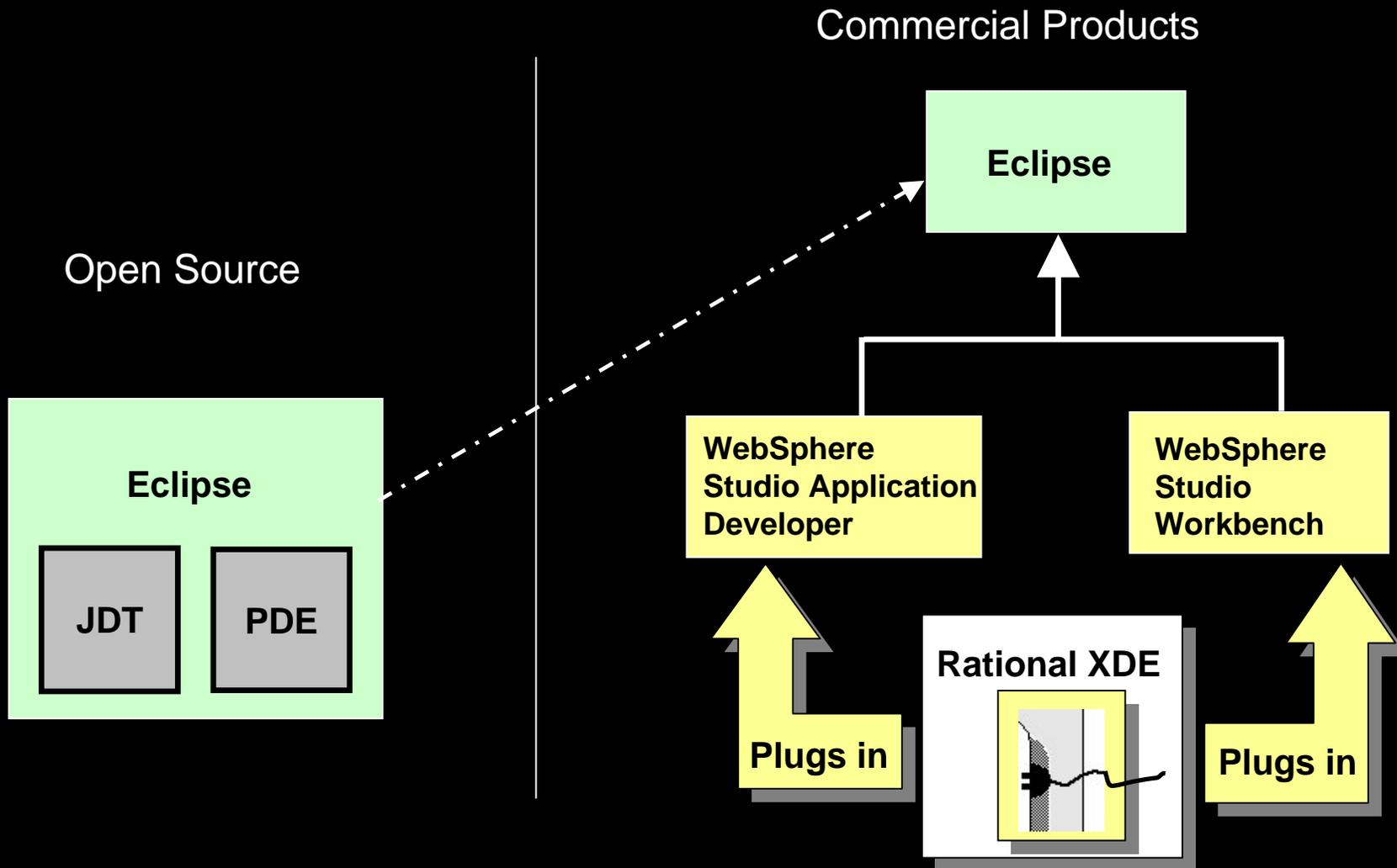


Up Until Now, the Architect ...

- ◆ **Wondered how do I:**
 - Bring proven patterns into the project (GoF, J2EE, my own)?
 - Ensure that patterns and templates are being used?
 - Reuse designs from my last project (not just the code)?



Eclipse, Workbench, and Rational XDE Developer



Welcome to Rational XDE

The screenshot shows the Rational XDE interface with several callout boxes highlighting key components:

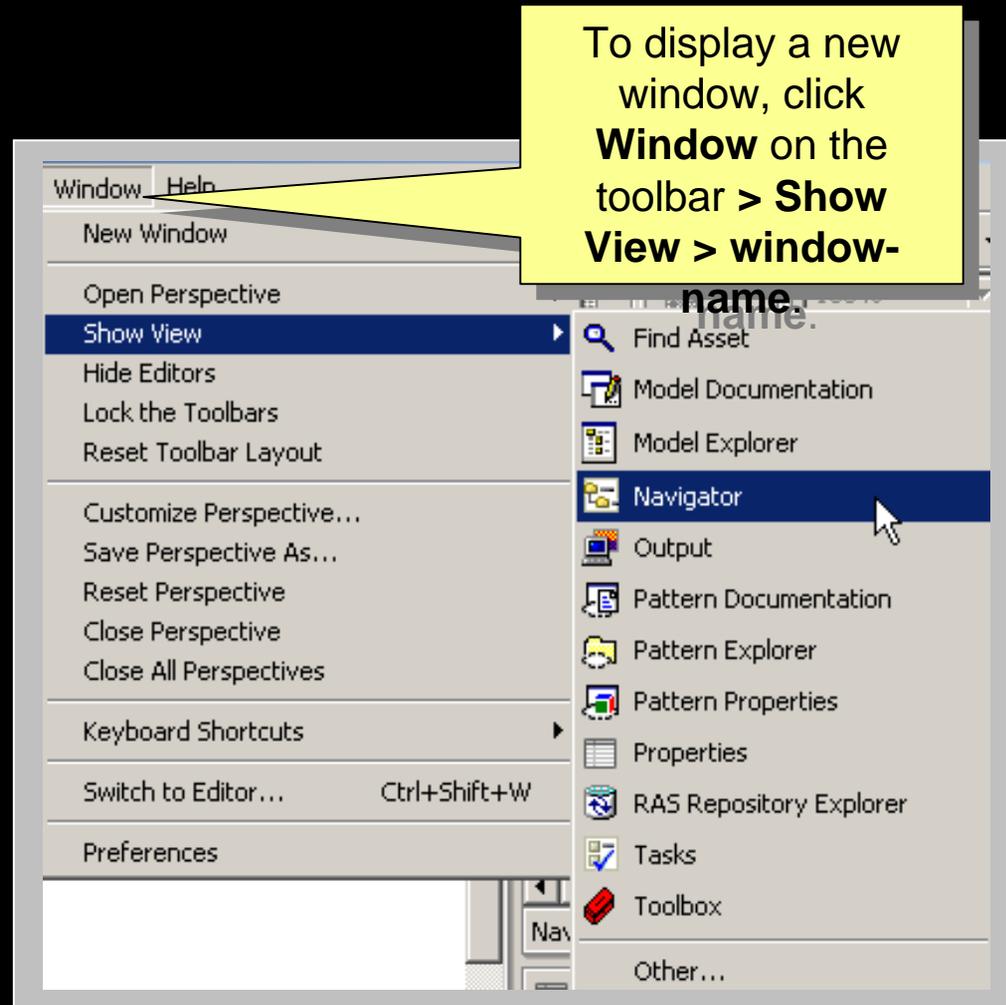
- Help**: Points to the Help menu in the top toolbar.
- Toolbox**: Points to the left-hand toolbox containing UML modeling elements.
- Workbench Window**: Points to the central workspace containing a UML diagram with two classes: `«HttpServlet» HelloServlet` and `HelloWorld`. A dashed red arrow labeled `«use»` connects the `doGet()` method of `HelloServlet` to the `HelloWorld` class.
- Navigator and Model Explorer**: Points to the right-hand pane showing a project tree structure.
- Properties**: Points to the Properties window at the bottom right, which displays details for the selected `Main <Diagram>`.
- Tasks and Output**: Points to the bottom task bar containing `Tasks`, `Model Documentation`, and `Output` tabs.

Property	Value
Print	
UML	
(Name)	Main
Alias	
Collections	
IsSpecific...	False
Stereotype	
Type	1 - CLASS
UseAlias	False
View	
GridSize	250
SnapToGrid	True

Rational XDE Windows

Primary views (“windows”) in XDE:

- Navigator
- Model Explorer
- Workbench window
 - Diagram window
 - Java editor
- Tasks window
- Properties window
- Output window
- Toolbox
- Help

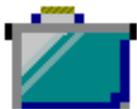


Navigator

- ◆ Some artifacts found in the Navigator:



Project (Open)



Project (Closed)



Java Source File



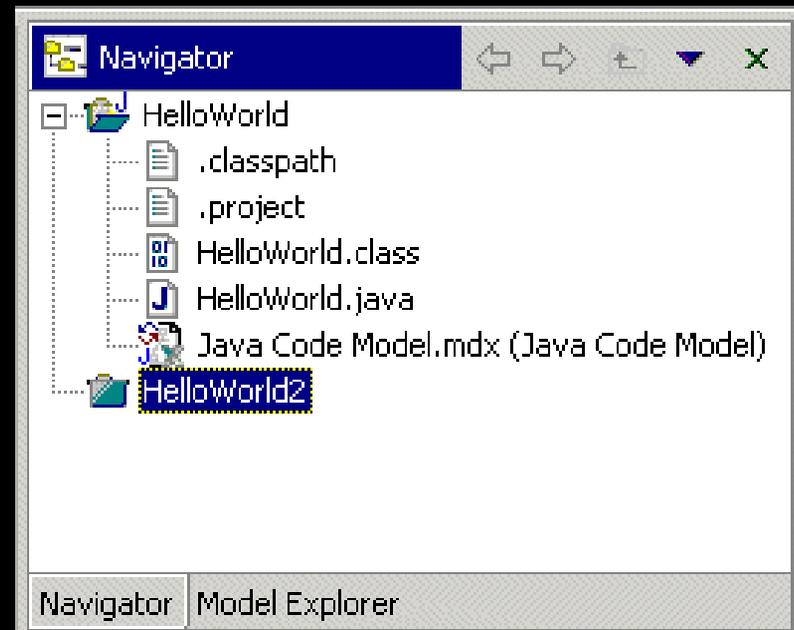
Java Class File



Text File

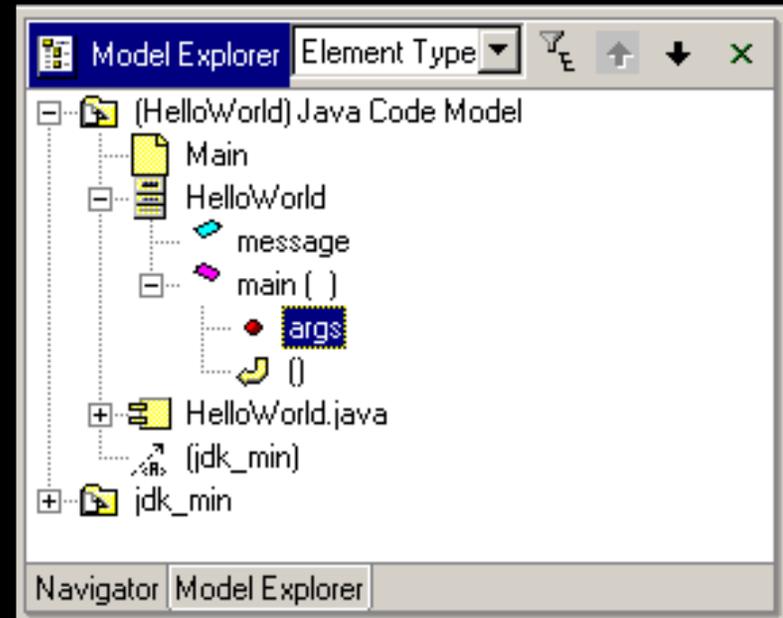
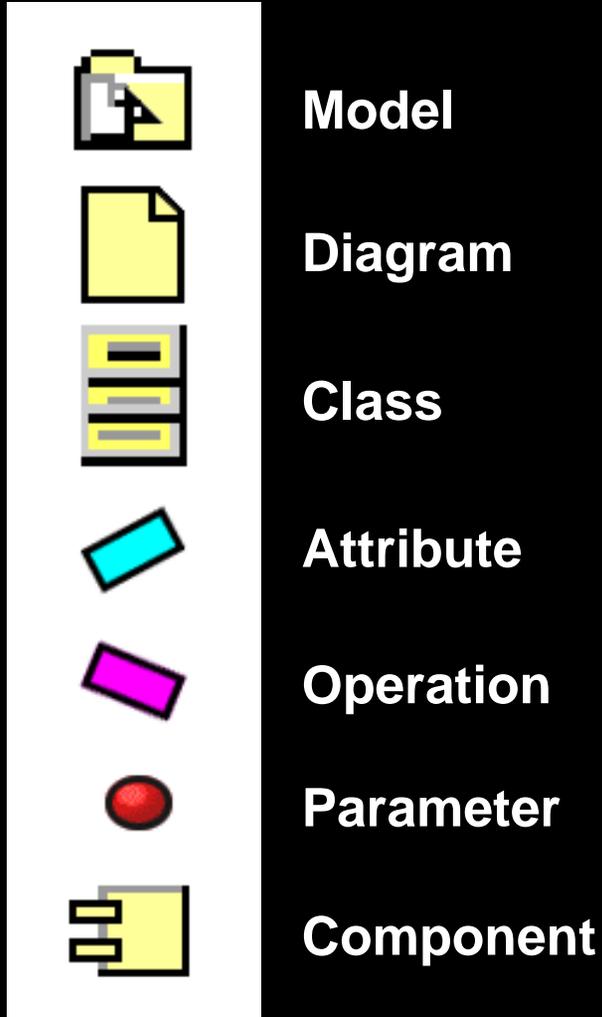


Java Code Model



Model Explorer

- ◆ Some model elements from the Model Explorer:



Model Explorer (continued)

- ◆ Additional Model Explorer features include:
 - Filtering
 - Shows certain model elements types, while hiding others
 - Sorting
 - Groups model elements by specific criteria

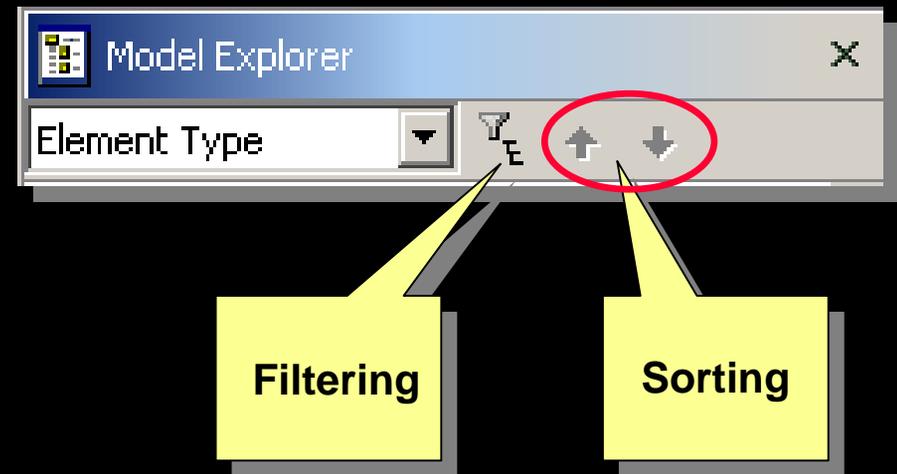
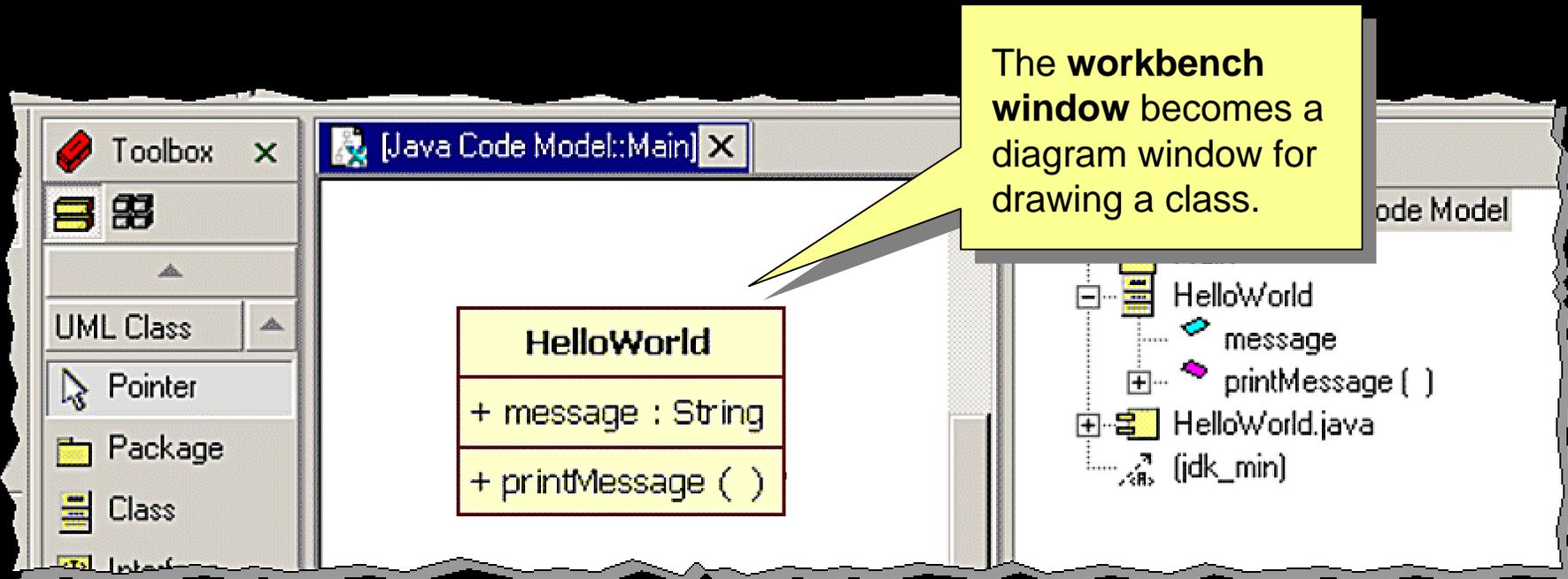


Diagram Window

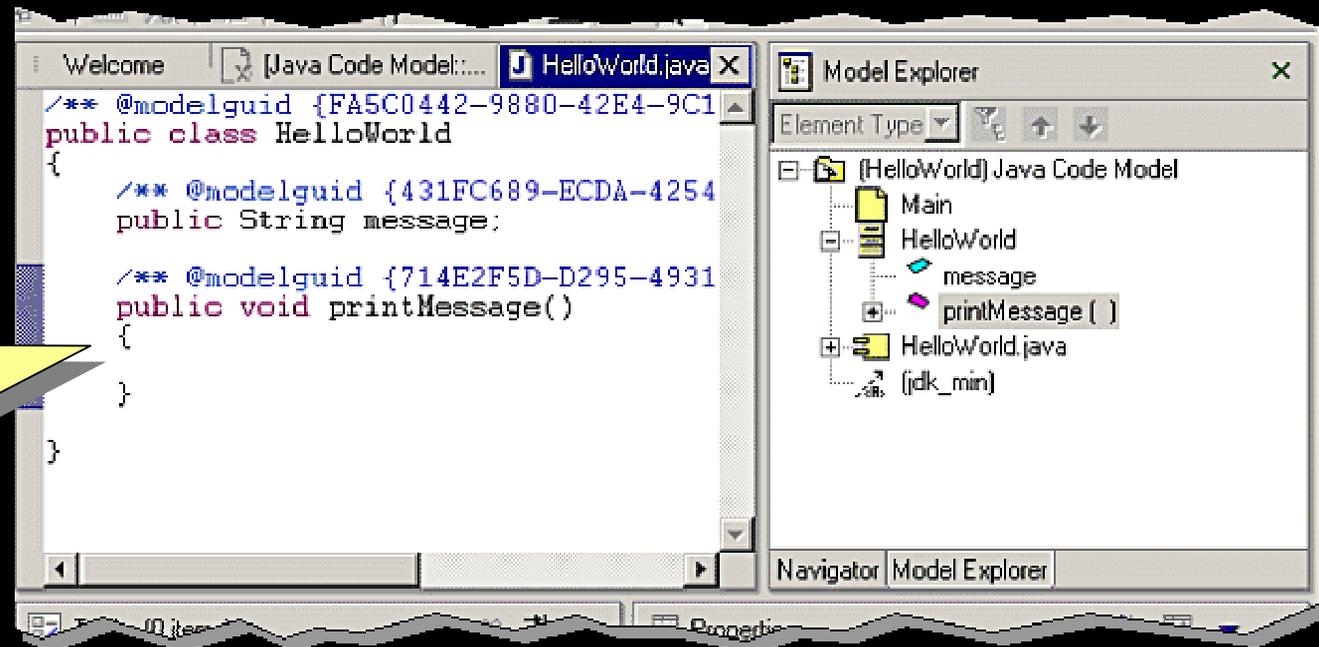
- ◆ Serves as a drawing surface
- ◆ Identifies the drawing title



Java Editor

- ◆ Syntax highlighting
- ◆ Content/code assistance
- ◆ Import assistance
- ◆ Integrated debugging

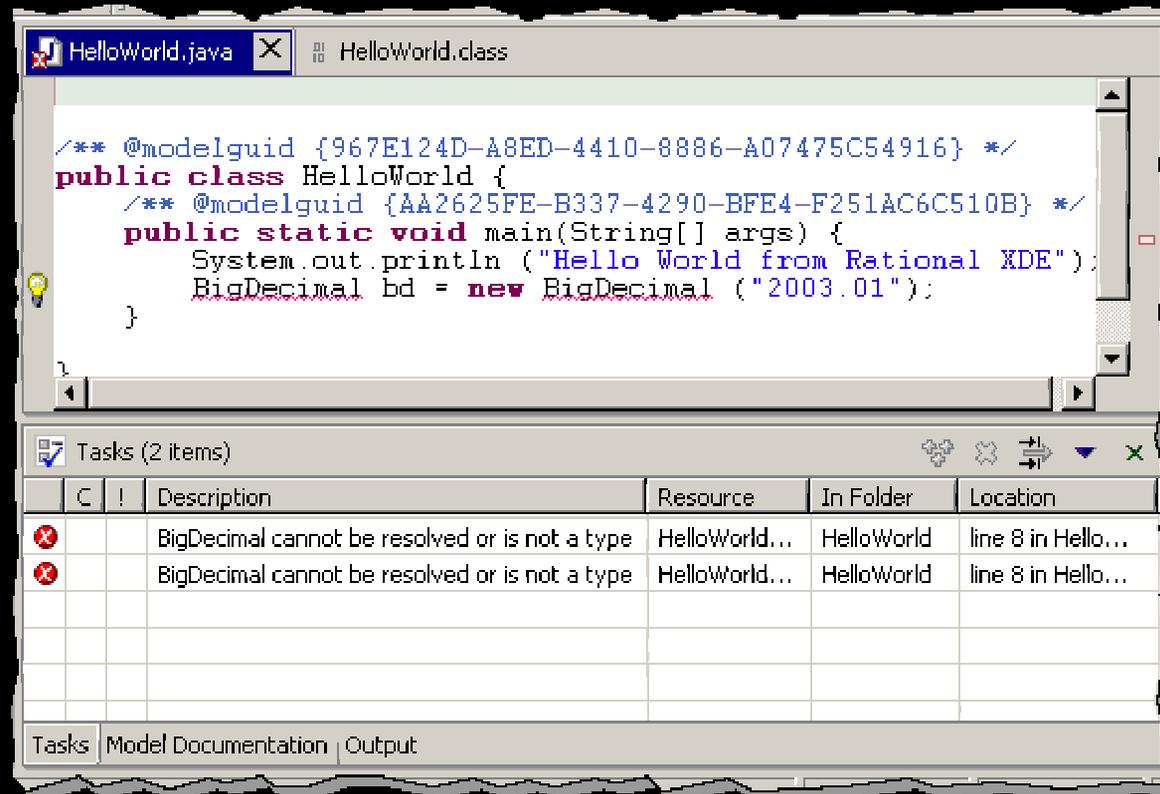
The **workbench window** can also serve as a code window.



Tasks Window

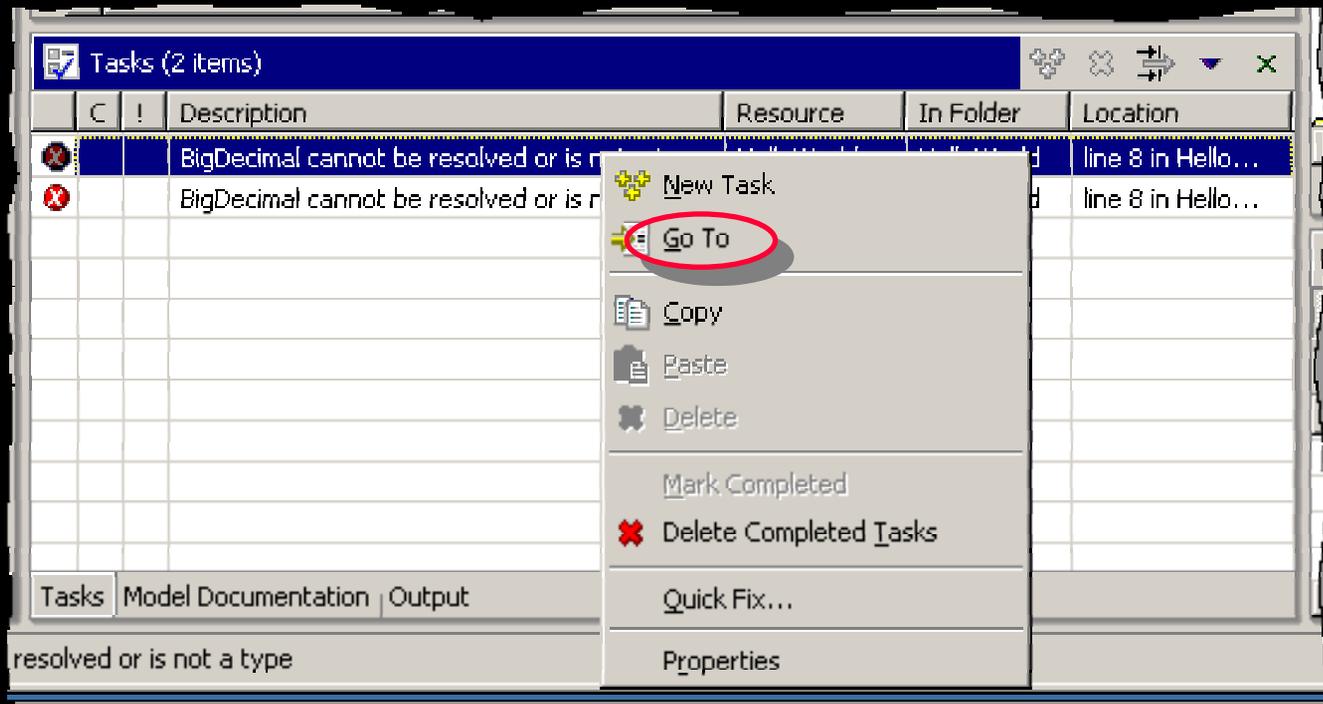
The **Tasks window** is used to:

- View errors and warnings
- Add tasks for managing development



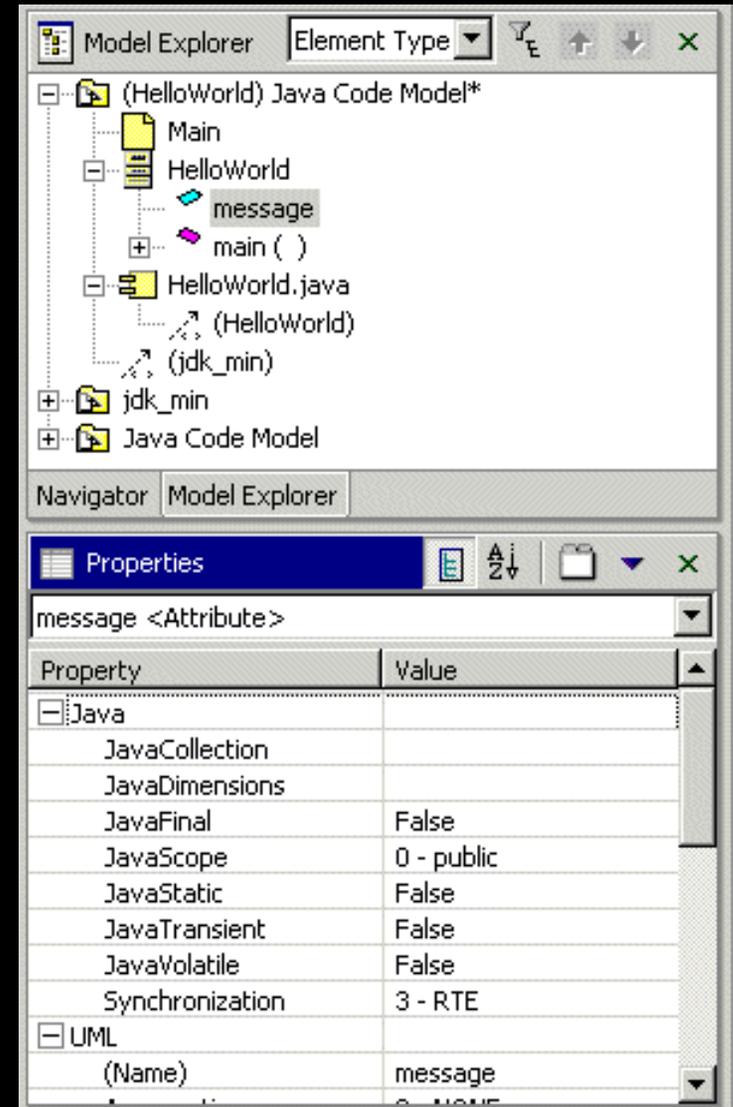
Tasks Window (continued)

- ◆ Use the Tasks window to resolve compiler errors



Properties Window

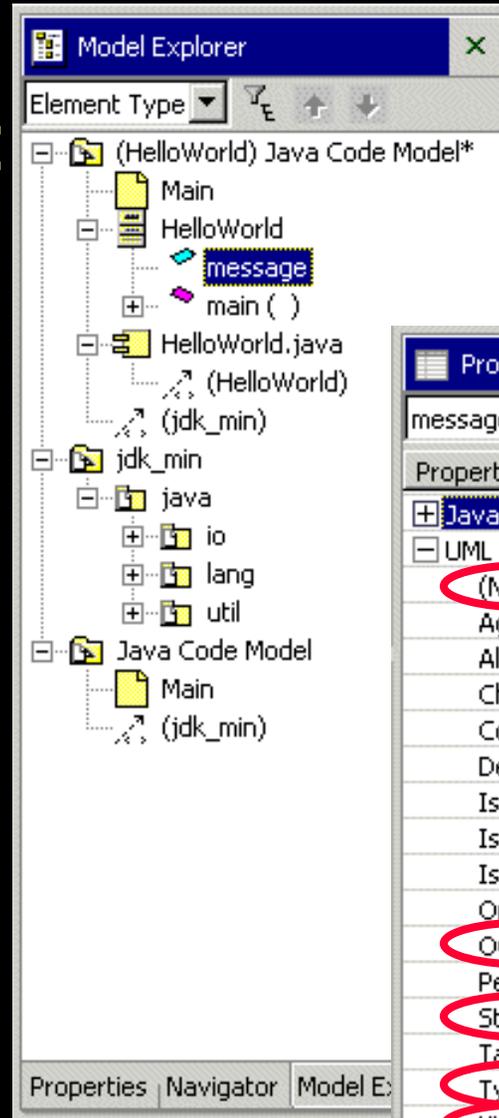
- ◆ **Properties** define characteristics of:
 - Diagrams
 - Model elements
 - Relationships
 - Shapes
 - Connectors
- ◆ Each type of element has its own properties



Properties Window (continued)

Common properties include:

- Name
- OwnerScope
- Stereotype
- TypeExpression
- Visibility



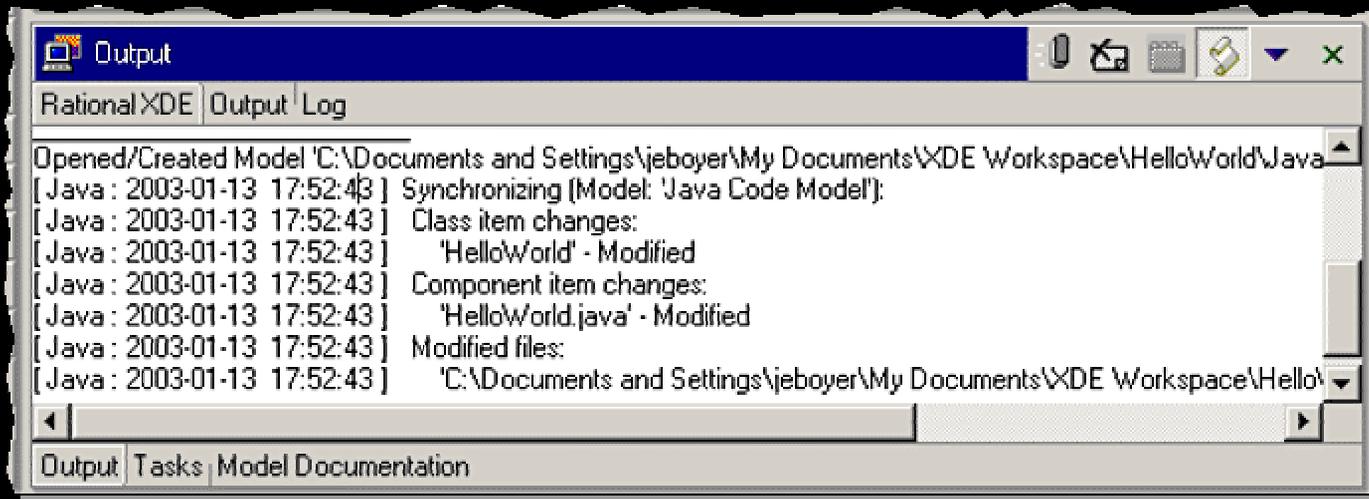
The Properties window shows the properties of the selected 'message' attribute. The table below lists the properties and their values. Several properties are circled in red in the original image.

Property	Value
Java	
UML	
(Name)	message
Aggregation	0 - NONE
Alias	
Changeability	0 - CHANGEABLE
Collections	
DefaultValueExpression	
IsByValueIfComposite	False
IsDerived	False
IsSpecification	False
Ordering	0 - UNORDERED
OwnerScope	0 - INSTANCE
Persistence	0 - PERSISTENT
Stereotype	
TargetScope	0 - INSTANCE
TypeExpression	
Visibility	0 - PUBLIC

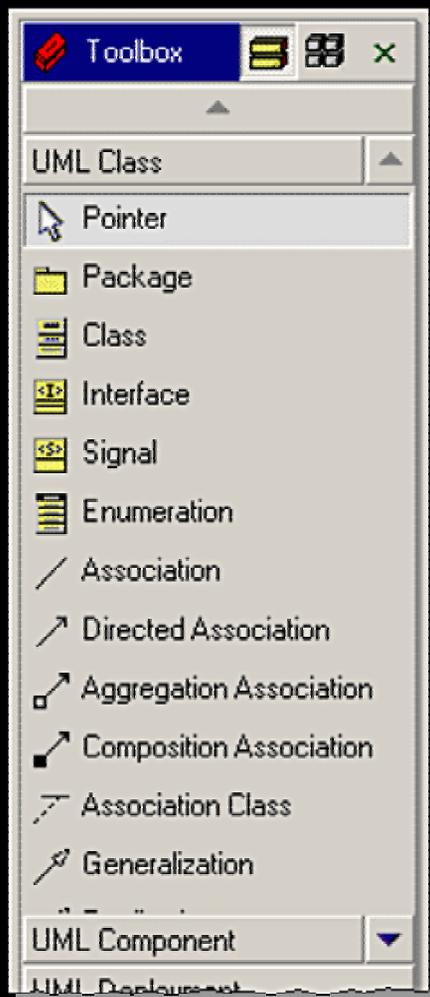
Output Window

The **Output window** displays messages about:

- The status of your models
- Model activities
- Related model elements



Toolbox



List View



Icon View

Help Window

The screenshot shows the Rational XDE Help window. On the left is a search results pane with a search bar containing 'zoom' and a 'GO' button. Below the search bar is a list of search results. The main pane displays 'Rational XDE Resources' with a sub-section 'To learn about' containing several links. A 'Help' menu is open, showing options like 'Welcome...', 'Rational XDE Resources', 'Extended Help', 'Help Contents', 'Software Updates', and 'About Rational XDE'. A yellow callout box points to the 'Help' menu with the text: 'On the toolbar, click **Help** and then a Help option.'

Search Results

- 100% Navigation in the Execution Flow
- 82% Sequence Diagram view
- 81% Identifying frequently called methods
- 74% Scaling Diagrams for Printing
- 70% Status line (Execution Flow view)
- 69% Identifying different phases of process
- 69% Navigating Through a Trace Sequence
- 67% Execution Flow view
- 64% Gauging program concurrency
- 58% Previewing Diagrams for Printing
- 53% Accessibility features in the workbench
- 48% Identifying which threads are active
- 46% Browsing method execution as a trace
- 45% Navigating large traces
- 43% Tutorial: Analyzing the profiling data
- 38% Viewing different invocations of a method
- 35% Print Overview
- 35% Viewing the caller of a method or

Rational XDE Resources

Rational XDE has a full range of guidance as you use XDE to learn about, use, and improve your development process.

To learn about

- Online resources available on the Internet, including the Developer Network
- Process guidance for each role in the software development lifecycle in the Rational Unified Process [Guidance](#)
- Different types of training available for XDE [Training](#)
- Capabilities of the XDE help system [Help on Help](#)
- How to change the way help is displayed in Eclipse [Controlling the Way that Help Is Displayed](#)
- Rational XDE Release Notes content [Release Notes](#)

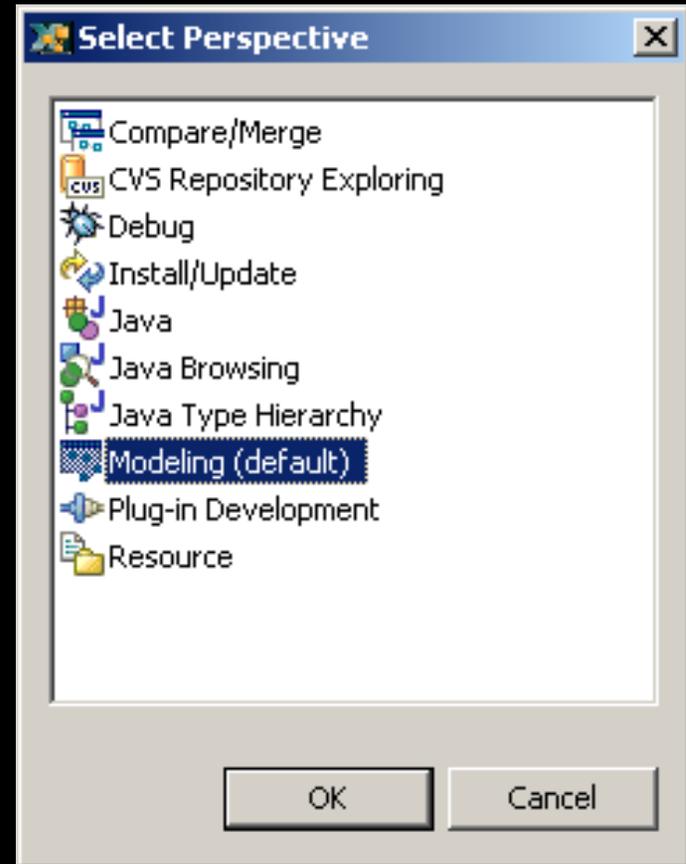
Help

- Welcome...
- Rational XDE Resources**
- Extended Help
- Help Contents
- Software Updates
- About Rational XDE

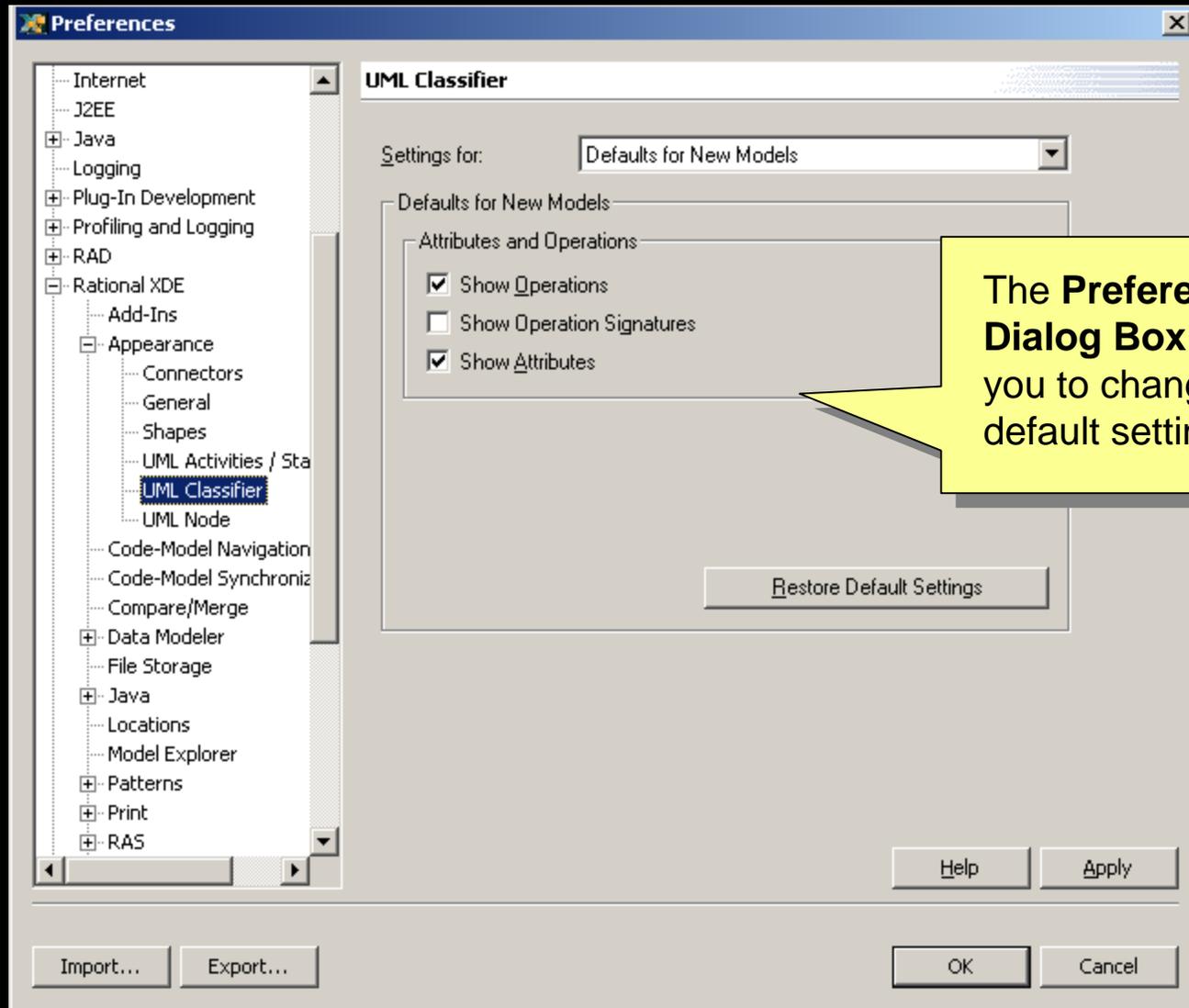
On the toolbar, click **Help** and then a Help option.

Perspectives

- ◆ A **perspective** is a predefined set of windows in the main development window
- ◆ Perspectives can be customized



Preferences Dialog Box



Demo: Rational XDE Windows

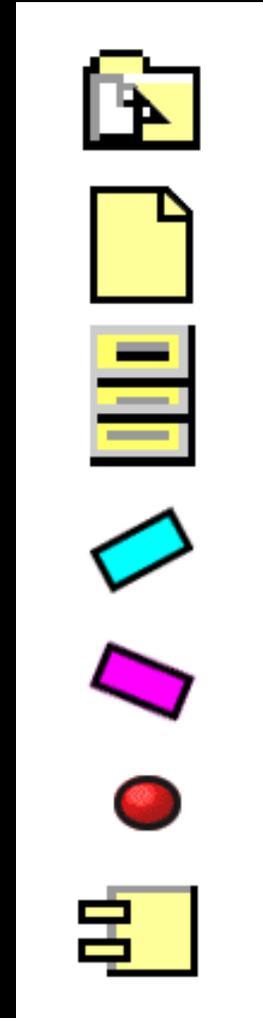
The instructor will now show you the Rational XDE:

- Navigator
- Model Explorer
- Java editor
- Tasks window
- Properties window
- Output window
- Diagram window
- Toolbox



Exercise: Getting Familiar with XDE

- ◆ Match the model element names with the graphics that appear in Model Explorer:
 - ◆ Component
 - ◆ Class
 - ◆ Operation
 - ◆ Model
 - ◆ Parameter
 - ◆ Diagram
 - ◆ Attribute



Summary

- ◆ XDE is built on WebSphere Studio Workbench.
- ◆ Eclipse supports the construction of integrated tools for application development.
- ◆ The Navigator provides a hierarchical view of projects and their XDE resources.
- ◆ The Model Explorer displays all of the UML elements, including packages, classes, interfaces, and diagrams.

