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About the Tutorial

Eclipse is an integrated development environment (IDE) for Java and other programming languages like C, C++, PHP, and Ruby etc. Development environment provided by Eclipse includes the Eclipse Java development tools (JDT) for Java, Eclipse CDT for C/C++, and Eclipse PDT for PHP, among others.

This tutorial will teach you how to use Eclipse in your day-2-day life while developing any software project using Eclipse IDE. We will give special emphasis on Java project.

Audience

This tutorial has been prepared for beginners to help them understand basic functionality of Eclipse tool. After completing this tutorial, you will find yourself at a moderate level of expertise in using Eclipse IDE from where you can take yourself to next levels.

Prerequisites

We assume you are going to use Eclipse IDE to handle all levels of Java projects development. So it will be good if you have knowledge of software development using any programming language specially Java programming.

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1. OVERVIEW

What is Eclipse?

In the context of computing, Eclipse is an integrated development environment (IDE) for developing applications using the Java programming language and other programming languages such as C/C++, Python, PERL, Ruby etc.

The Eclipse platform which provides the foundation for the Eclipse IDE is composed of plug-ins and is designed to be extensible using additional plug-ins. Developed using Java, the Eclipse platform can be used to develop rich client applications, integrated development environments, and other tools. Eclipse can be used as an IDE for any programming language for which a plug-in is available.

The Java Development Tools (JDT) project provides a plug-in that allows Eclipse to be used as a Java IDE, PyDev is a plugin that allows Eclipse to be used as a Python IDE, C/C++ Development Tools (CDT) is a plug-in that allows Eclipse to be used for developing application using C/C++, the Eclipse Scala plug-in allows Eclipse to be used an IDE to develop Scala applications and PHPeclipse is a plug-in to eclipse that provides complete development tool for PHP.

Licensing

Eclipse platform and other plug-ins from the Eclipse foundation is released under the Eclipse Public License (EPL). EPL ensures that Eclipse is free to download and install. It also allows Eclipse to be modified and distributed.

Eclipse Releases

Every year, since 2006, the Eclipse foundation releases the Eclipse Platform and a number of other plug-ins in June.

Codename	Year	Platform Version
Callisto	2006	3.2
Europa	2007	3.3
Ganymede	2008	3.4

Galileo	2009	3.5
Helios	2010	3.6
Indigo	2011	3.7
Juno	2012	3.8 and 4.2
Kepler	2013	4.3
Luna	2014	4.4.0

2. INSTALLATION

Downloading Eclipse

You can download eclipse from http://www.eclipse.org/downloads/. The download page lists a number of flavors of eclipse.

The capabilities of each packaging of eclipse are different. Java developers typically use Eclipse Classic or Eclipse IDE for developing Java applications.

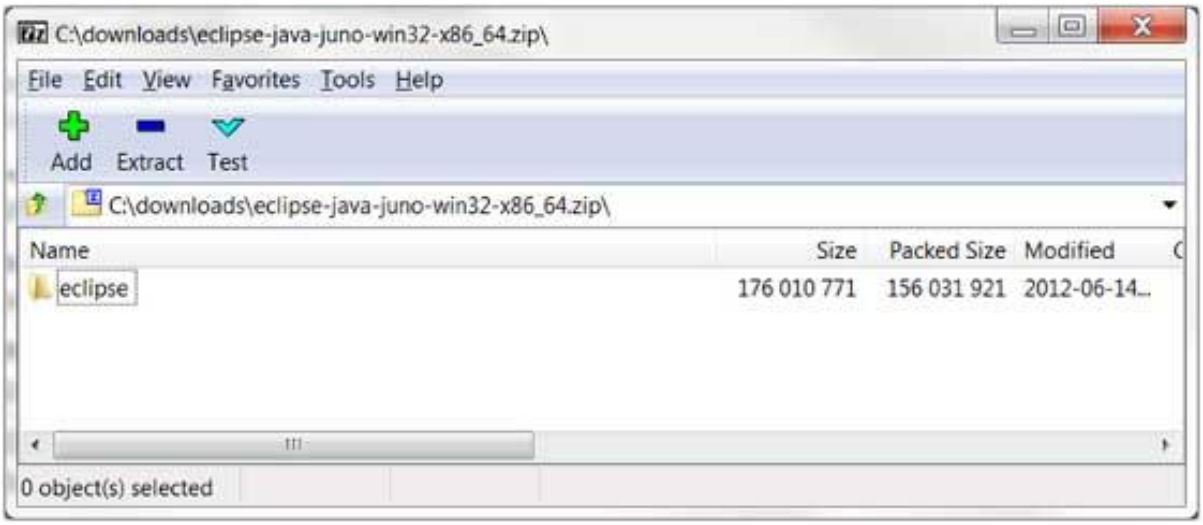
The drop down box in the right corner of the download page allows you to set the operating system on which eclipse is to be installed. You can choose between Windows, Linux and Mac. Eclipse is packaged as a zip file.

Installing Eclipse

To install on windows, you need a tool that can extract the contents of a zip file. For example you can use:

- **7-zip**
- **PeaZip**
- **IZArc**

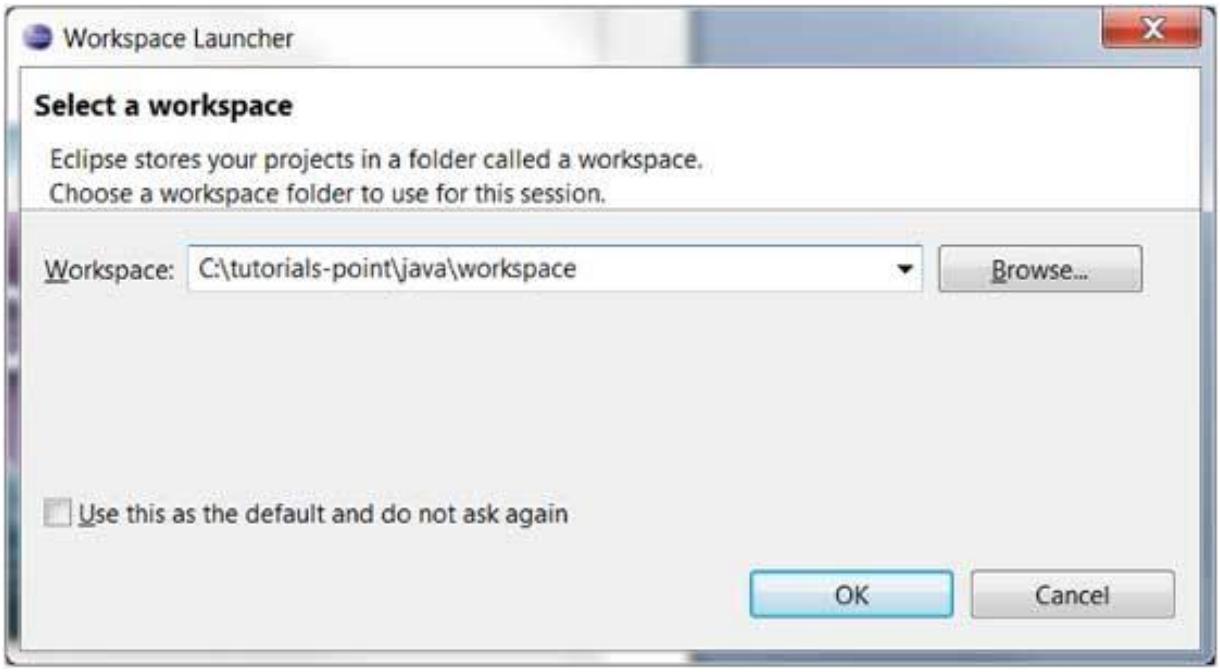
Using any one of these tools, extract the contents of the eclipse zip file to any folder of your choice.



Launching Eclipse

On the windows platform, if you extracted the contents of the zip file to c:\, then you can start eclipse by using c:\eclipse\eclipse.exe

When eclipse starts up for the first time it prompts you for the location of the workspace folder. All your data will be stored in the workspace folder. You can accept the default or choose a new location.



If you select "Use this as the default and do not ask again", this dialog box will not come up again. You can change this preference using the Workspaces Preference Page. See the Preference tutorial page for more details.

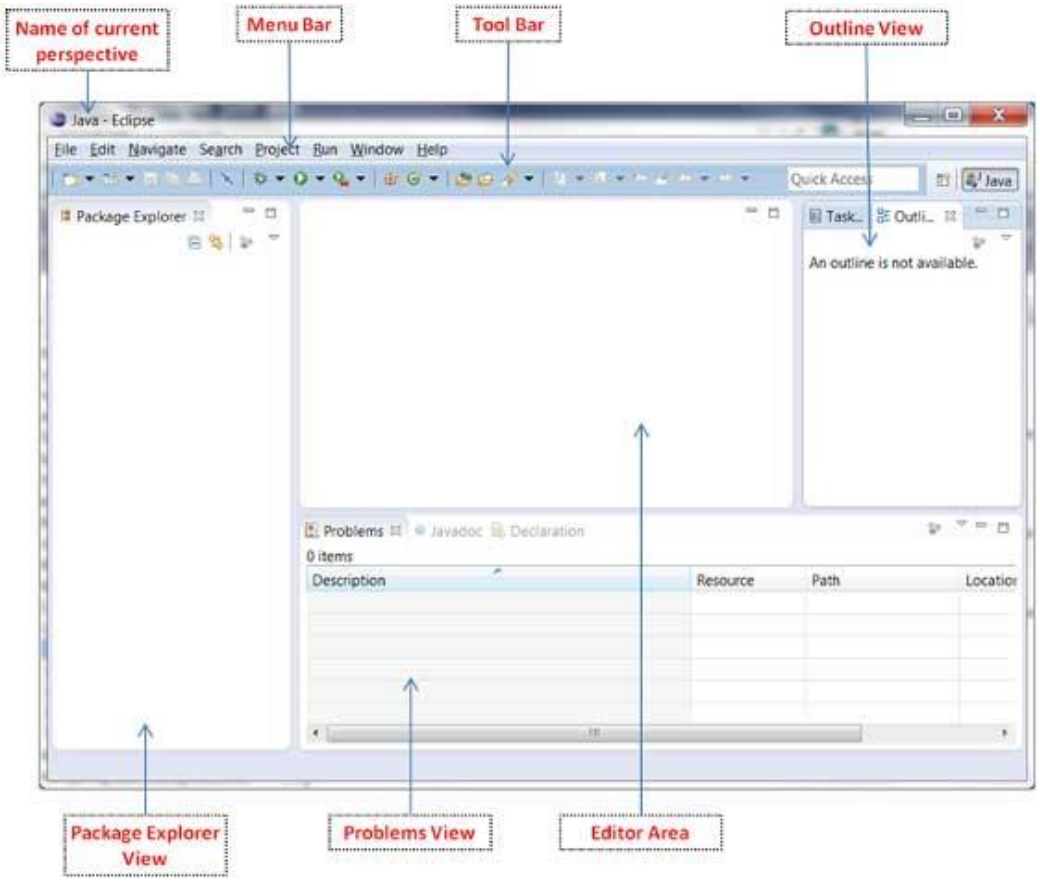
3. EXPLORE WINDOWS

Parts of an Eclipse Window

The major visible parts of an eclipse window are:

- Views
- Editors (all appear in one editor area)
- Menu Bar
- Toolbar

An eclipse perspective is the name given to an initial collection and arrangement of views and an editor area. The default perspective is called java. An eclipse window can have multiple perspectives open in it but only one perspective can be active at any point of time. A user can switch between open perspectives or open a new perspective. A perspective controls what appears in some menus and tool bars.



A perspective has only one editor area in which multiple editors can be open. The editor area is usually surrounded by multiple views. In general, editors are used to edit the project data and views are used to view the project metadata. For example, the package explorer shows the java files in the project and the java editor is used to edit a java file.

The eclipse window can contain multiple editors and views but only one of them is active at any given point of time. The title bar of the active editor or view looks different from all the others.

The UI elements on the menu bar and tool bar represent commands that can be triggered by an end user.

Using Multiple Windows

Multiple Eclipse Windows can be open at the same time. To open a new window, click on the Windows menu and select the New Window menu item.

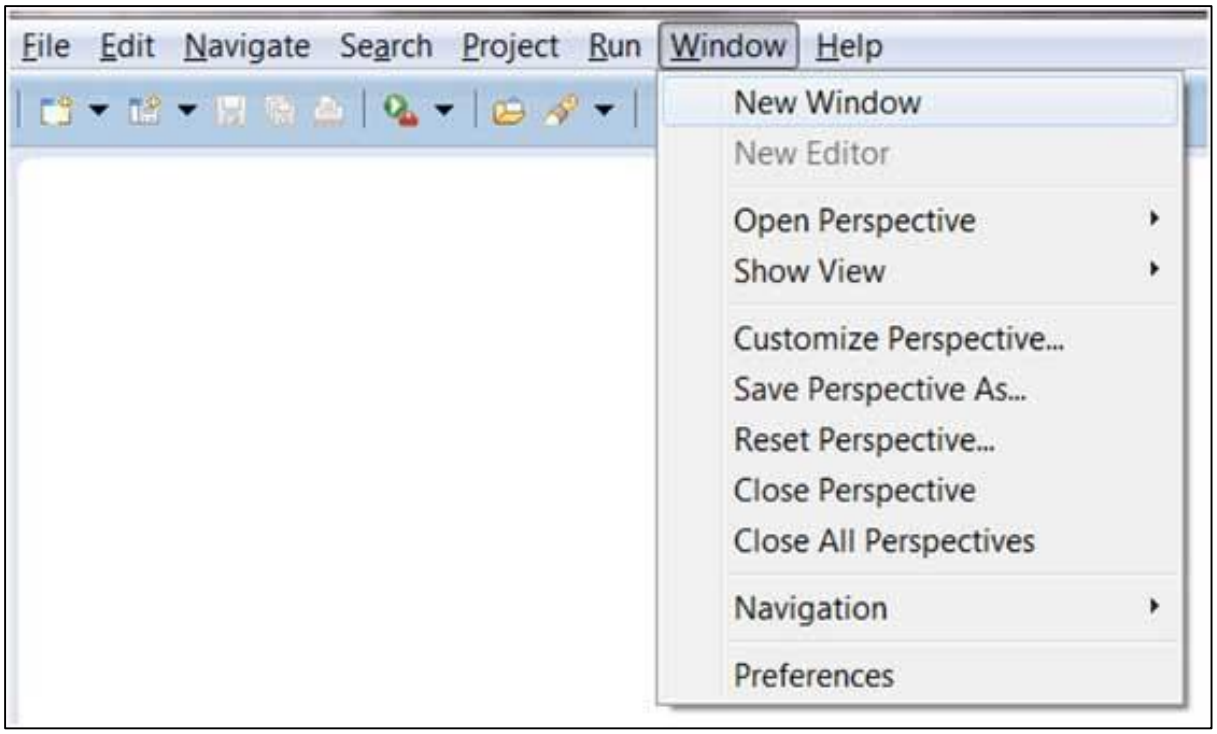
Each window can have a different perspective open in them. For example you could open two Eclipse windows one in the Java perspective and the other in the Debug perspective. The window showing the Java perspective can be used for editing the java code and the window showing the debug perspective can be used for debugging the application being developed.

4. EXPLORE MENUS

Typical Eclipse Menus

The typical menus available on the menu bar of an Eclipse window are:

- File menu
- Edit menu
- Navigate menu
- Search menu
- Project menu
- Run menu
- Window menu
- Help menu



Plug-ins can add new menus and menu items. For example when the java editor is open, you will see the Source menu and when the XML editor is open, you will see the **Design** menu.

Brief Description of Menus

Menu Name	Description
File	The File menu allows you to open files for editing, close editors, save editor content and rename files. Among the other things, it also allows you to import and export workspace content and shutdown Eclipse.
Edit	The Edit menu presents items like copy & paste.
Source	The Source menu is visible only when a java editor is open. It presents a number of useful menu items related to editing java source code.
Navigate	The Navigate menu allows you to quickly locate resources and navigate to them.
Search	The Search menu presents items that allow you to search the workspace for files that contain specific data.
Project	The menu items related to building a project can be found on the Project menu.
Run	The menu items on the Run menu allow you to start a program in the run mode or debug mode. It also presents menu items that allow you to debug the code.
Window	The Window menu allows you to open and close views and perspectives. It also allows you to bring up the Preferences dialog.
Help	The Help menu can be used to bring up the Help window, Eclipse Marketplace view or Install new plug-ins. The about Eclipse menu item gives you version information.

Customizing Menus

The visible menu items on a menu depend on the installed plug-ins and customization done using the Customize Perspective dialog box.

5. EXPLORE VIEWS

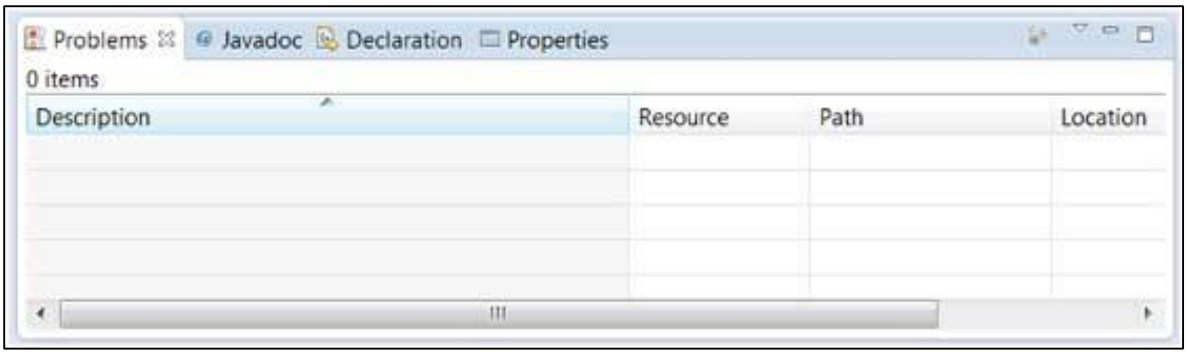
About Views

Eclipse views allow users to see a graphical representation of project metadata. For example the project navigator view presents a graphical representation of the folders and files associated with a project and properties view presents a graphical representation of an element selected in another view or editor.

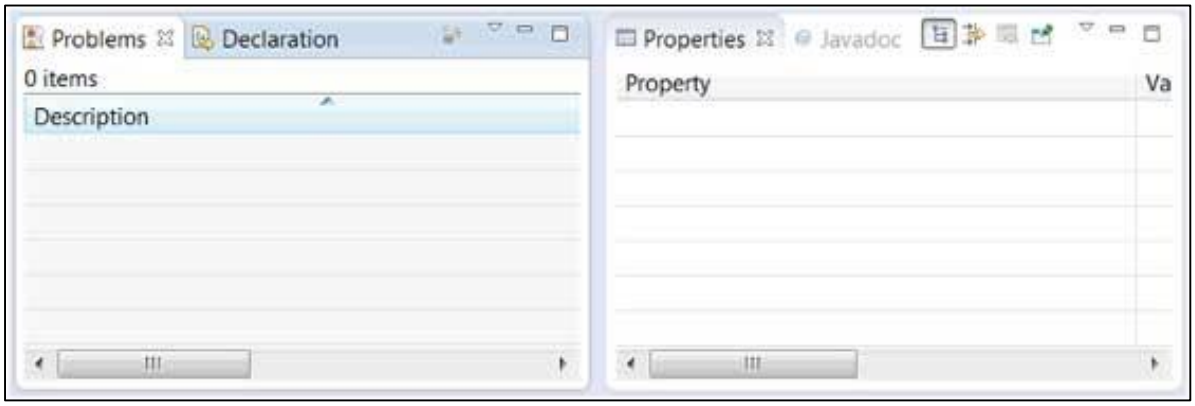
An eclipse perspective can show any number of views and editors. All editor instances appear in a single editor area, whereas views are placed inside view folders. A workbench window can display any number of view folders. Each view folder can display one or more views.

Organizing Views

The following picture shows four views arranged in a view folder.

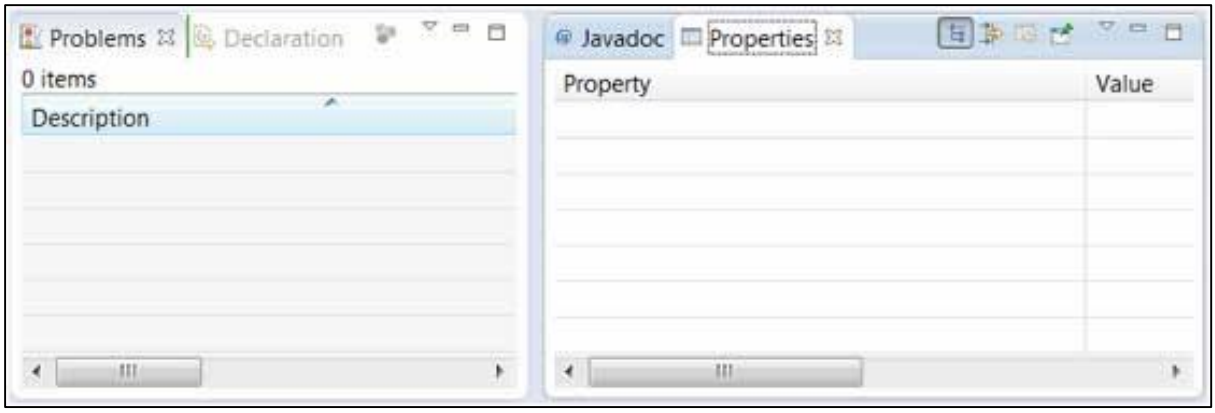


The picture given below shows the same four views arranged in two view folders.



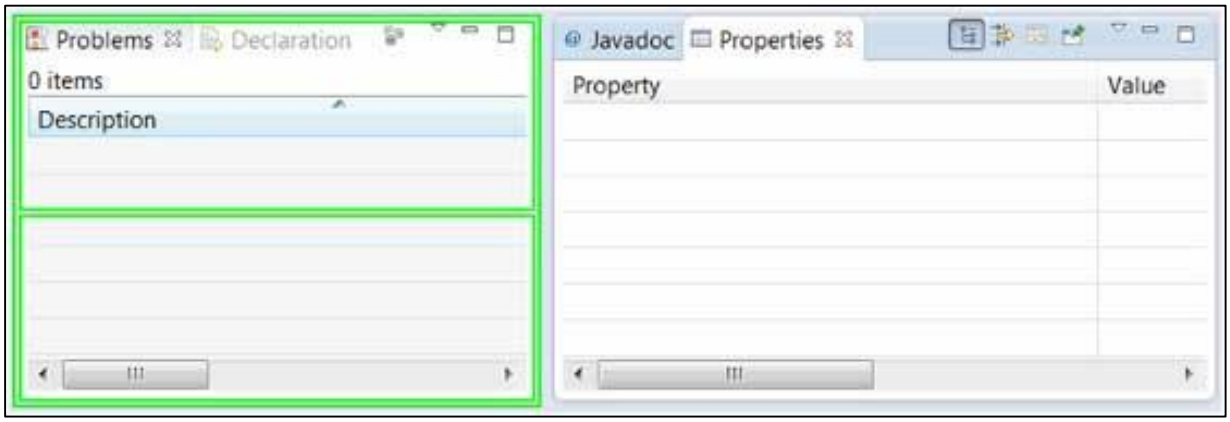
Moving Views

To move a view from one view folder to another, just click on the view title and drag to the title bar area of another view folder. The green line shown below is a result of dragging the title bar of the Properties view from one view folder to the title bar area of another view folder. The Properties view can be moved to where the green line is by releasing the mouse button and sending out a drop event.



Creating View Folders

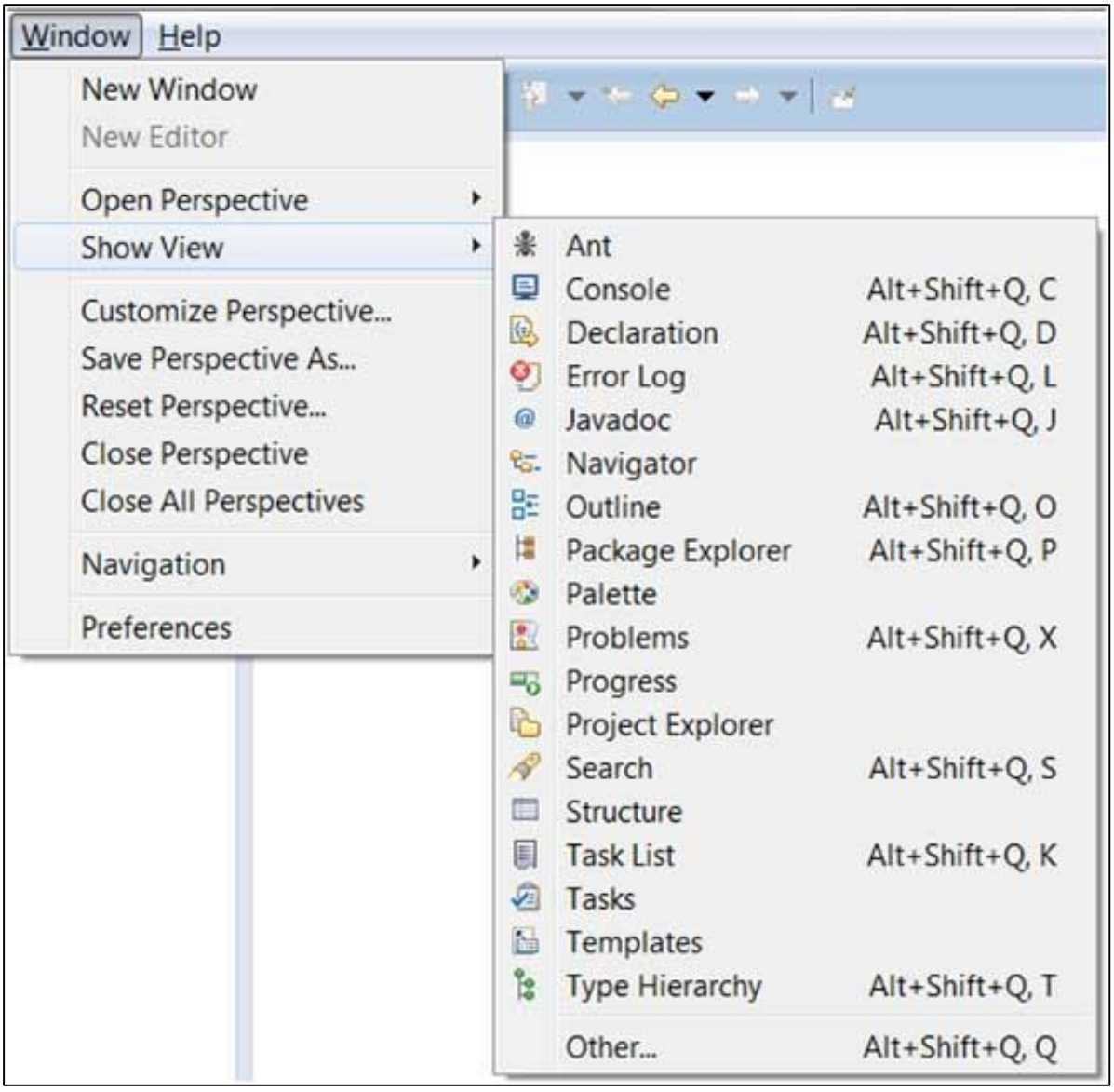
View folders can be dynamically created by dragging the title bar of a view to anywhere outside the editor area and title bar of another view folder. As you drag the title bar around, green lines will indicate where exactly the new view folder will be created.



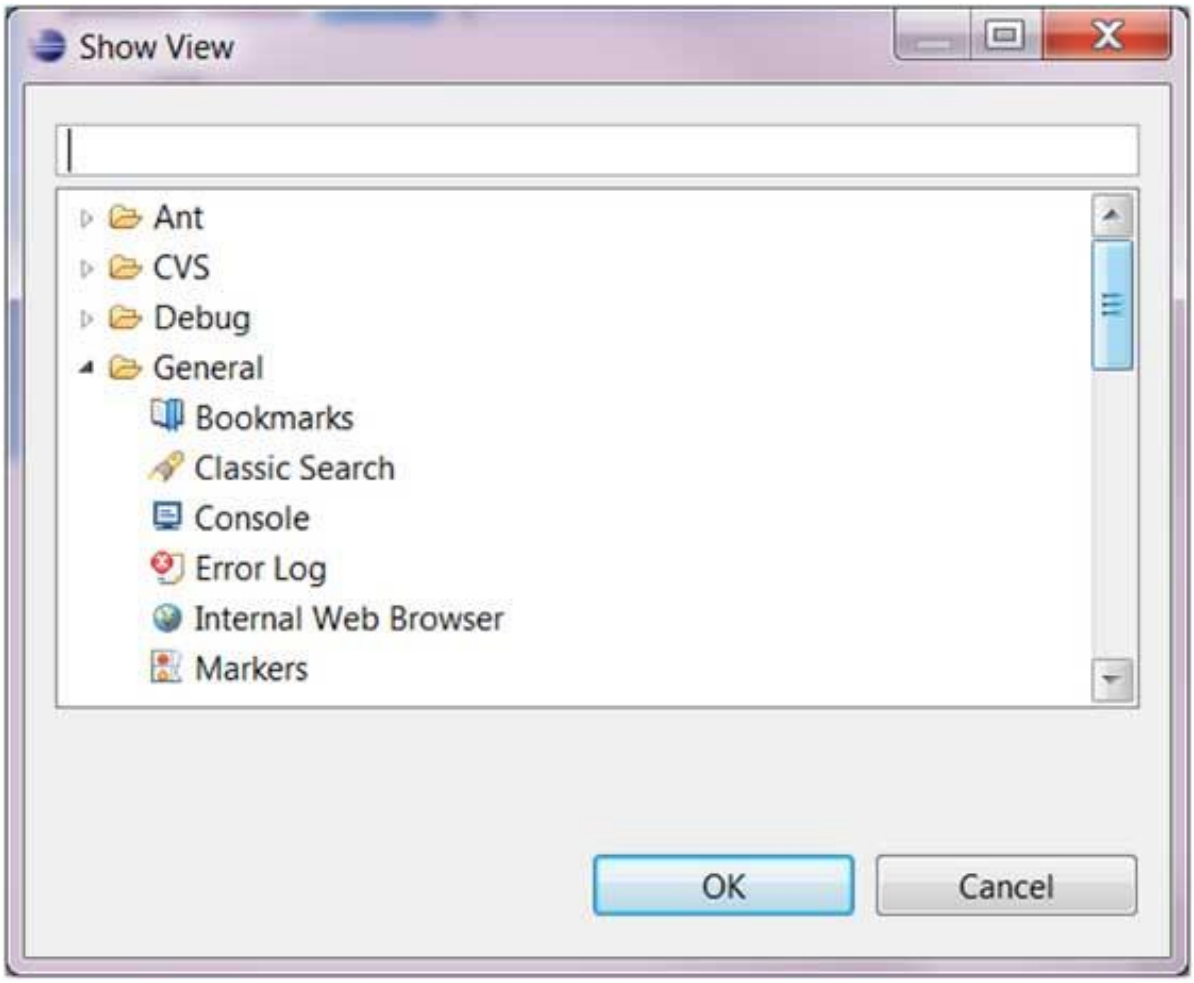
Moving the drag icon to the bottom of a window allows you to create a view folder that spans the entire width of the window. Moving the drag icon to the left or right edge of window allows you to create a view folder that spans the entire height of the window.

Opening a view

To open a view, click on the **Window** menu and select the **Show View** menu item.



Clicking on the **Other** menu item brings up the Show View dialog box that allows you to locate and activate a view.



The views are organized by category. To quickly locate a view, just type the name of a view into the filter text box. To open a view, select it and click on the OK button. The subsequent pages of this tutorial introduce you to a number of useful views.