

Eclipse overview



Including Eclipse 3.x



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Agenda

- The Eclipse Foundation
- Eclipse terminology
- Basic functions and features
- Eclipse 3.x

The Eclipse Foundation



 eclipse

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The Eclipse Foundation

- Launched in November 2001
- Originally led by Borland, IBM, Merant, QNX, Rational, RedHat, SuSE, TogetherSoft and Webgain
- Today dozens of vendors participate, including Intel, HP, SAP, Hitachi, Telelogic and Ericsson.
- The Eclipse Foundation is non-profit and **not controlled by IBM.**

What is the Eclipse Foundation?

- From `eclipse.org`:
 - "Eclipse is an open platform for tool integration built by an open community of tool providers."
 - An open source group that provides royalty free source code and world wide redistribution rights.

What is Eclipse itself?

- "An open extensible IDE for anything and nothing in particular."
- Today: "An open, extensible platform for any application."
- Originally an open platform for building IDEs and plug-ins, it's now being used as a platform for non-IDE tools (Lotus Workplace, for example)

Eclipse projects

- Eclipse Project (the core platform)
 - Provide the base Eclipse platform, not just an IDE anymore
- Eclipse Tools Project
 - Coordinates groups building world-class tools for Eclipse, also provides input for Eclipse future directions
- Eclipse Technology Project
 - Research, incubation and education

Eclipse projects

- Eclipse Web Tools Platform Project
 - "Generic, extensible and standards-based" tools for the Web + J2EE
- Eclipse Test and Performance Tools Platform Project
 - A platform for building world-class testing and performance tools

Eclipse projects

- Business Intelligence and Reporting Tools (BIRT) Project
 - Lots of applications need reporting functions. The BIRT project intends to provide a complete suite of reporting tools and frameworks.

Other things

- The various projects have several things you can download, including:
 - GEF – The Graphical Editing Framework
 - EMF – The Eclipse Modeling Framework
 - Hyades – Automated software quality tools
 - ECESIS – Free courseware for teaching with and about Eclipse
 - C/C++ IDE – Great tools for C/C++ development

The Eclipse architecture



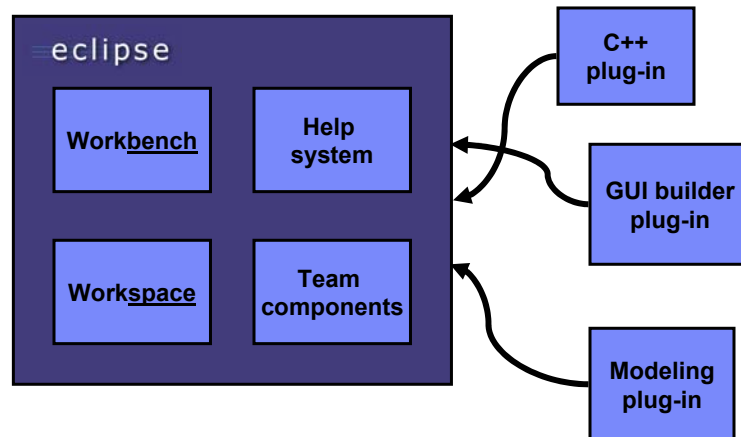
 eclipse

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Eclipse architecture

- The most important part of the Eclipse architecture is the **plug-in**.
 - Eclipse provides the base functions of an IDE. You can add as many plug-ins as you need.
 - This architecture lets vendors (and everybody else) extend Eclipse.
 - Your plug-in contains only the code for its unique function; everything else comes from Eclipse (or other plug-ins).

Eclipse architecture



Basic terms and functions



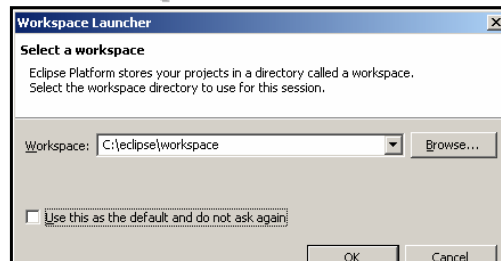
Terms

- There are several terms you'll hear when you're working with Eclipse:
 - Workspace
 - Workbench
 - Perspectives
 - Editors
 - Views
- We'll cover these next.

Workspace

- The **workspace** is a physical location on your machine.
 - It contains projects, folders, and files.
 - A **project** is a collection of folders and files for a particular task.
 - A **folder** is a subdirectory; it can contain folders and other files.
 - A **file** is just a file.
- In other words, **it's a directory.**

Default workspace

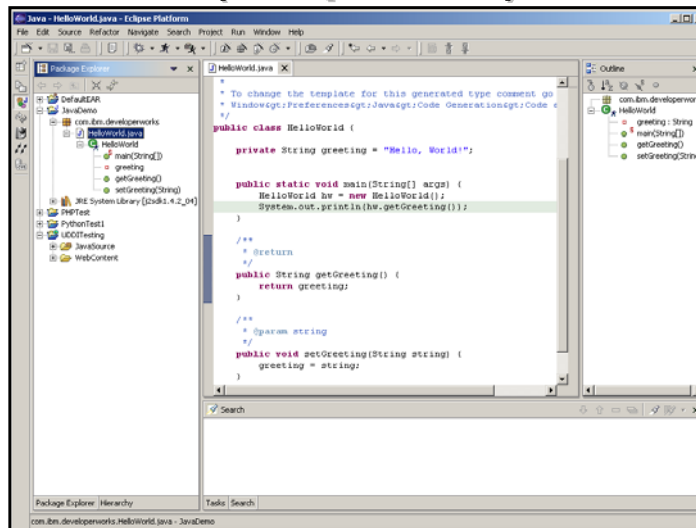


- The first time you run Eclipse, it suggests a default workspace. If this is the one you always want to use, click the check box above and you won't see this question again.

Workbench

- The **workbench** is the Eclipse environment.
 - When you open Eclipse, you see a workbench that displays the resources in a particular workspace.
 - A workbench contains perspectives, views, and editors.

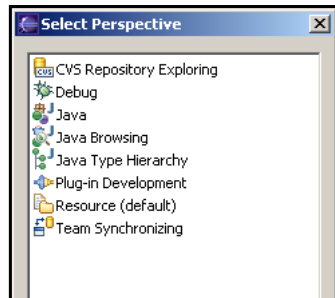
Workbench (Eclipse 2.x)



Perspectives

- A perspective is a set of views organized for a particular task.
 - If you're writing Java code, certain views are useful.
 - If you're debugging Java code, other views are useful.
 - A perspective lets you arrange the views you need.
- Eclipse comes with several perspectives installed.

Perspectives

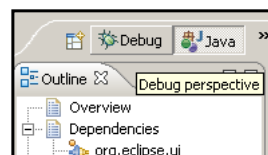
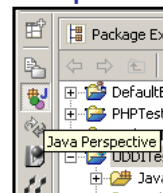


- Some perspectives are installed with Eclipse.
- As you install plug-ins for various tasks, other perspectives may appear.

Perspectives

- Eclipse remembers which perspectives you've used and creates shortcuts for them.

Eclipse 2.x

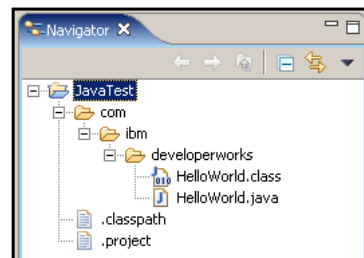
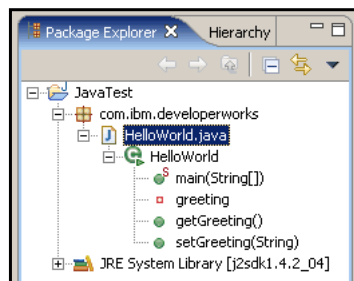


Eclipse 3.x

Views

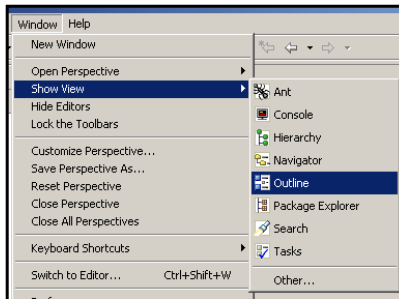
- A view is a window on some resources in your workspace.
 - One view might list all the files in your workspace
 - Another view might list all the Java classes in a JAR file.
- You can open and close and arrange views any way you like.
- Two views might display the same thing in different ways.

Two views of the same files



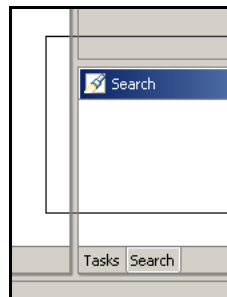
Opening views

- The **Window**→**Show View** menu lets you open a view at any time.
- Click the **Other...** item to see a complete list of views.



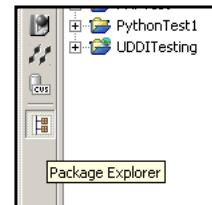
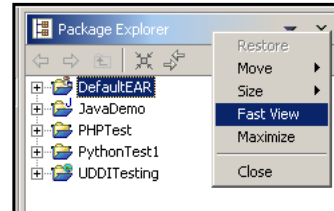
Moving and stacking views

- To move a view, click and drag its tab. If more than one view is in the same space, they'll be **stacked**.
- Tasks and Search are stacked here, and the outlined window is the one we're moving.



Fast views

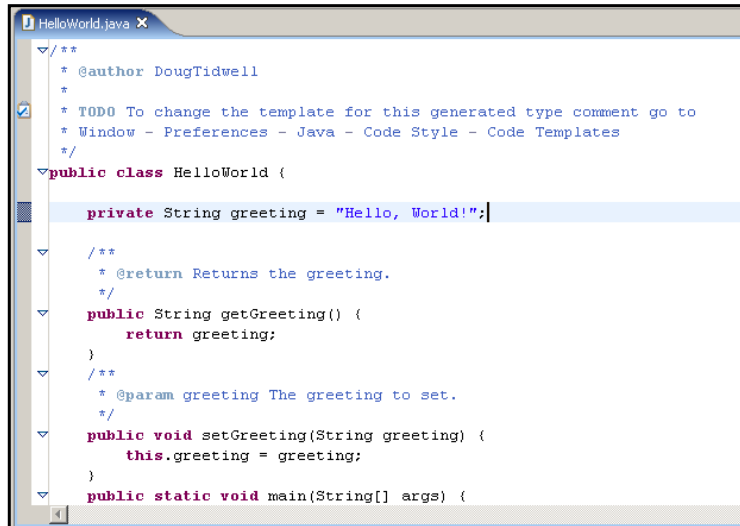
- A fast view has an icon; you can click on that icon to go directly to the view.
- To create one, choose **Fast View** from the view's menu.



Editors

- An editor allows you to modify a resource.
 - As you'd expect, there are different kinds of editors for different kinds of resources.

The Java editor



```
/**
 * @author DougTidwell
 *
 * TODO To change the template for this generated type comment go to
 * Window - Preferences - Java - Code Style - Code Templates
 */
public class HelloWorld {
    private String greeting = "Hello, World!";

    /**
     * @return Returns the greeting.
     */
    public String getGreeting() {
        return greeting;
    }

    /**
     * @param greeting The greeting to set.
     */
    public void setGreeting(String greeting) {
        this.greeting = greeting;
    }

    public static void main(String[] args) {
```

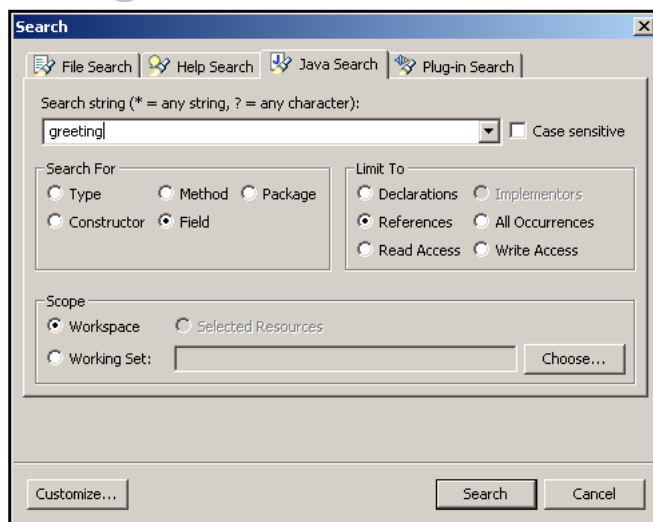
Editing functions

- In addition to the editors themselves, Eclipse has several useful features for working with files.
 - Searching
 - Bookmarking

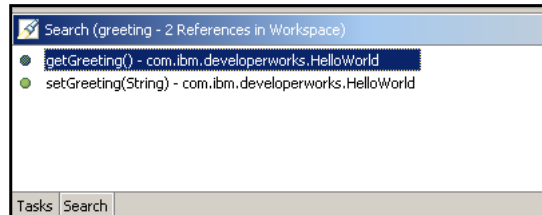
Searching

- Eclipse has a very sophisticated search facility.
- You can search through:
 - Files
 - The help system
 - Java source
 - Plug-ins
- There are special search options for each kind of search.

Searching



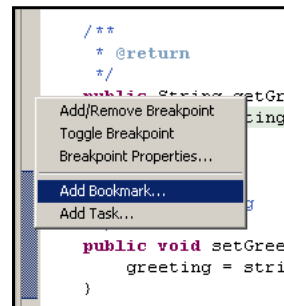
Searching



- The results of the search show up in the Search view.
- You can double-click on a match and go directly to that point in the file.

Bookmarking

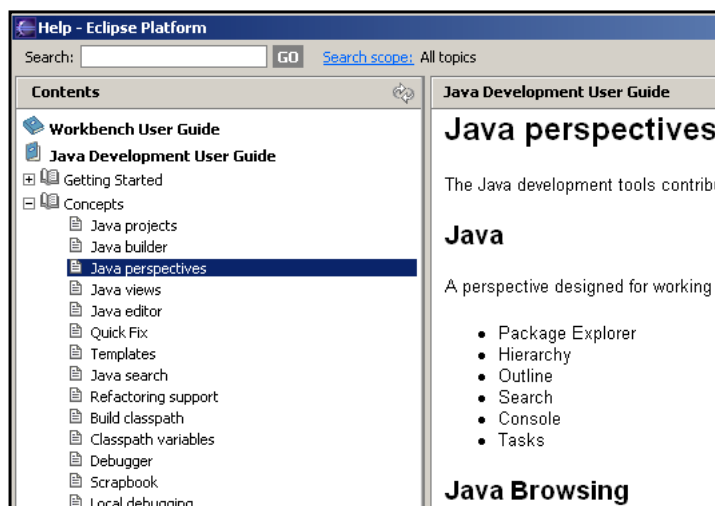
- You can create a bookmark in a file and go directly to that spot whenever you want.
- To create a bookmark, right-click in the gray area on the left-hand side of the editor.



Help is on the way

- Eclipse's help system is very sophisticated. Choose **Help→Help Contents** to see it.
- You can view help topics from a list, or you can search for what you need.
- When you install a plug-in, its help information is integrated with everything else in the platform.

Help



Team functions

- Eclipse has built-in support for versioning, configuration management and interacting with code repositories such as CVS.
- Eclipse also supports FTP and WebDAV.
- As with everything in the world of Eclipse, many groups (including IBM) have taken these basic functions and extended them.

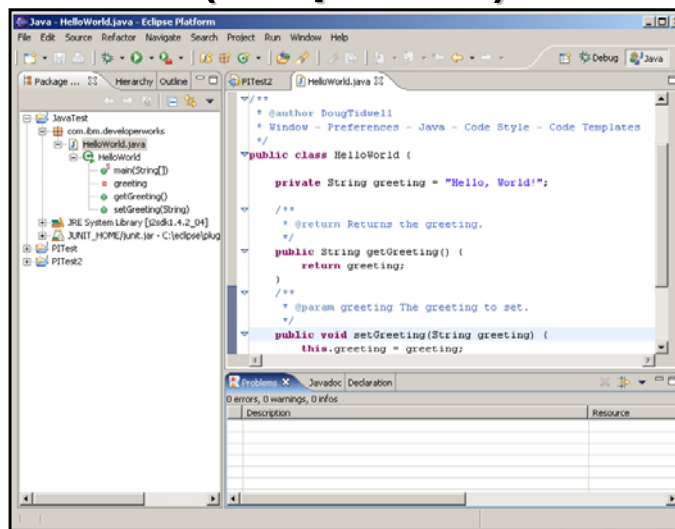
Eclipse 3.x



Eclipse 3.x

- Released at the end of June 2004, Eclipse 3.x is a major upgrade to the tool set.
- The interface looks great (almost as good as a Mac!)
- Development tools have been improved
- Rich client technology (Eclipse without the development tools)

Workbench (Eclipse 3.x)



Eclipse 3.x

- We'll take a quick look at the new interface...

Review



Review

- We've talked about:
 - The Eclipse Foundation and its purpose
 - Eclipse terminology
 - The basic functions and features of Eclipse
 - Eclipse 3.x