Eclipse Integrated Development Environment (IDE)



Figure 1 Eclipse Splash Screen



Figure 2 Eclipse Welcome Screen

The Welcome screen is available the first time Eclipse is used and can be displayed by selecting **Help > Welcome**. The white X on the tab closes the window. There are 4 main components within the Eclipse development environment:

 Workspace - The primary unit of organization in Eclipse. A workspace contains all of your projects. After the splash screen appears, you will be prompted to enter the path for the workspace in the Workspace Launcher. If you check the *Use this as the default and do not ask again* checkbox, the Workspace Launcher will not appear.

Workspace Launcher						
Select a workspace						
Eclipse SDK stores your projects in a folder called a workspace. Choose a workspace folder to use for this session.						
Workspace: c:\courses\csc120	▼ <u>B</u> rowse					
回 <u>U</u> se this as the default and do not ask again	OK Cancel					

- 2. **Projects** Contain source code and other related files needed to build Java applications.
- 3. Perspectives A perspective is a way of looking at each project; it is a layout of predefined views.
- 4. Views one or more views are within a perspective. Views are dockable and can be moved around within the Java perspective by clicking on the name on the tab and dragging the view to a new location. In the graphic below, *Package Explorer, Outline, Problems, Javadoc, Declaration, Console* and the *Editor* (program source code area) are examples of views. To show a closed view, select Window > Show View > name of the view.

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<terminated> HelloWorld [Java Application] C:\Program Files\Java\jre6\bin\javaw.exe (Sep 9, 2010 11:38:45 PM)</terminated>	
Hello world!	~ ~
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Views	· · · · · · · · · · · · · · · · · · ·

Setting the Perspective to Java

If you're not already in the Java perspective, in the main menu select **Window > Open Perspective > Java** If Java is not listed, select **Other...**



Creating a Java Project

Before creating a class, we need a project in which to place the class. In the main toolbar, click on the New Java Project button, or click on **File > New > Java Project**. Enter the project name (example *HelloWorld*), then click Finish.

New Java Project	
Create a Java Project Create a Java project in the workspace or in an external location.	Enter the name of the
Project name: HelloWorld	project here
✓ Use default location Location: C:\Courses\CSC120\HelloWorld Browse	Specify the location for the project. By default, the project will be
Use an execution environment JRE: JavaSE-1.6	placed in the workspace folder.
Image: Use a project specific JRE: jre6 Image: Use default JRE (currently 'jre6') Configure JREs	Specify the version of Java for the project from the dropdown list Example 1.5 or 1.6
Project layout <u>U</u> se project folder as root for sources and class files <u>C</u> reate separate folders for sources and class files	
Working sets	
Add project to working sets Working sets: Select	
	Specify where the source and class files will be placed
(?) < <u>Back</u> <u>Next</u> > <u>Finish</u> Cancel	

Create the Java Class

Click the New Java Class button. If not already specified, select **HelloWorld/src** as the source folder. Enter **HelloWorld** for the class name, select the checkbox to create the **main()** method, then click the Finish button.

😂 New Java Class	Second Mean Red	_ 0 X	
Java Class Create a new Java	class.	C	Source files are placed in a folder called src.
Source fol <u>d</u> er:	HelloWorld/src	Br <u>o</u> wse	
Pac <u>k</u> age:	csc120	Bro <u>w</u> se	
Enclosing t <u>y</u> pe:		DIO <u>M</u>	Java package contains related class files.
Na <u>m</u> e:	HelloWorld		All our programs will be
Modifiers:	@ public		placed in a package with
	abs <u>t</u> ract final static		the course name
<u>S</u> uperclass:	java.lang.Object	Brows <u>e</u>	
Interfaces:		<u>A</u> dd	
			Enter the name for the
		Remove	class.
Which method stub	os would you like to create?		Note:
	public static void main(String[] args)		Class names should begin
	Constructors from superclass		with a capital letter.
Do you want to add	comments? (Configure templates and default value here)		
bo you want to uut	<u>Generate comments</u>		
			Select the checkbox to
			create the main()
			method
?	<u> </u>	Cancel	

The Java editor will automatically open showing your new class. You can now type the code for the class.

Java - HelloWorld/src/csc120/HelloWorld.ja	va - Eclipse SDK				
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csc120 HelloWorld.java IRE System Library [JavaSE-1.6]	⊖ /** * ©param args			● [°] main(Str	ing[]) : voic
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Saving and Running the Program

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Click the save button 🔚 to save changes to the program; the class will automatically compile.

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□ 🕏 🏹	package csc120;						*	↓ ^a z 😿 💉 ●	\x ^L ▽
HelloWorld	<pre>public class HelloWorld { public static void main (S System.out.println("H } } }</pre>	tring[[] args) { world!");					t csc120 G ► HelloWorld G S main(Strin	g[]) : voir
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To run your application, right-click on your class in the **Package Explorer** and select **Run As > Java Application** or click the Run button.

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The Console view should appear at the bottom and display the "Hello, world!" output.

Java - HelloWorld/src/csc120/HelloWorld.java	- Eclipse SDK	x
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	Console view with the output from the program	

Resources on the Internet:

Java Tutorials	http://download.oracle.com/javase/tutorial/
JDK 6	http://www.oracle.com/technetwork/java/javase/downloads/index.html
Java Documentation	http://download.oracle.com/javase/6/docs/api/index.html
Eclipse	http://www.eclipse.org/downloads/
Eclipse/Java Tutorial	http://eclipsetutorial.sourceforge.net/totalbeginner.html
Eclipse Resources	http://www.eclipse.org/resources/
JCreator LE	http://www.jcreator.org/download.htm