Using Eclipse to Run Java Programs

Downloading and Installing Eclipse

Here's how:

1. **Visit www.eclipse.org.**
2. **On that Web site, follow the links for downloading Eclipse. Be sure to pick the version that's appropriate for your operating system (Linux, Macintosh, Windows, or whatever).**

   The download is a compressed file – a ZIP file, a `tar.gz` file, or something like that.

   The next step depends on which operating system you have.
3. **If you're not using a Macintosh, Extract the compressed file's contents to a directory on your hard drive. If you're using a Mac, don't bother extracting. Just look for a new Eclipse icon on your desktop.**

   On my Windows computer, I extract the compressed file's contents to the root of my C: drive. On my Linux/Unix computer, I extract the compressed file's contents to my `/usr/local` directory. In either case, the extraction creates a new directory named `eclipse`. The `eclipse` directory contains everything I need in order to run Eclipse.

Running Eclipse

Here's how you start an Eclipse session:

1. **Double-click the Eclipse icon.**

   On a Macintosh, double click the Eclipse icon that appears on your desktop.

   On a Linux/Unix or Windows computer, use the explorer to navigate to the new `eclipse` directory. In the `eclipse` directory you find an eclipse icon. (This blue icon contains a stylized picture of some round celestial object being eclipsed. What else would you expect to see?) Double-click the eclipse icon.

   When Eclipse runs for the first time, you see a Welcome page.

Beginning Programming with Java For Dummies
Excerpted from *Eclipse For Dummies*

2. **On the Welcome page, click the icon labeled Workbench.**

   The Eclipse workbench appears. At first, this workbench displays something called the Resource perspective. The Resource perspective is an arrangement of panes that helps you find files on your hard drive.

   The Resource perspective is nice. But to create a Java program, you want another perspective – called the Java perspective. The Java perspective's arrangement helps you navigate from one part of a Java program to another.

3. **On the Eclipse menu bar, choose Window→Open Perspective→Java.**

   In response to your choice, the Eclipse workbench rearranges itself. (See Figure 1.)

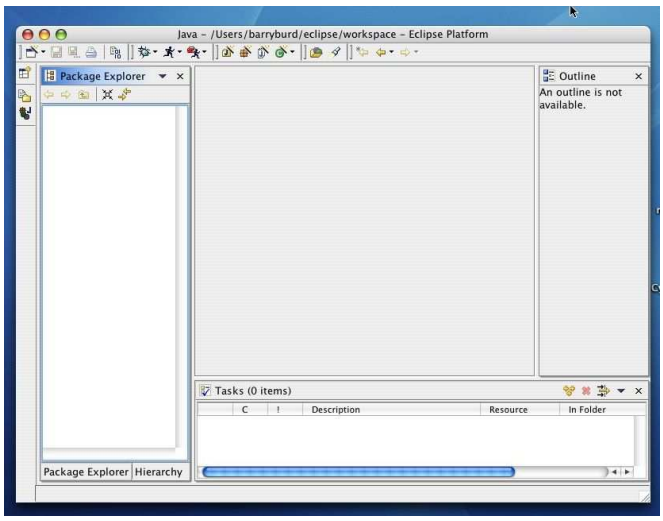


Figure 1: Opening the Java perspective for the very first time.

Creating a New Java Project

How does that old nursery rhyme go? "Each sack had seven cats. Each cat had seven kittens." Imagine the amount of cat litter the woman had to have! Anyway, in this section you create a project. Eventually, your project will contain a Java program.

1. **On the Eclipse menu bar, choose File→New→Project.**

   You see the New Project dialog, as shown in Figure 2.

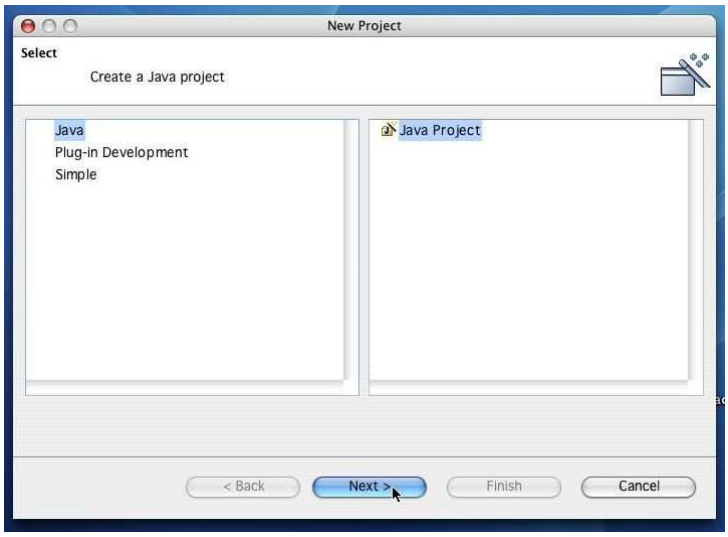


Figure 2: The New Project dialog.

* Formally, a *project* is a collection of files and folders.
* Intuitively, a *project* is a basic work unit. For instance, a self-contained collection of Java program files to manage your CD collection (along with the files containing the data) may constitute a single Eclipse project.

2. **In the New Project dialog, select Java Project, and then click Next.**

   You see the New Java Project wizard, as shown in Figure 3.

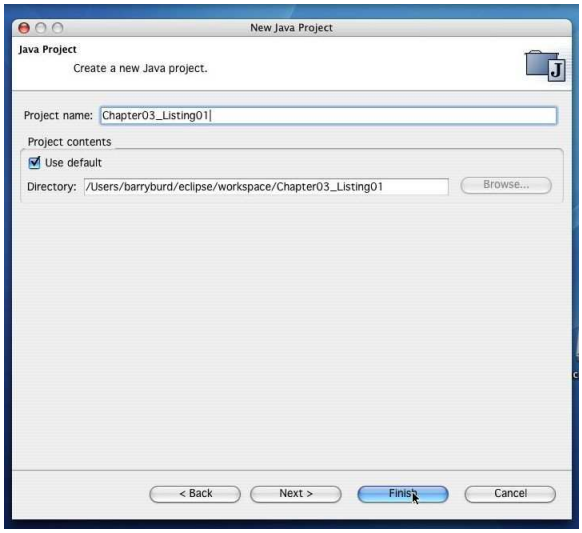


Figure 3: The New Java Project wizard.

3. **In the Project Name field, type a name for your new project.**

   In Figure 3, I typed **Chapter03_Listing01**. In the steps that follow, I assume that you also type **Chapter03_Listing01**. Of course, you can type all kinds of things in the Project Name field. I'm an old stick in the mud so I avoid putting blank spaces in my project names. But if you insist, you can use dashes, blank spaces, and other troublesome characters.

   You have to type a name for your new project. Aside from typing a name, you can accept the defaults (the Location and Project Layout stuff) in the New Java Project wizard.

4. **Click Finish.**

   When you click Finish, the Eclipse workbench reappears. The leftmost area contains the *Package Explorer view*. The view's list contains your new `Chapter03_Listing01`. (See Figure 4.)

Figure 4: The Chapter03_Listing01 project in the Package Explorer view.

In Eclipse, a *view* is one of the things that can fill up an area. A view illustrates information. When you read the word "view," think of it as a "point of view." Eclipse can illustrate the same information in many different ways. So Eclipse has many different kinds of views. The Package Explorer view is just one way of envisioning your Java programming projects.

Creating and running a Java class

Drumroll, please! It's time to write some code.

1. **Select a project's branch in the Package Explorer.**

   For example, select the Chapter03_Listing01 branch in Figure 4.

2. **On the main menu bar, choose File→New→Class.**

   The New Java Class wizard miraculously appears, as shown in Figure 5.

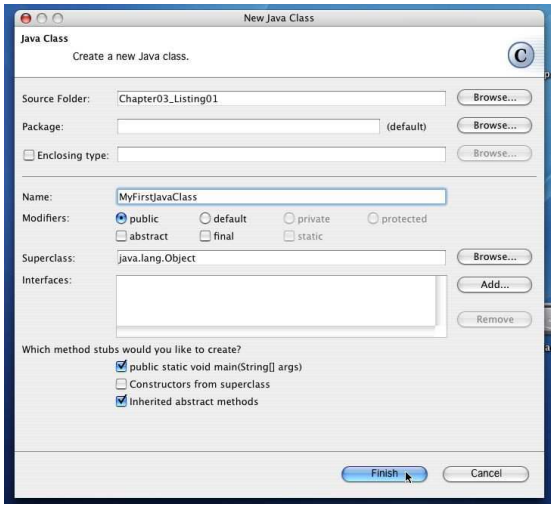


Figure 5: The New Java Class wizard.

3. **In the New Java Class wizard, fill in the Name field.**

   In Figure 5, I typed **MyFirstJavaClass**. You can type whatever you darn well please (unless you want to stay in sync with these instructions).

4. **Select other options in the New Java Class wizard.**

   For this example, put a check mark in the `public static void main(String args[])` box. Aside from that, just accept the defaults, as shown in Figure 5.

5. **Click Finish.**

   After some disk chirping, you see the workbench in Figure 6. The Package Explorer displays a new `MyFirstJavaClass.java` file, and the workbench's middle area displays a *Java editor*.

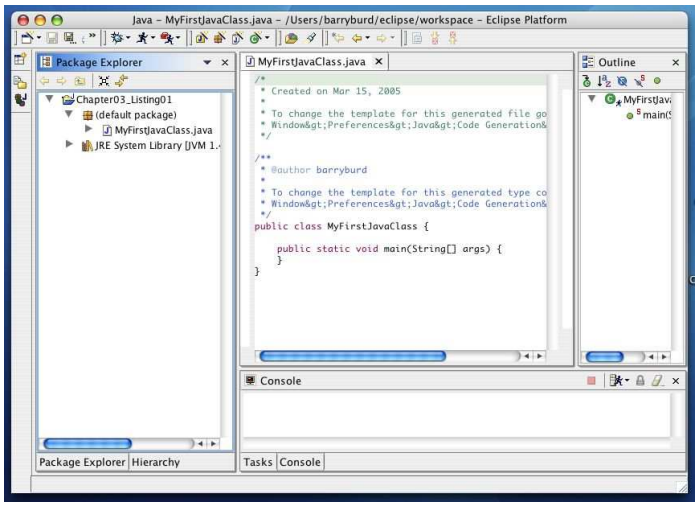
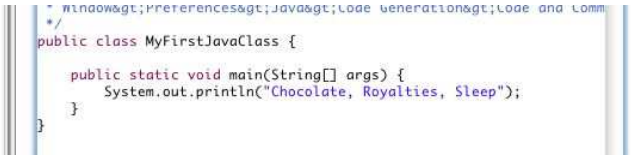


Figure 6: Eclipse creates a skeletal Java source file.

6. **Add your own code to the skeletal Java source file.**

   In Figure 7, I add `System.out.println("Chocolate, Royalties, Sleep")` to the main method's body.



```
 */
public class MyFirstJavaClass {

    public static void main(String[] args) {
        System.out.println("Chocolate, Royalties, Sleep");
    }
}
```

Figure 7: An additional line of code.

7. **Choose File→Save to save your new `MyFirstJavaClass.java` file.**

   You don't have to tell Eclipse to compile your code. By default, Eclipse compiles as you type.

   Of course, you want to test your new program. Using Eclipse, can run the program with only a few mouse clicks. Here's how:

8. **Choose Run→Run As→Java Application. (See Figure 8.)**

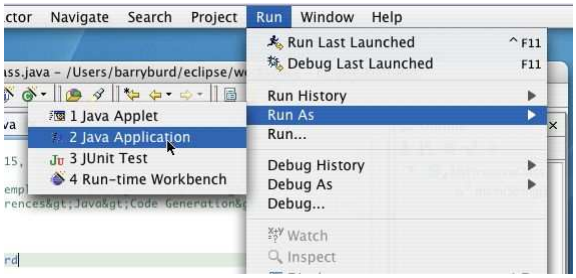


Figure 8: Running a Java program.

After a brief delay, a new Console view appears in the bottommost area of the Eclipse workbench. If you click the Console's tab, you see your program's output, as shown in Figure 9.

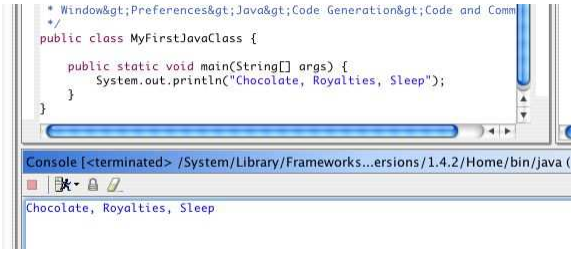


Figure 9: The output of the program in Figure 7.

Using the Import wizard

This section tells you how to bring existing Java code into an Eclipse project. You can use these steps to bring my sample programs (from *Beginning Programming with Java For Dummies*) into Eclipse.

1. **Create a new Java project.**

That is, follow the steps the "Creating a New Java Project" section of this online chapter. If you want to follow along with me in this example, name your project **ImportWizardTest**.

2. **In the Package Explorer, select your newly created project. Then, on the main menu, choose File→Import.**

   An Import Wizard appears.

3. **In the Import Wizard, select File System. Then click Next. (See Figure 10.)**

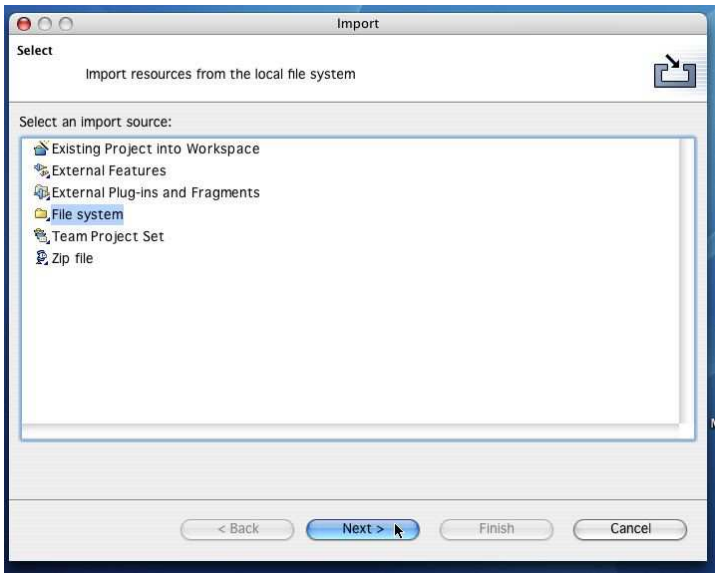


Figure 10: The first page of the Import Wizard.

The File System page appears.

4. **In the From Directory field, enter the name of a Java source directory.**

   In this example, I'm importing some of the stuff in the `/Users/barryburd/MyProjects/Chapter03_Example01` directory. So in Figure 11, I typed **/Users/barryburd/MyProjects Chapter03_Example01** in the From Directory field.

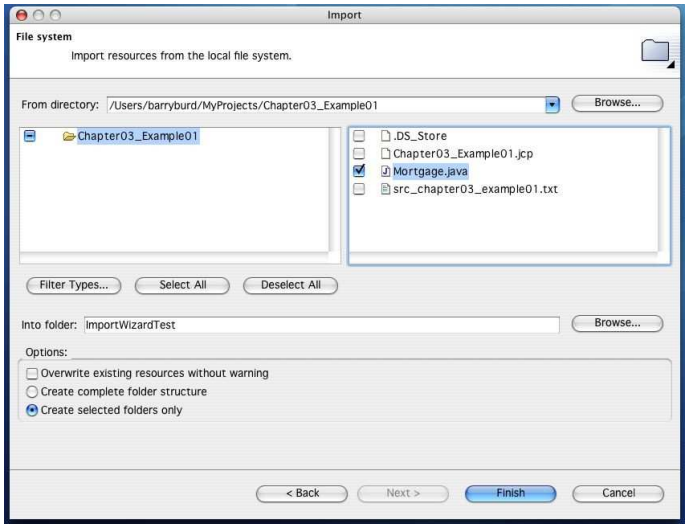


Figure 11: Selecting the files you want to import.

5. **Expand the folder on the in the left pane, looking in the right pane for the file that you want to import. When you find the file, put a checkmark in the file's checkbox.**

   In Figure 11, I put a checkmark in the `Mortgage.java` file's checkbox.

6. **In the Options group, select the Create Selected Folders Only radio button.**

   Once again, see Figure 11.

7. **Click Finish.**

   The Import Wizard disappears. In the Eclipse workbench, your project tree contains new entries. (See Figure 12.)

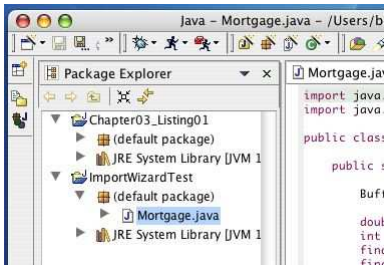


Figure 12: The newly imported Mortgage.java code.