

Getting started with the JDK and an IDE

Install and use the tools you'll need to start writing complete Java programs on your own machine.

WE'LL COVER THE FOLLOWING ^

- Java
- Eclipse IDE
 - Hello World in Eclipse
- Exercise: creating a new class

To write Java code on your own computer, rather than in the web browser, you'll need a Java Development Kit (JDK) to compile and run Java code, and some way of editing Java files.

Java

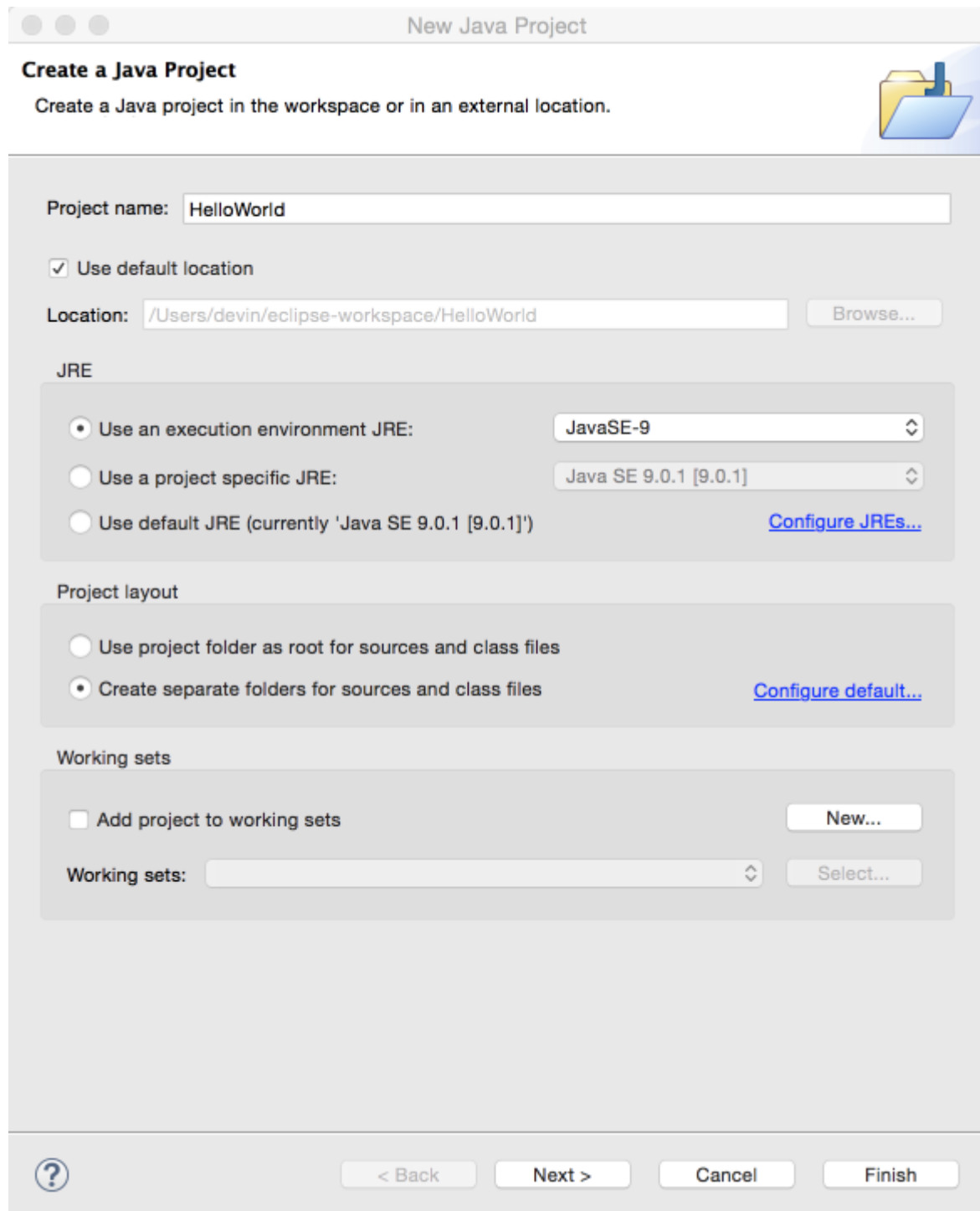
You'll need to download and install the JDK first; the current version is Java 9. You can download it from the [download link](#) on Oracle's Java page.

Eclipse IDE

Although a standard text editor like Atom, Sublime, Notepad++, or Emacs are fine ways to edit code, an Integrated Development Environment, or IDE for short, provides some features that you might find useful. There are several good IDEs available, including Eclipse, Netbeans, and IntelliJ IDEa. We'll use [Eclipse](#).

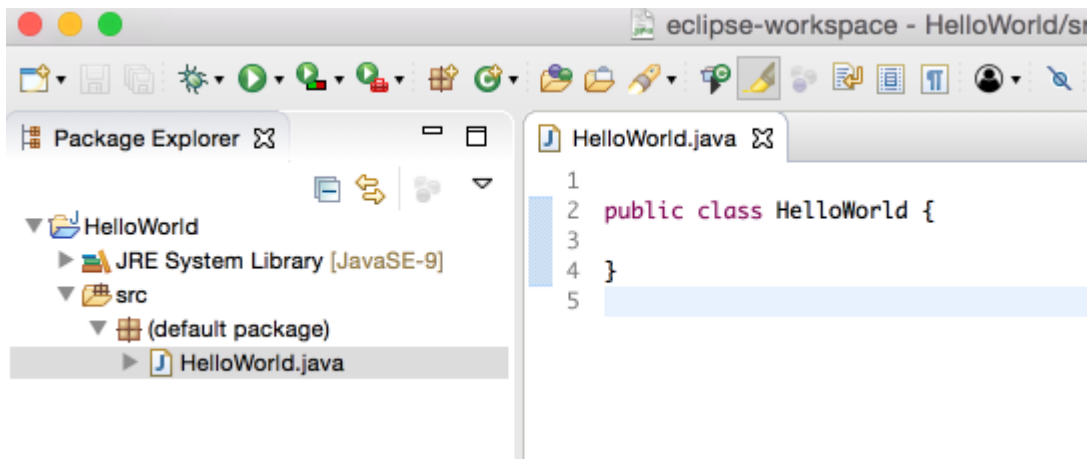
1. Download the installer from the [Eclipse download page](#).
2. Run the intaller, and select "Eclipse IDE for Java Developers" from the menu.
3. Launch Eclipse, and select a workspace, which will be the folder where your projects with Java code will be kept.

4. Create a new Java project, using from “File->New...-> Java project”. Call the project HelloWorld, and leave the other options set to default values:



Hello World in Eclipse

You should now be at the main editor window for Eclipse. From the File menu, select New --> Class, and create a class `HelloWorld`. Your screen should now look something like this:



You now have a class called `HelloWorld`, but it cannot be run without a `main` method. Add a `main` method to print some text:

```
public class HelloWorld {  
    public static void main(String[] args) {  
        System.out.println("Hello, world.");  
    }  
}
```

Once you've added the code to Eclipse, run it using either "Run As" from the "Run" menu, or using the small green arrow icon from the top Eclipse toolbar. In the console at the bottom of the screen, you should see the text `Hello, world.`



The class `HelloWorld` is stored in its own file, `HelloWorld.java`. Each new class you create will get its own file, and you can use the package explorer on the left to move between files.

Exercise: creating a new class

In the Eclipse IDE, create a new class `Location` with `x` and `y` instance variables, a constructor, and a `toString` method. Then create a `Location` object

from `main` and print out a `Location` or two to verify that you can run the program from Eclipse.

Here's the code that I wrote to test Eclipse; notice that the `Location` class is in a different file than `HelloWorld`. The sample code is not executable and you should not look at it unless you are having trouble getting Eclipse to run the code.

