

Brooklyn College

Eclipse

Beginner's Guide

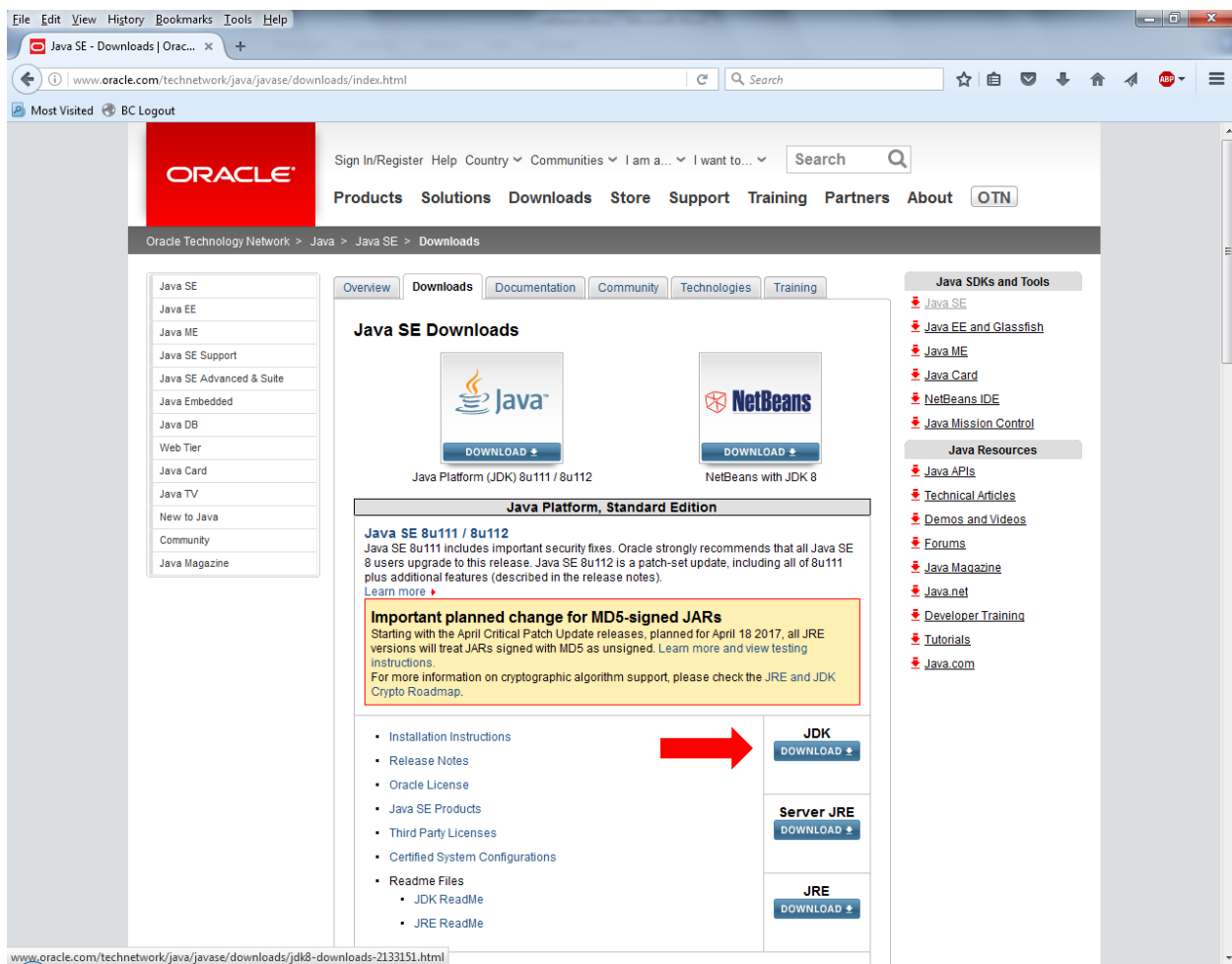
Lawrence Goetz
6/16/2017

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Installation of Java JDK

<http://www.oracle.com/technetwork/java/javase/downloads>



The screenshot displays the Oracle Java SE Downloads page. The page layout includes a top navigation bar with the Oracle logo and links for Sign In/Register, Help, Country, Communities, I am a..., I want to..., and a Search bar. Below this is a secondary navigation bar with links for Products, Solutions, Downloads, Store, Support, Training, Partners, and About, along with an OTN button. The main content area is titled 'Java SE Downloads' and features two download buttons: 'DOWNLOAD' for Java Platform (JDK) 8u111 / 8u112 and 'DOWNLOAD' for NetBeans with JDK 8. Below these, there is a section for 'Java Platform, Standard Edition' with a 'DOWNLOAD' button. A red arrow points to the 'JDK DOWNLOAD' button. The page also includes a list of links for installation instructions, release notes, and other resources.

Download the JDK.

The screenshot shows the Oracle Java SE Development Kit 8 Downloads page. The page is titled "Java SE Development Kit 8 Downloads" and includes a search bar, navigation links, and a list of download links for various operating systems and architectures. The "Accept License Agreement" radio button is selected.

Java SE Development Kit 8 Downloads

Thank you for downloading this release of the Java™ Platform, Standard Edition Development Kit (JDK™). The JDK is a development environment for building applications, applets, and components using the Java programming language.

The JDK includes tools useful for developing and testing programs written in the Java programming language and running on the Java platform.

See also:

- Java Developer Newsletter: From your Oracle account, select **Subscriptions**, expand **Technology**, and subscribe to **Java**.
- Java Developer Day hands-on workshops (free) and other events
- Java Magazine

JDK 8u111 Checksum
JDK 8u112 Checksum

Java SE Development Kit 8u111

You must accept the Oracle Binary Code License Agreement for Java SE to download this software.

☐ Accept License Agreement ☒ Decline License Agreement

Product / File Description	File Size	Download
Linux ARM 32 Hard Float ABI	77.78 MB	jdk-8u111-linux-arm32-vfp-hflt.tar.gz
Linux ARM 64 Hard Float ABI	74.73 MB	jdk-8u111-linux-arm64-vfp-hflt.tar.gz
Linux x86	160.35 MB	jdk-8u111-linux-i586.rpm
Linux x86	175.04 MB	jdk-8u111-linux-i586.tar.gz
Linux x64	158.35 MB	jdk-8u111-linux-x64.rpm
Linux x64	173.04 MB	jdk-8u111-linux-x64.tar.gz
Mac OS X	227.39 MB	jdk-8u111-macosx-x64.dmg
Solaris SPARC 64-bit	131.92 MB	jdk-8u111-solaris-sparcv9.tar.Z
Solaris SPARC 64-bit	93.02 MB	jdk-8u111-solaris-sparcv9.tar.gz
Solaris x64	140.38 MB	jdk-8u111-solaris-x64.tar.Z
Solaris x64	96.82 MB	jdk-8u111-solaris-x64.tar.gz
Windows x86	189.22 MB	jdk-8u111-windows-i586.exe
Windows x64	194.64 MB	jdk-8u111-windows-x64.exe

Java SE Development Kit 8u112

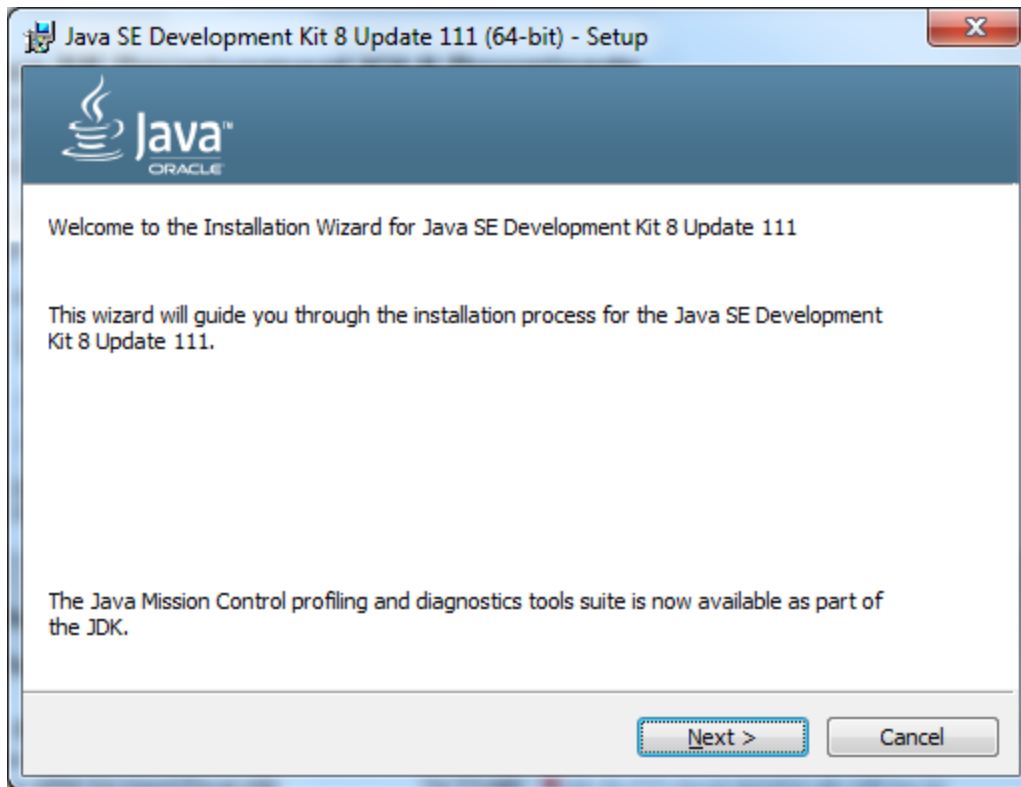
You must accept the Oracle Binary Code License Agreement for Java SE to download this software.

☐ Accept License Agreement ☒ Decline License Agreement

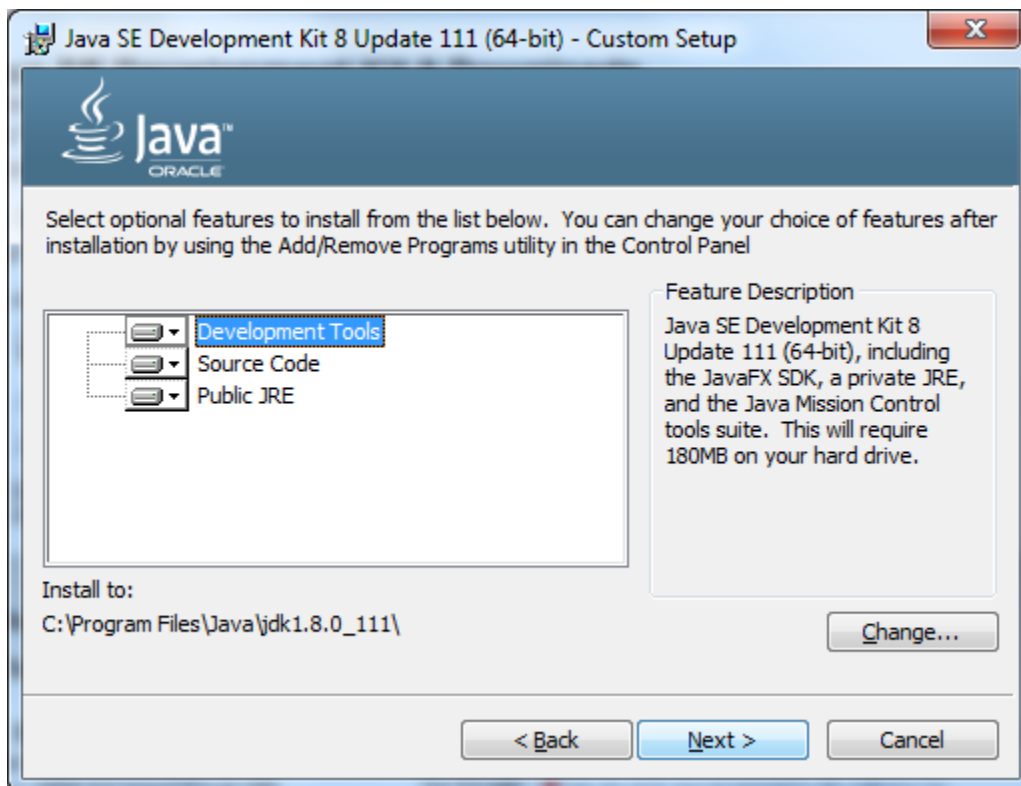
Product / File Description	File Size	Download
Linux x86	162.42 MB	jdk-8u112-linux-i586.rpm
Linux x86	177.12 MB	jdk-8u112-linux-i586.tar.gz

Select to **Accept License Agreement**. Then select the **Download** link next to the Product that matches your Operating System that you are working one (such as Windows x64).

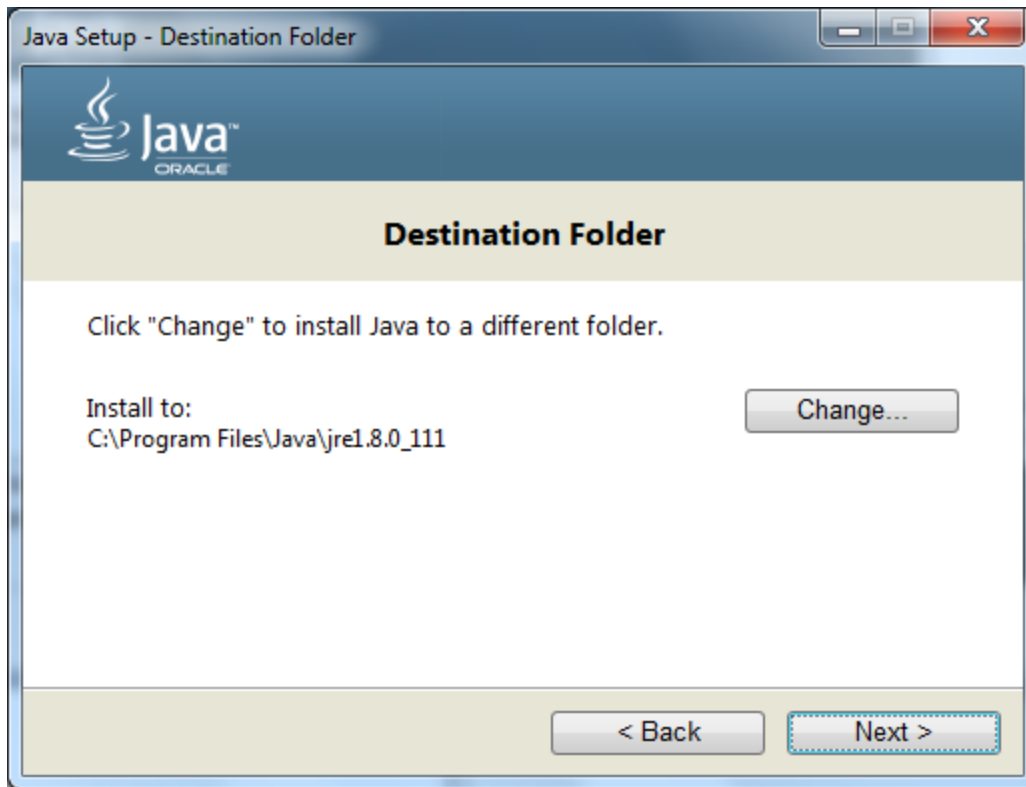
When this download is complete, run the program to install the JDK.



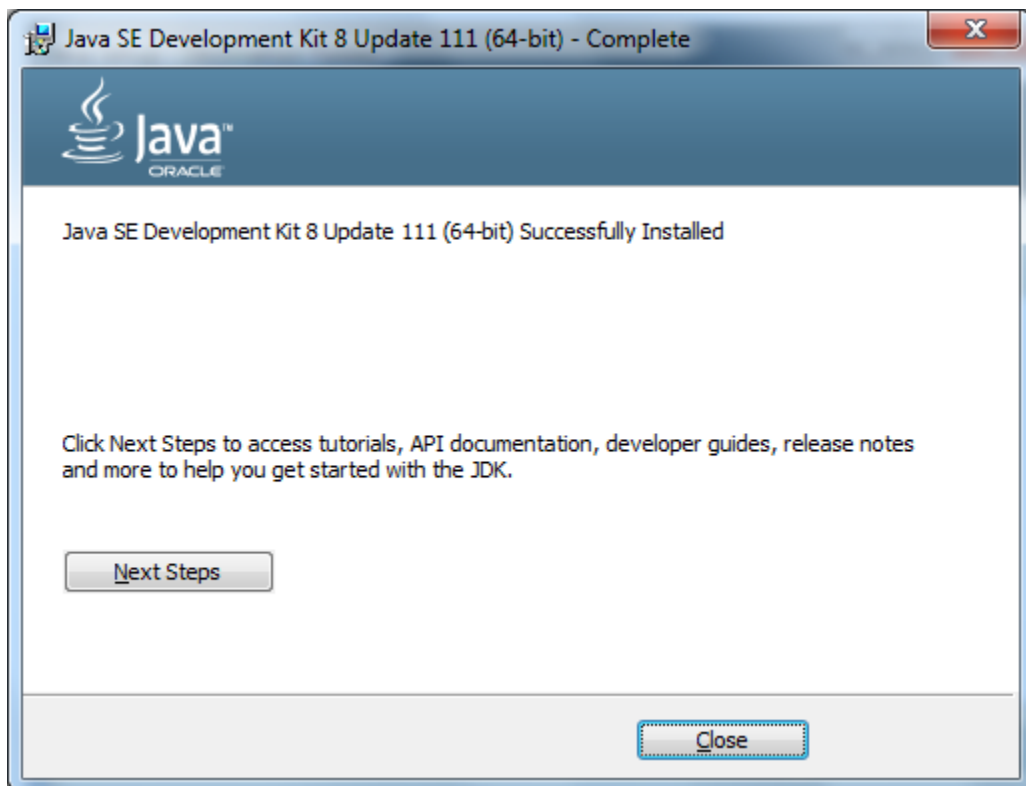
Select **Next**.



Take the defaults, then select **Next** and the install will begin.



Leave the default values and select **Next**.

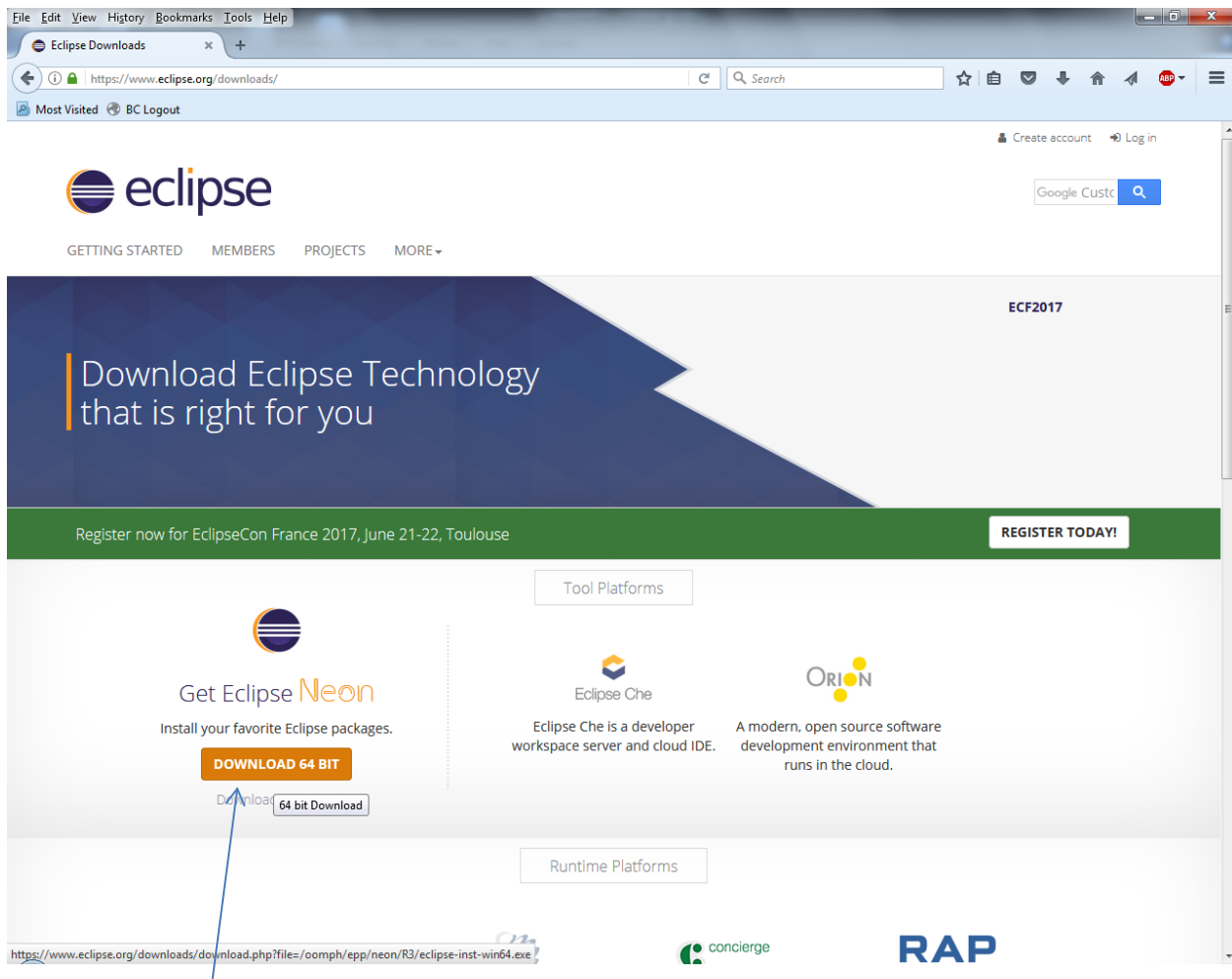


Click on **Close**.

Installing Eclipse

Visit:

<https://www.eclipse.org/downloads/>



Click on the **Download** button. It will show the version for your computer.

The screenshot shows the Eclipse Foundation website's download page. The browser's address bar displays the URL: <https://www.eclipse.org/downloads/download.php?file=/oomph/epp/neon/R3/eclipse-inst-win64.exe>. The page features the Eclipse logo and navigation links: GETTING STARTED, MEMBERS, PROJECTS, and MORE. A dark banner at the top reads "HOME / DOWNLOADS / ECLIPSE DOWNLOADS - SELECT A MIRROR". Below this, a disclaimer states: "All downloads are provided under the terms and conditions of the **Eclipse Foundation Software User Agreement** unless otherwise specified."

The main content area has a white background with a large orange "DOWNLOAD" button. Below the button, it says "Download from: Canada - University of Waterloo Computer Science Club (http)" and "File: **eclipse-inst-win64.exe** SHA-512". A link ">> Select Another Mirror" is also present. A blue arrow points from the text "Click on the Download button" to the orange button.

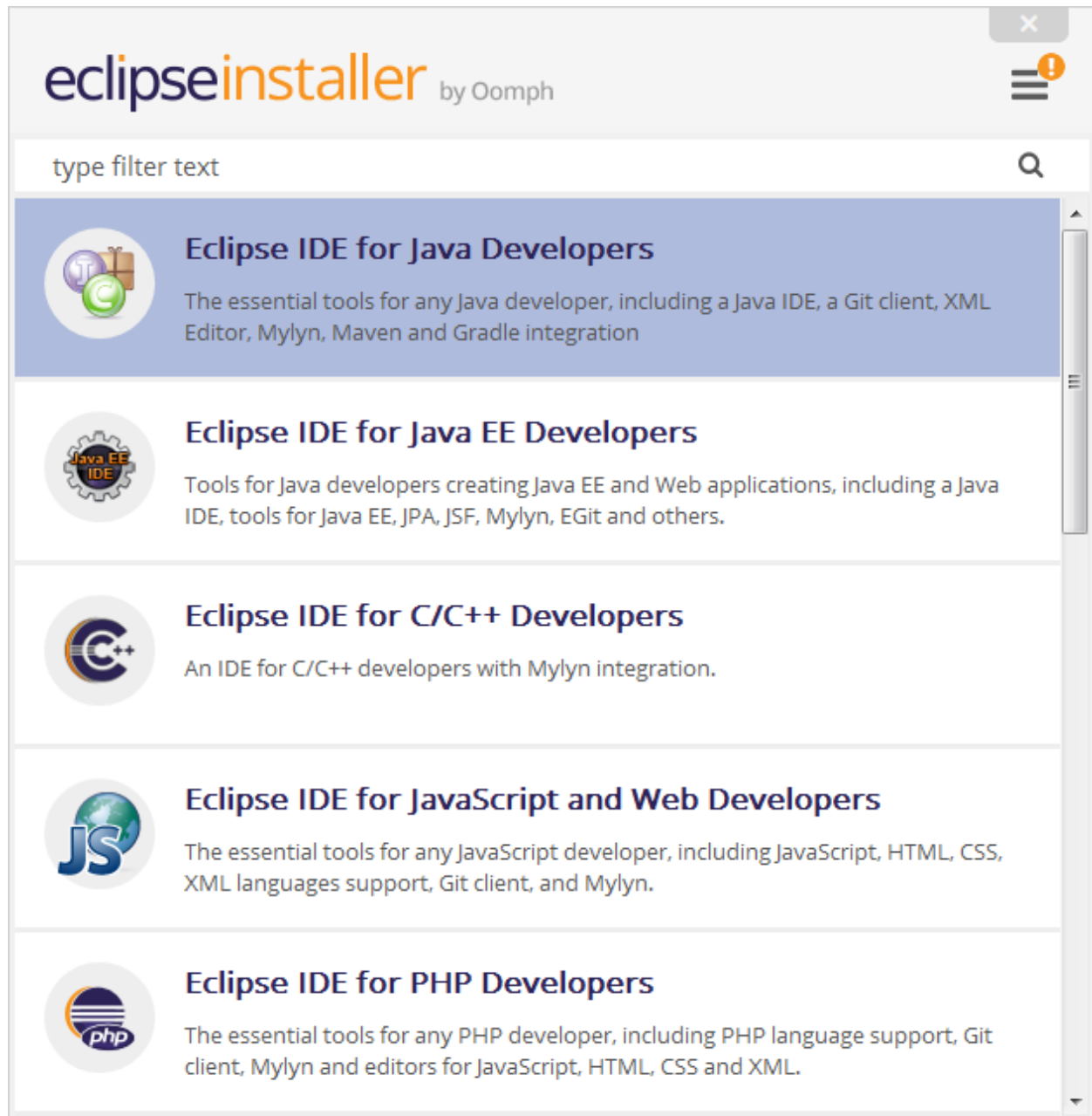
Below the main download area is a dark blue banner that says "OR Get It Faster from our Members". Underneath are three member cards: IBM (Blazingly fast downloads hosted by IBM Bluemix), Obeo (Download the latest Eclipse easily and discover how to ...), and BLU AGE (Free and fast direct Eclipse downloads. Get more BLU AG...). Each card has a "GET IT" button. A blue arrow points from the text "Once the download is complete you can run the installer." to the "GET IT" button under the IBM card.

On the right side, there are three sections: "FEATURED MEMBER" (ca technologies), "OTHER OPTIONS FOR THIS FILE" (All mirrors (xml), Direct link to file (download starts immediately from best mirror)), and "RELATED LINKS" (Friends of Eclipse, Becoming a mirror site, Updating and installing Eclipse components, Eclipse newsgroups).

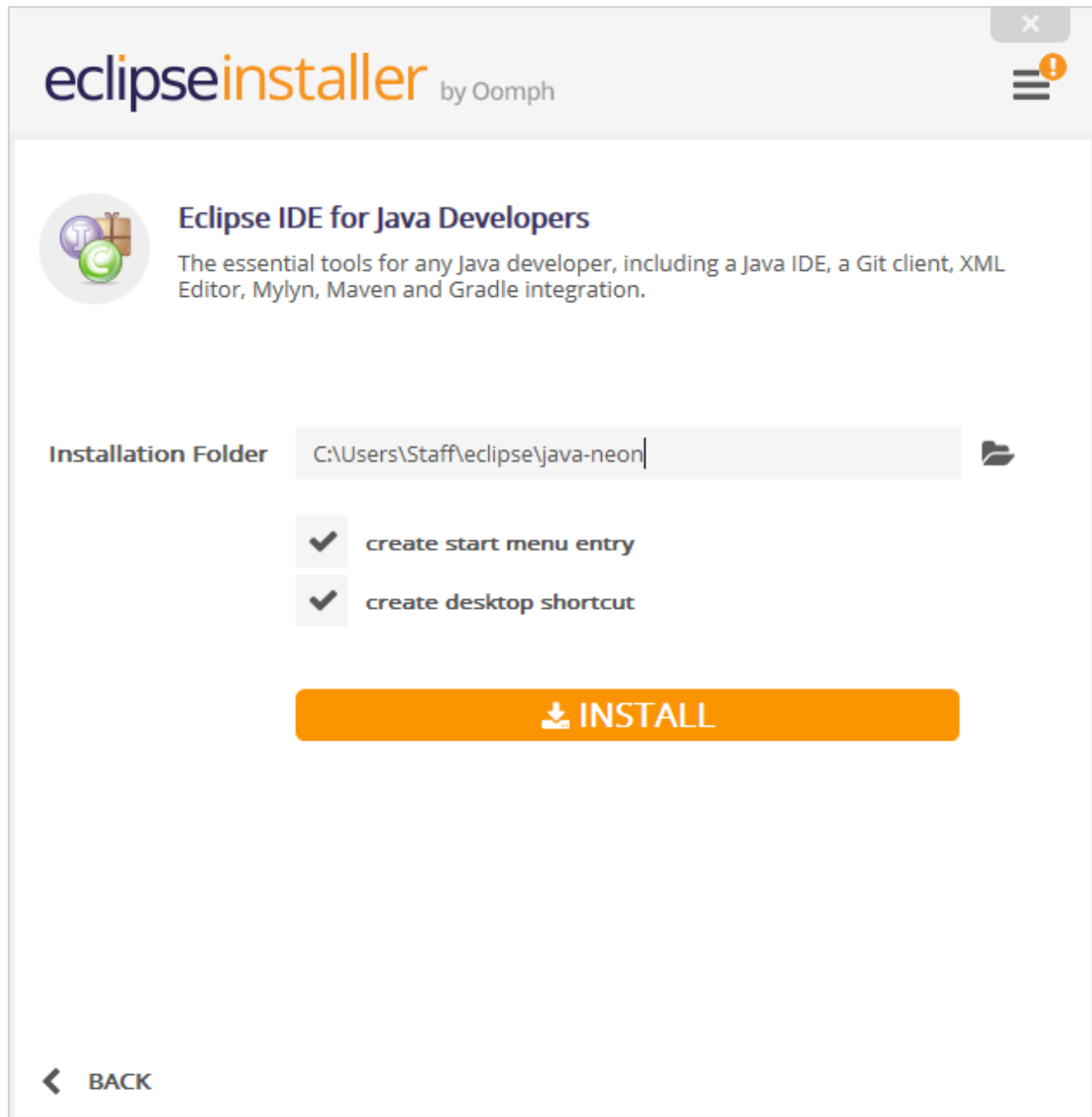
At the bottom, the URL https://www.eclipse.org/downloads/download.php?file=/oomph/epp/neon/R3/eclipse-inst-win64.exe&mirror_id=492 is shown.

Click on the **Download** button to begin the download.

Once the download is complete you can run the installer.



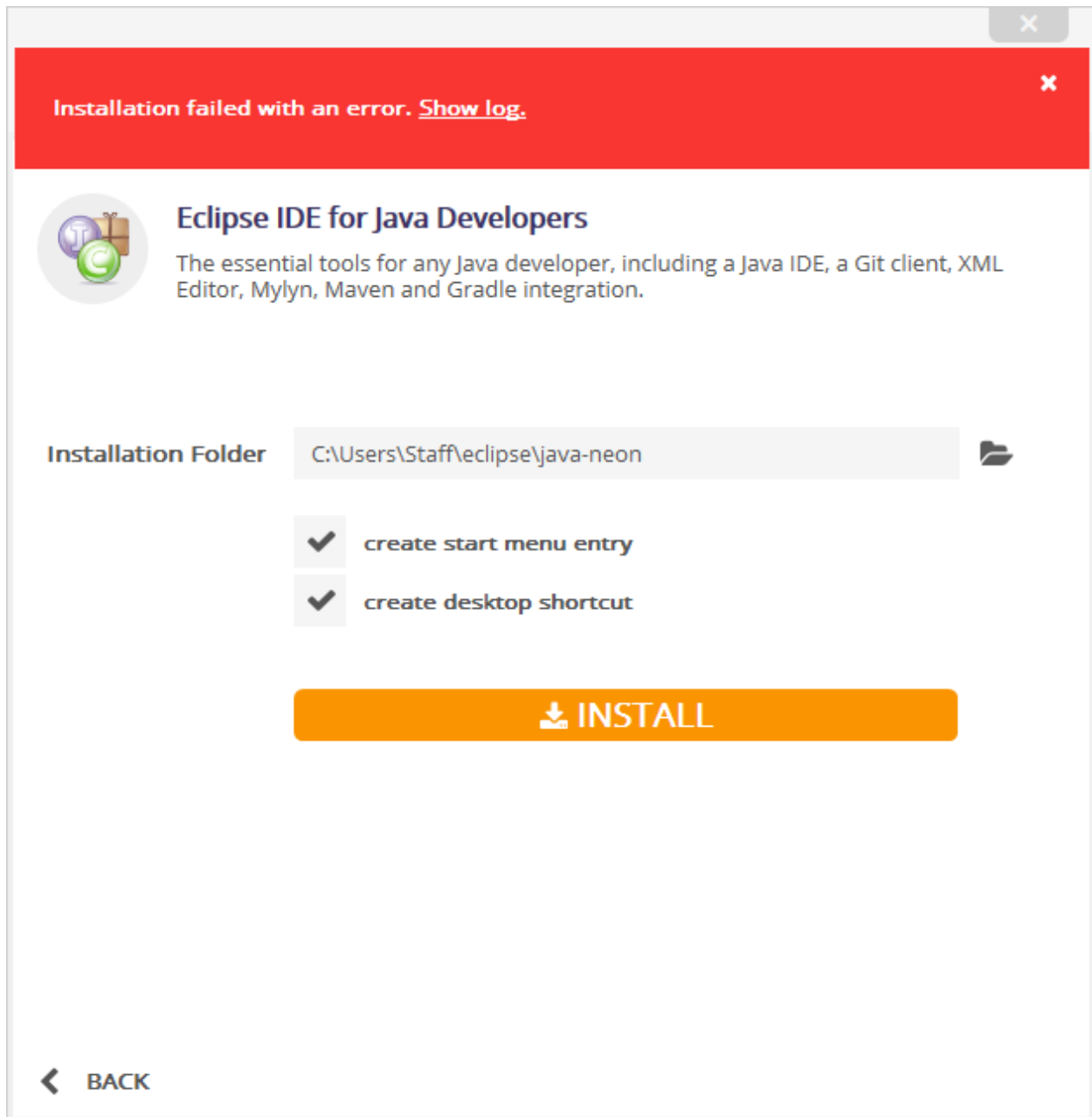
Select the Eclipse IDE for **Java Developers**.



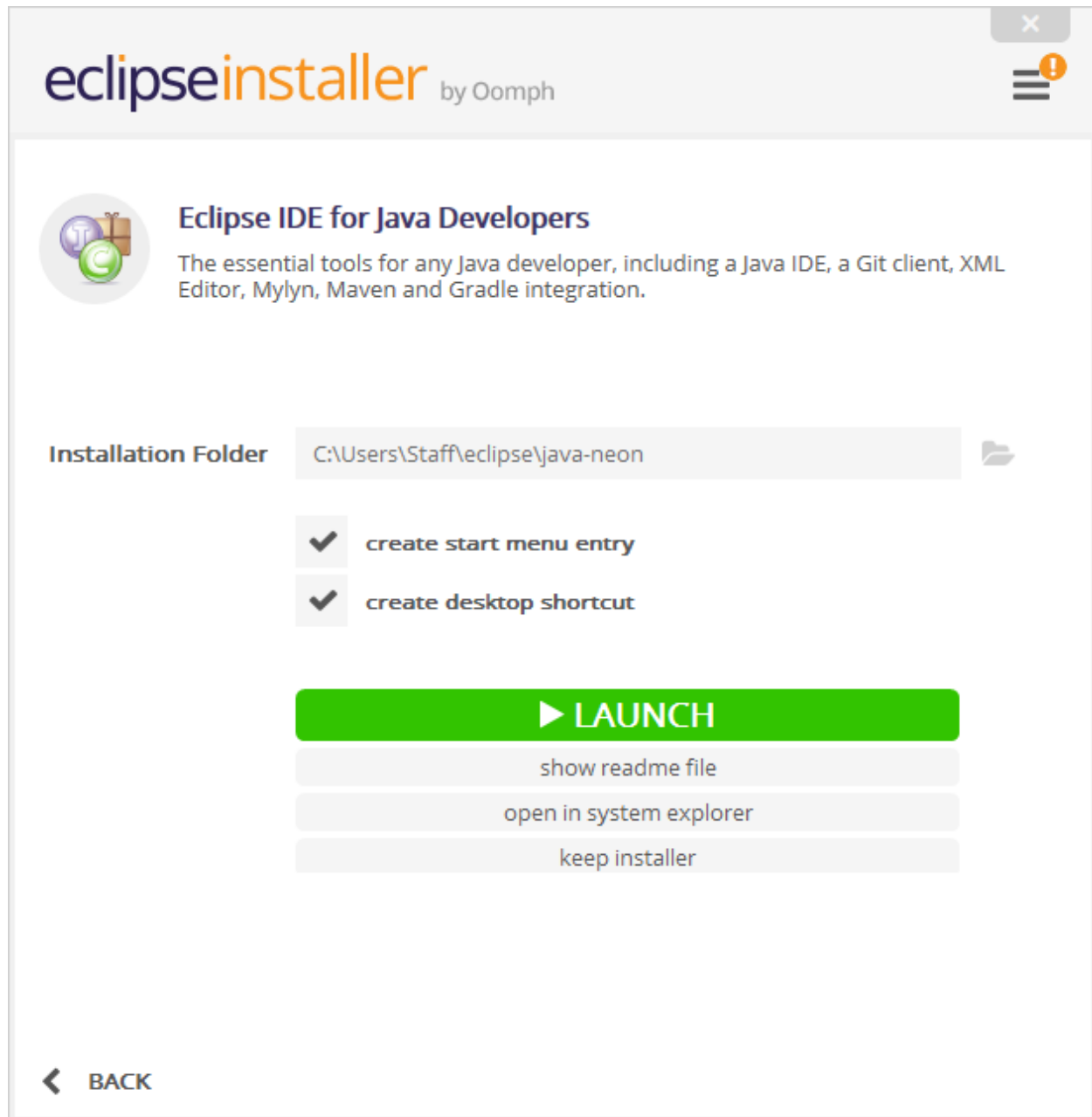
Take the defaults and press **Install**.



Click **Accept Now**.



If you get an error, click on the **Install** button again. Sometimes there will be network errors while getting the installation files. Installation will take a long time and you will see status messages on the top as the files are being downloaded.

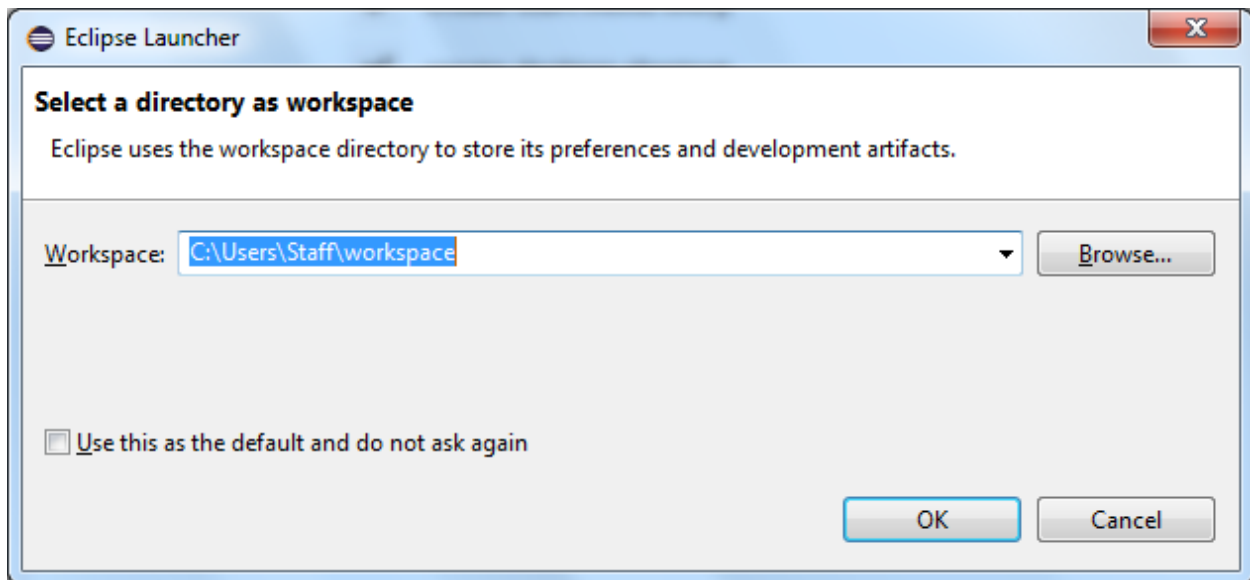
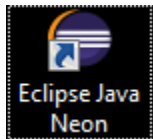


Once the install is completed, click on **Launch**.

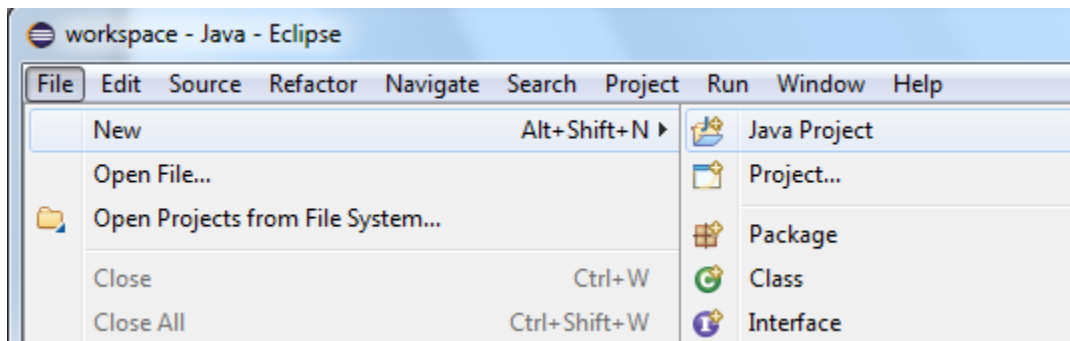
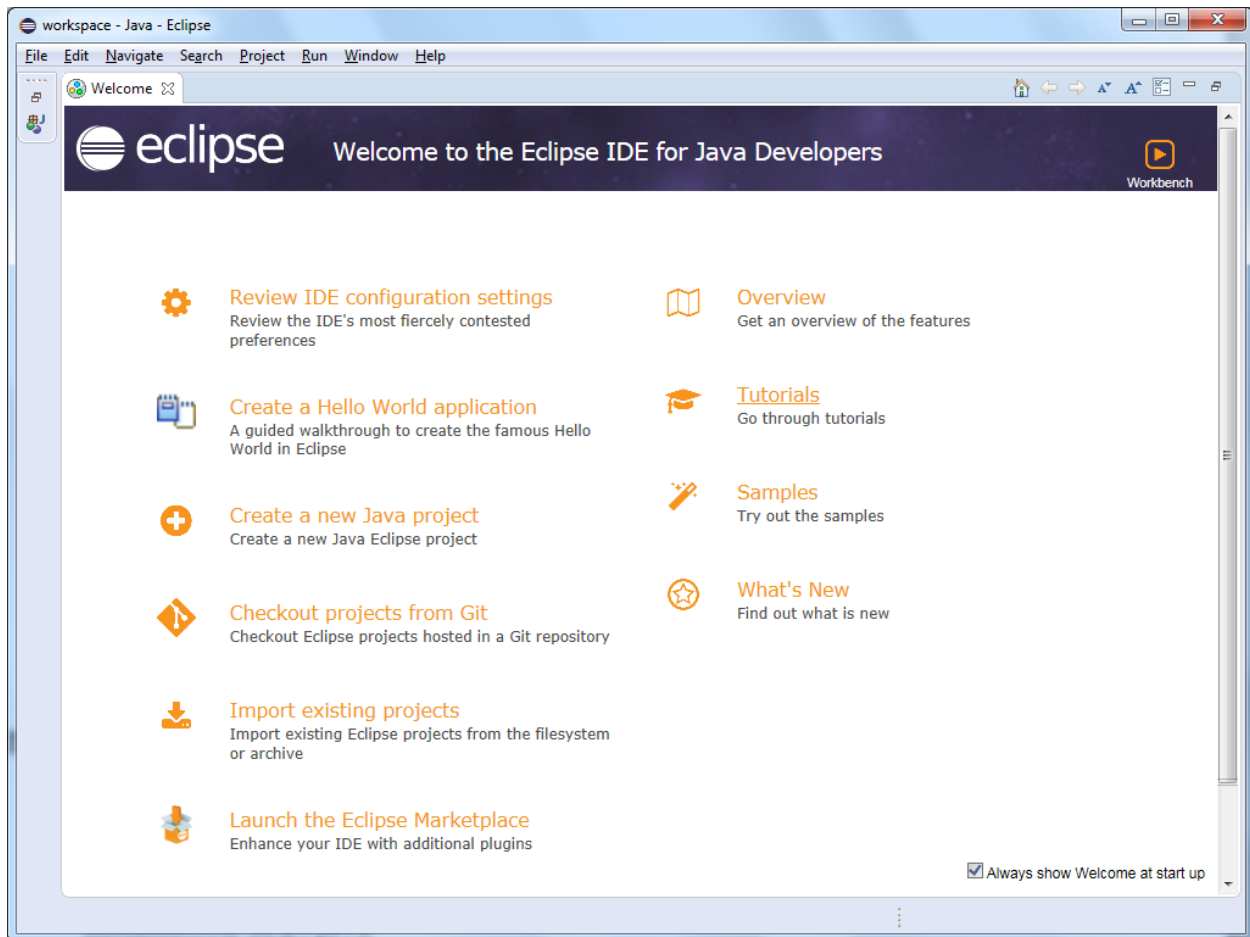
Running Eclipse

One Eclipse is installed, you can Launch it.

There is also a desktop icon:



Use the standard Workspace and click on OK.



From the **File** menu, select **New**, then select **Java Project**.

New Java Project

Create a Java Project

Create a Java project in the workspace or in an external location.

Project name: HelloWorld

☒ Use default location

Location: C:\Users\Staff\workspace\HelloWorld [Browse...](#)

JRE

☒ Use an execution environment JRE: JavaSE-1.8

☐ Use a project specific JRE: jre1.8.0_131

☐ Use default JRE (currently 'jre1.8.0_131') [Configure JREs...](#)

Project layout

☐ Use project folder as root for sources and class files

☒ Create separate folders for sources and class files [Configure default...](#)

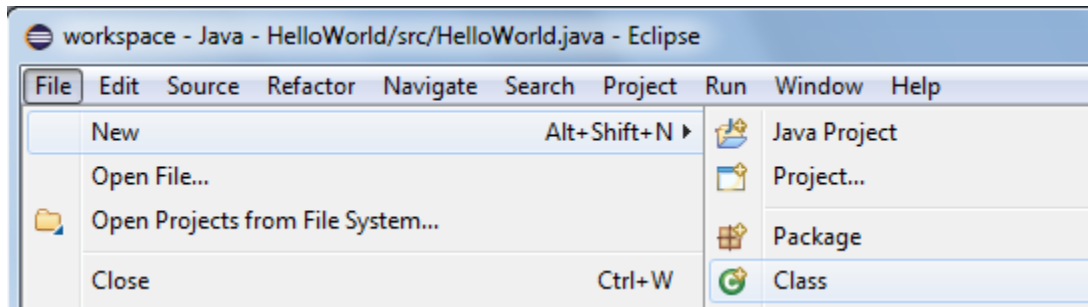
Working sets

☐ Add project to working sets [New...](#)

Working sets: [Select...](#)

[?](#) [< Back](#) [Next >](#) [Finish](#) [Cancel](#)

Type in the project name as **HelloWorld** and then click on **Finish**.



From the **File** menu, select **New**, then select **Class**.

New Java Class

Java Class

⚠ The use of the default package is discouraged.

Source folder: HelloWorld/src Browse...

Package: (default) Browse...

☐ Enclosing type: Browse...

Name: → HelloWorld

Modifiers: ☒ public ☐ package ☐ private ☐ protected
☐ abstract ☐ final ☐ static

Superclass: java.lang.Object Browse...

Interfaces: Add...
Remove

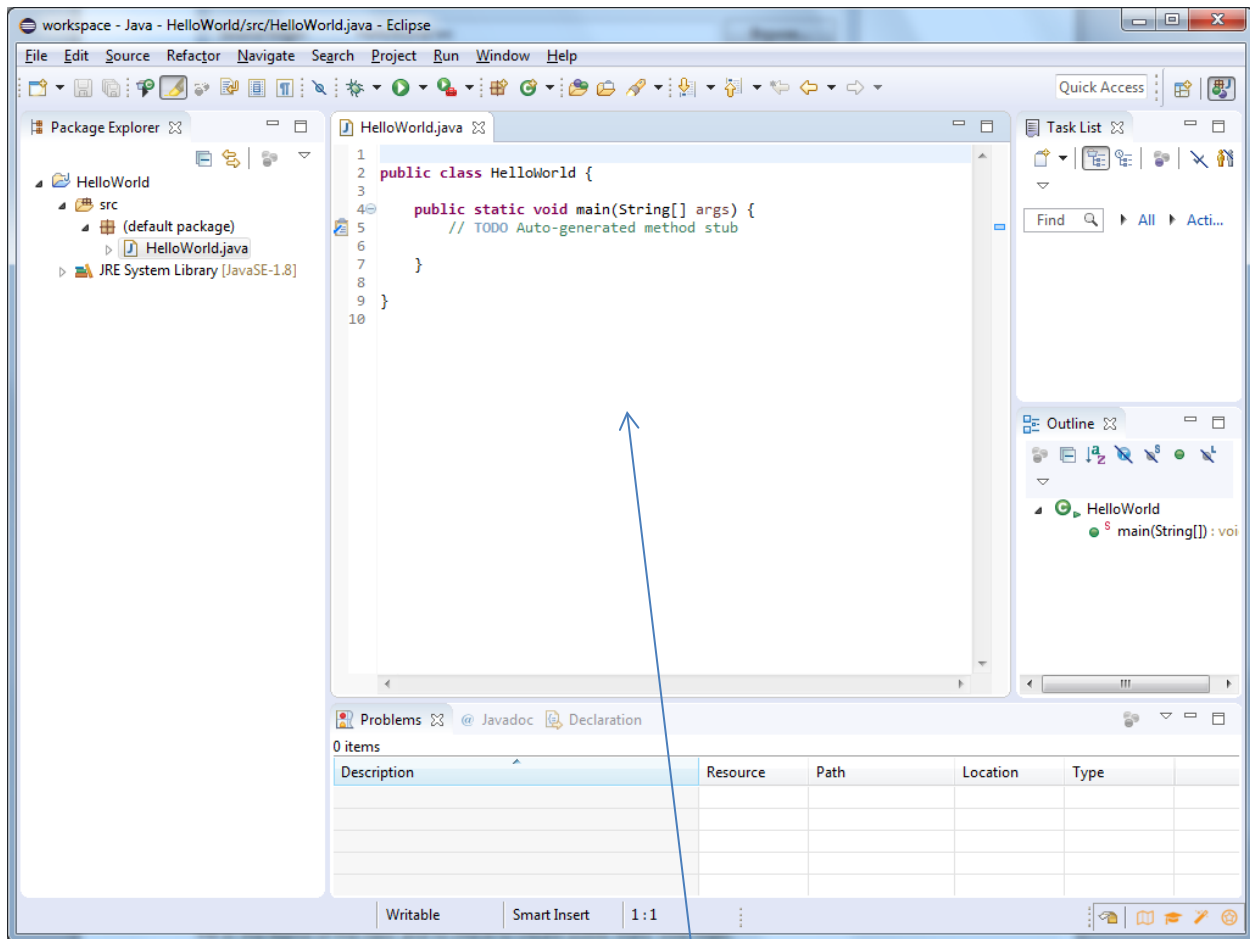
Which method stubs would you like to create?

→ ☒ public static void main(String[] args)
☐ Constructors from superclass
☒ Inherited abstract methods

Do you want to add comments? (Configure templates and default value [here](#))
☐ Generate comments

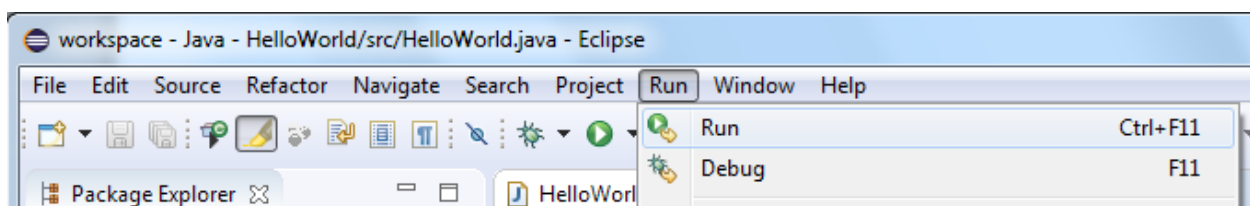
? Finish Cancel

Fill in the **Name** of the class and to check to **create public static void main**.



Sample class.

Editor



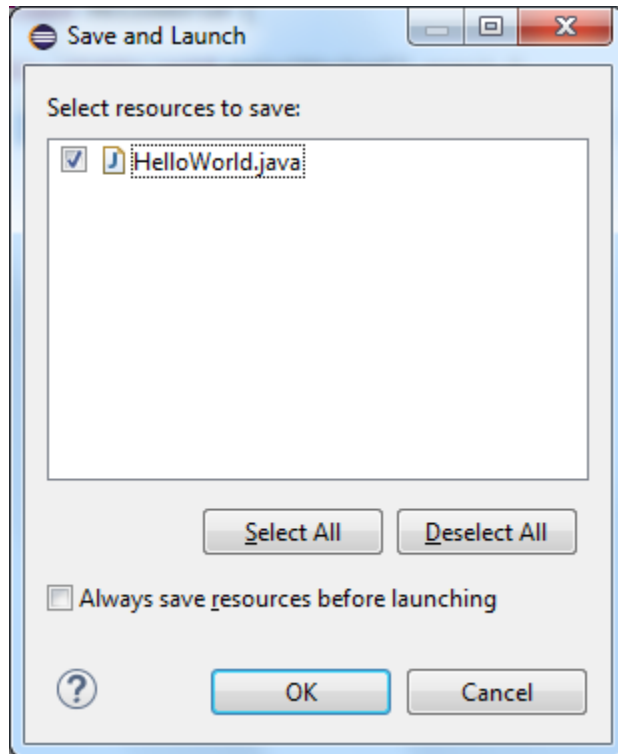
From the **Run** menu, select **Run**.

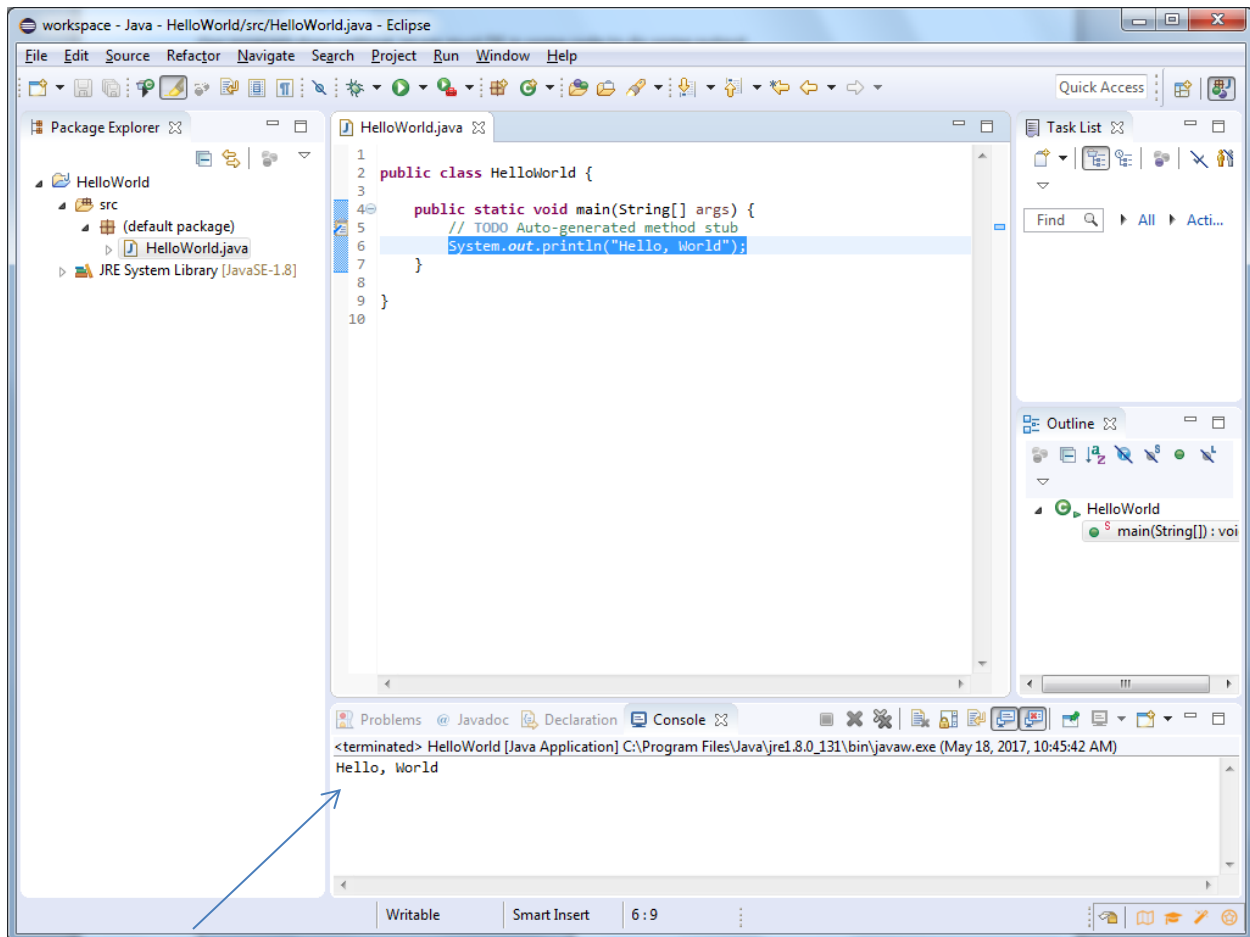
Our program does nothing, so we must fill in some code to do some output.

On line #6 write the following code:

```
System.out.println("Hello, World");
```

Now run the program again. If you did not save it will ask to save it.





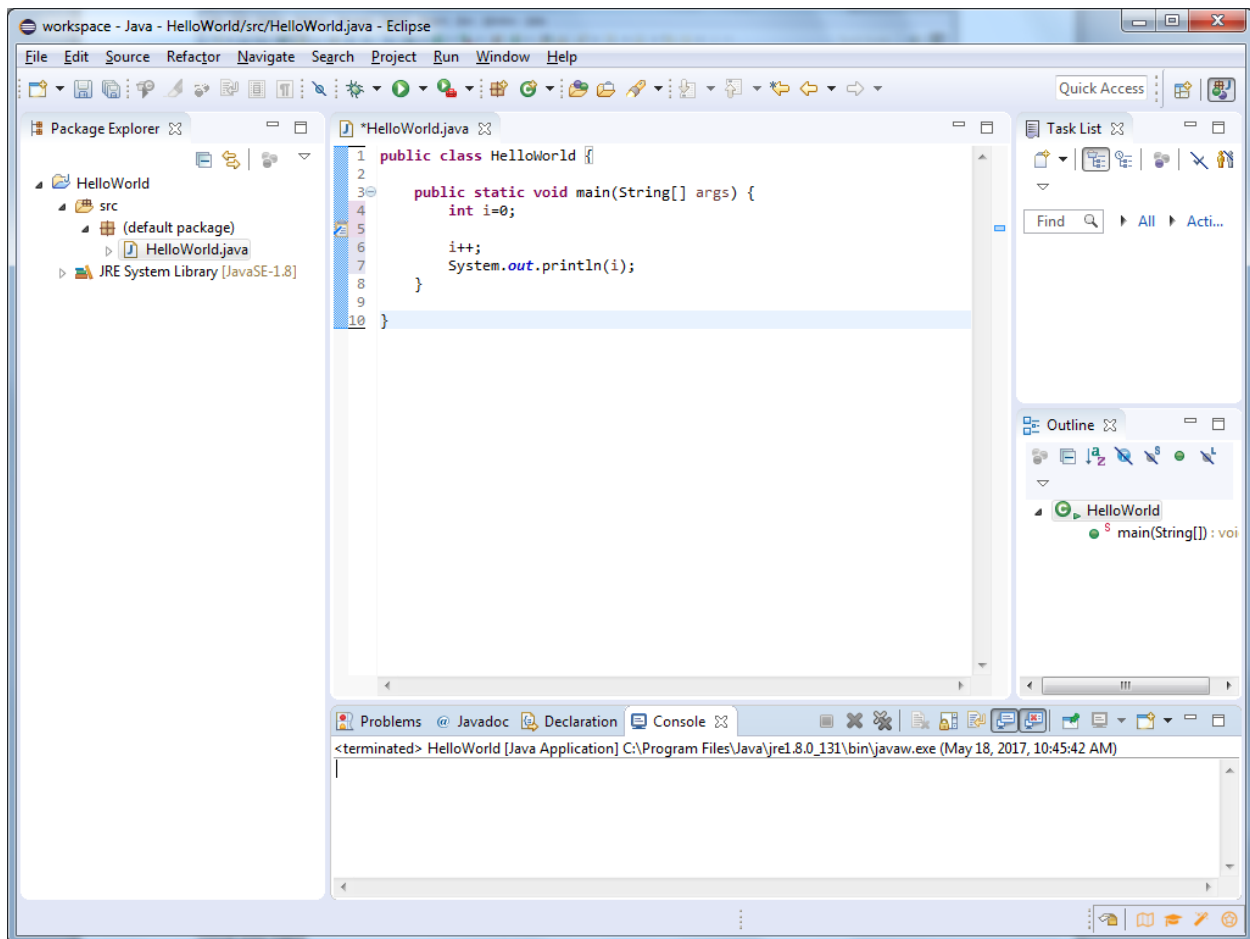
The **console** shows the output from the program.

Debugging a program

Let us modify the program so we can get some practice with the debugger.

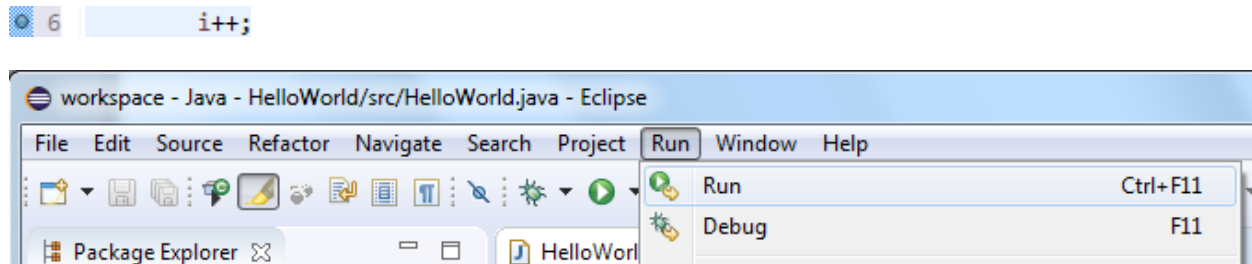
We will set the code of **HelloWorld.java** to be as follows:

```
public class HelloWorld {  
  
    public static void main(String[] args) {  
        int i=0;  
  
        i++;  
        System.out.println(i);  
    }  
}
```

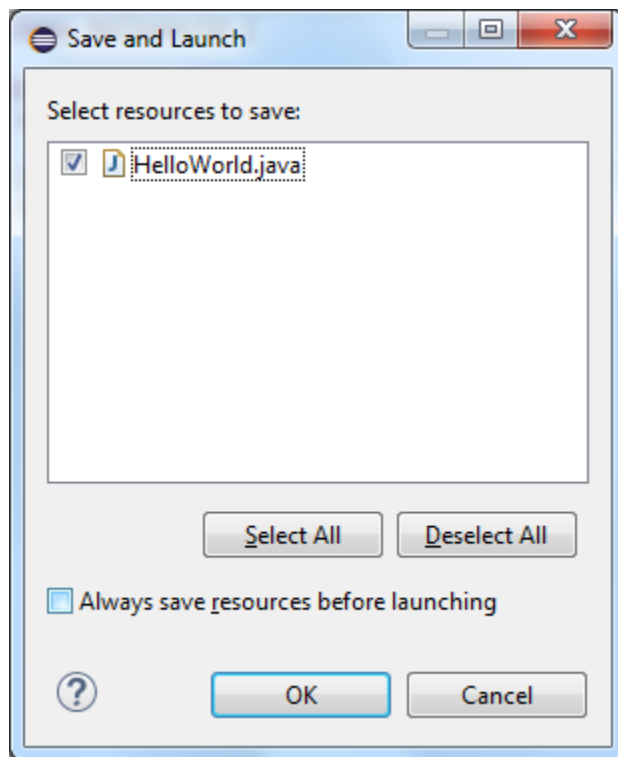


Once you have written the program, set a break point on line #6. Select line #6 in the editing window and press Ctrl-Shift-B.

You can also double click on left margin next to the line number to toggle a line break point. A break point is indicated by a dot in the left margin.

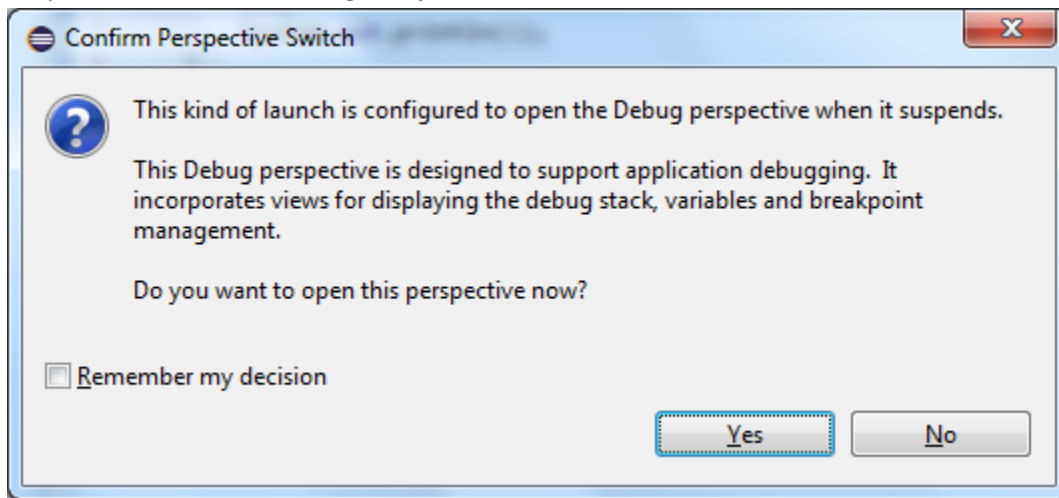


From the **Run** menu, select **Debug**.

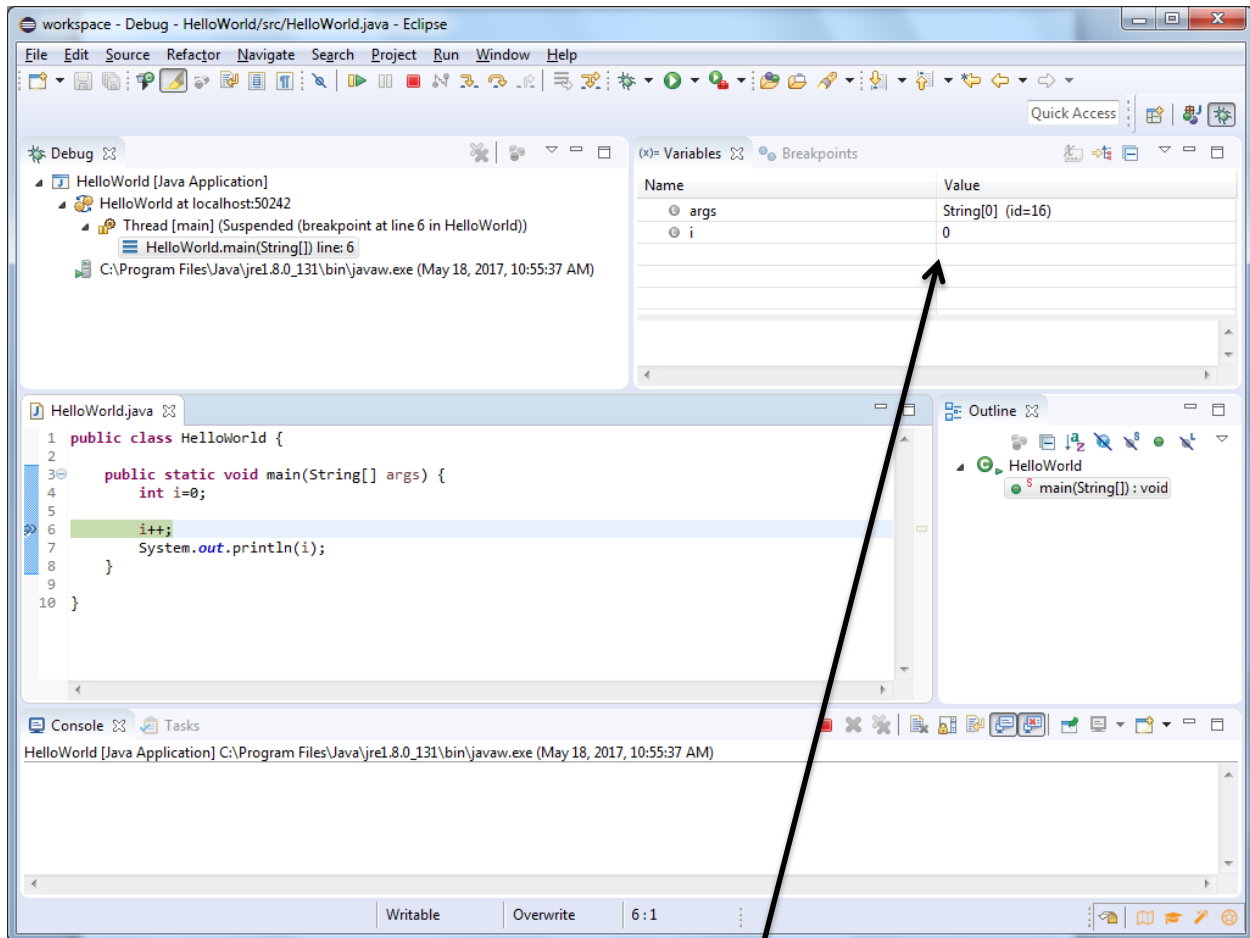


If your file is not saved, let the Eclipse save it.

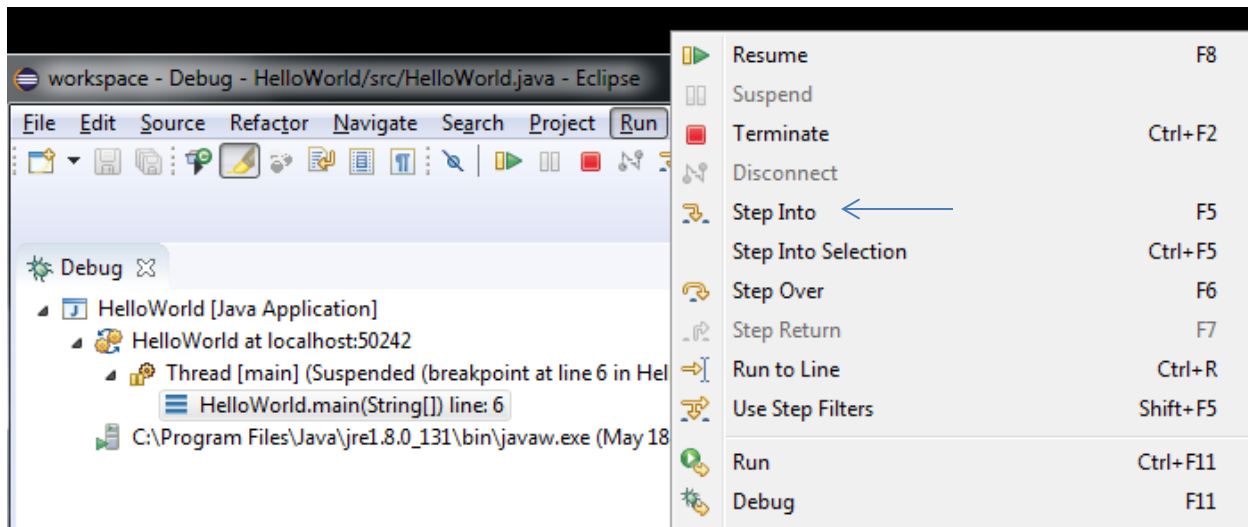
Eclipse will switch to a **Debug Perspective**. Select **Yes**.



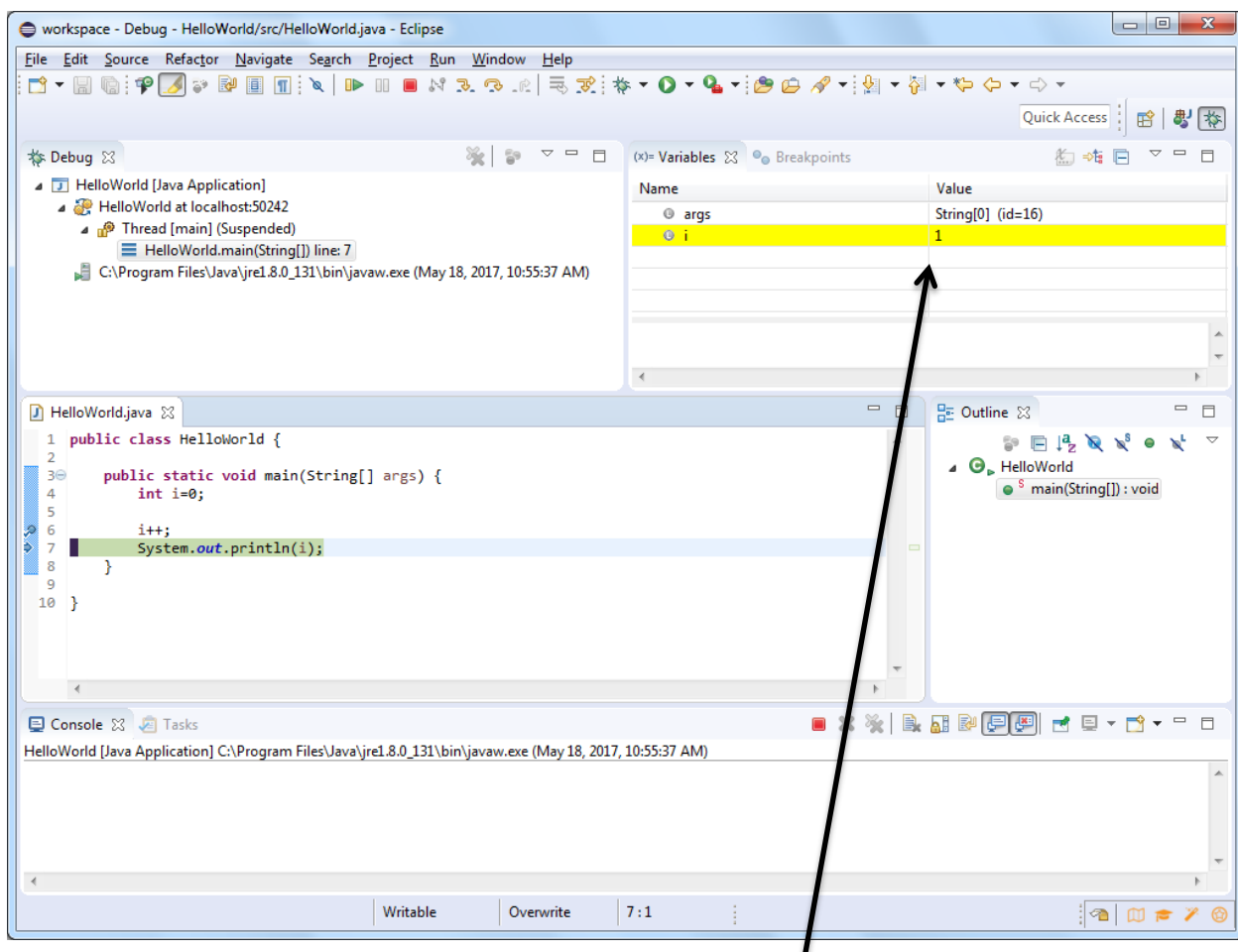
If you don't want this warning to appear again, select to "Remember my decision".



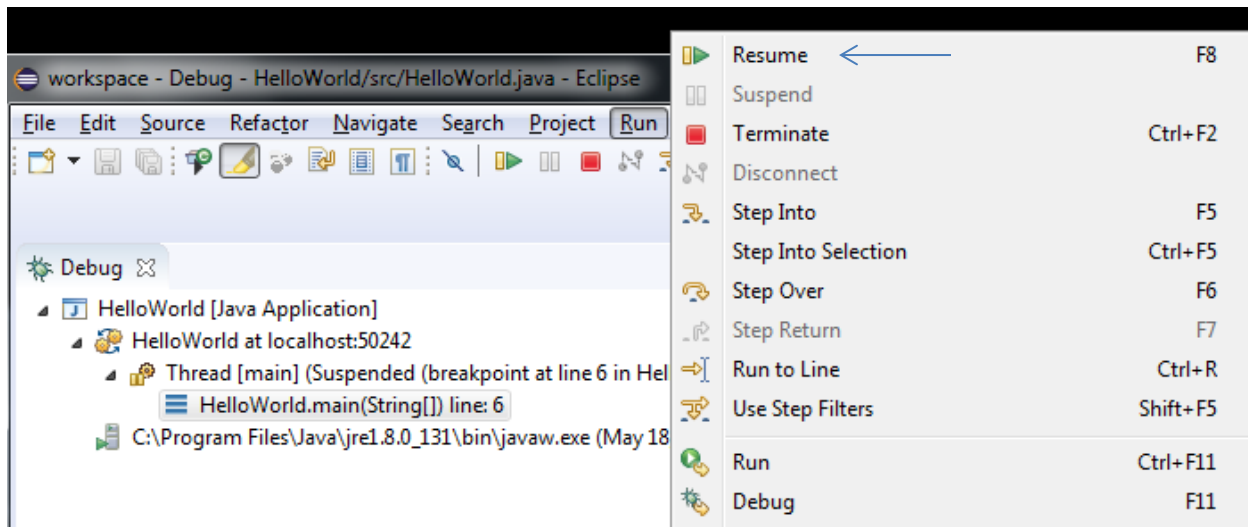
The program stops (or “breaks”) your program when it reaches the break point. The Variables in your program or shown in the Variables panel above. Line #6 was not executed, therefore the value of `i` is listed as 0.



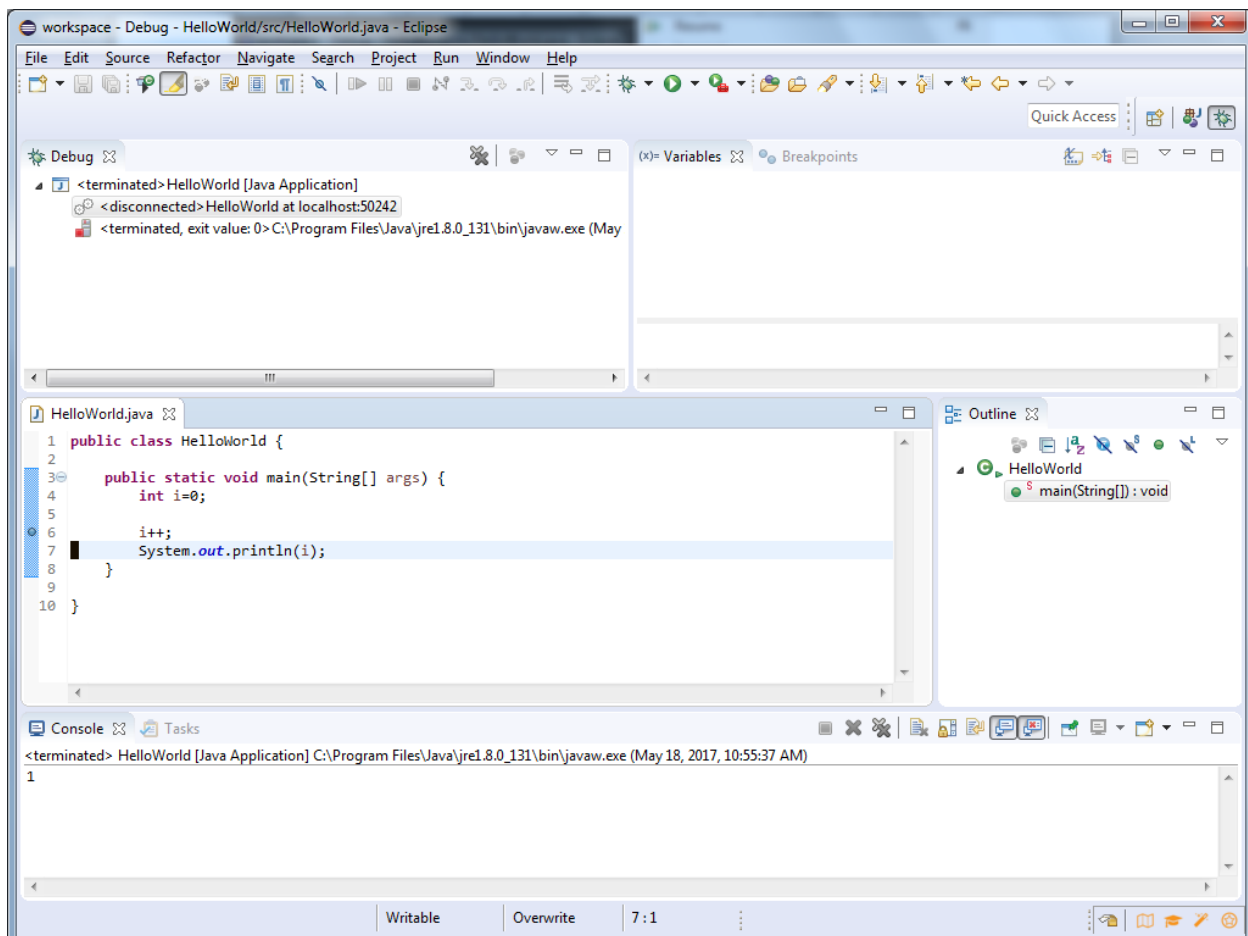
From the **Run** menu, select **Step Into** to see the next instructions. Pressing **F5** will let you step through your program one instruction at a time.



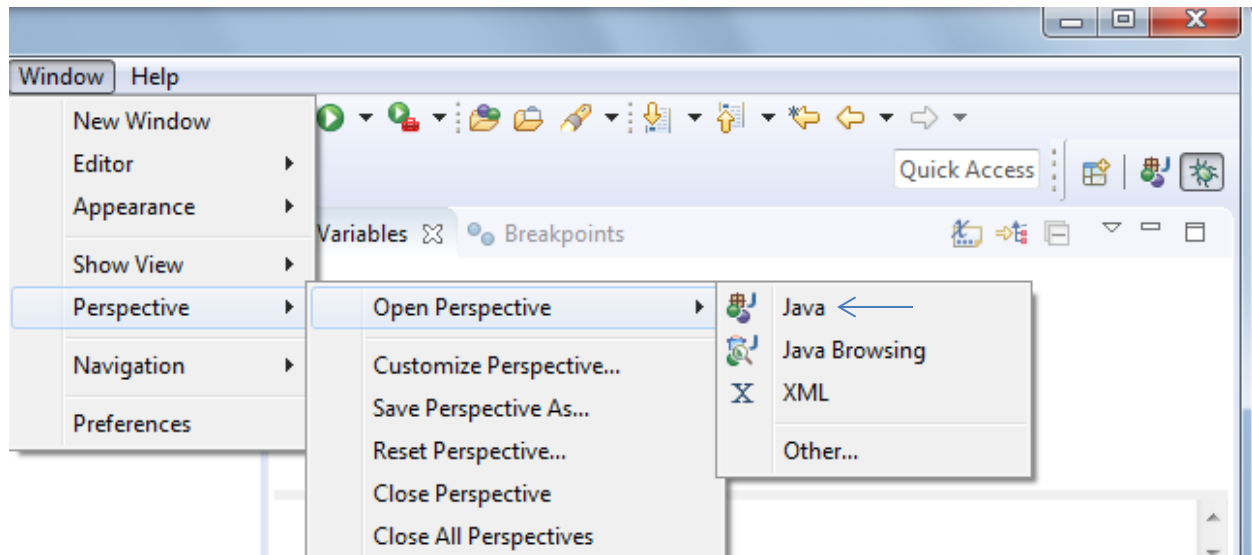
Line #6 is executed and now the value of `i` becomes 1 as indicated by the highlighted value above.



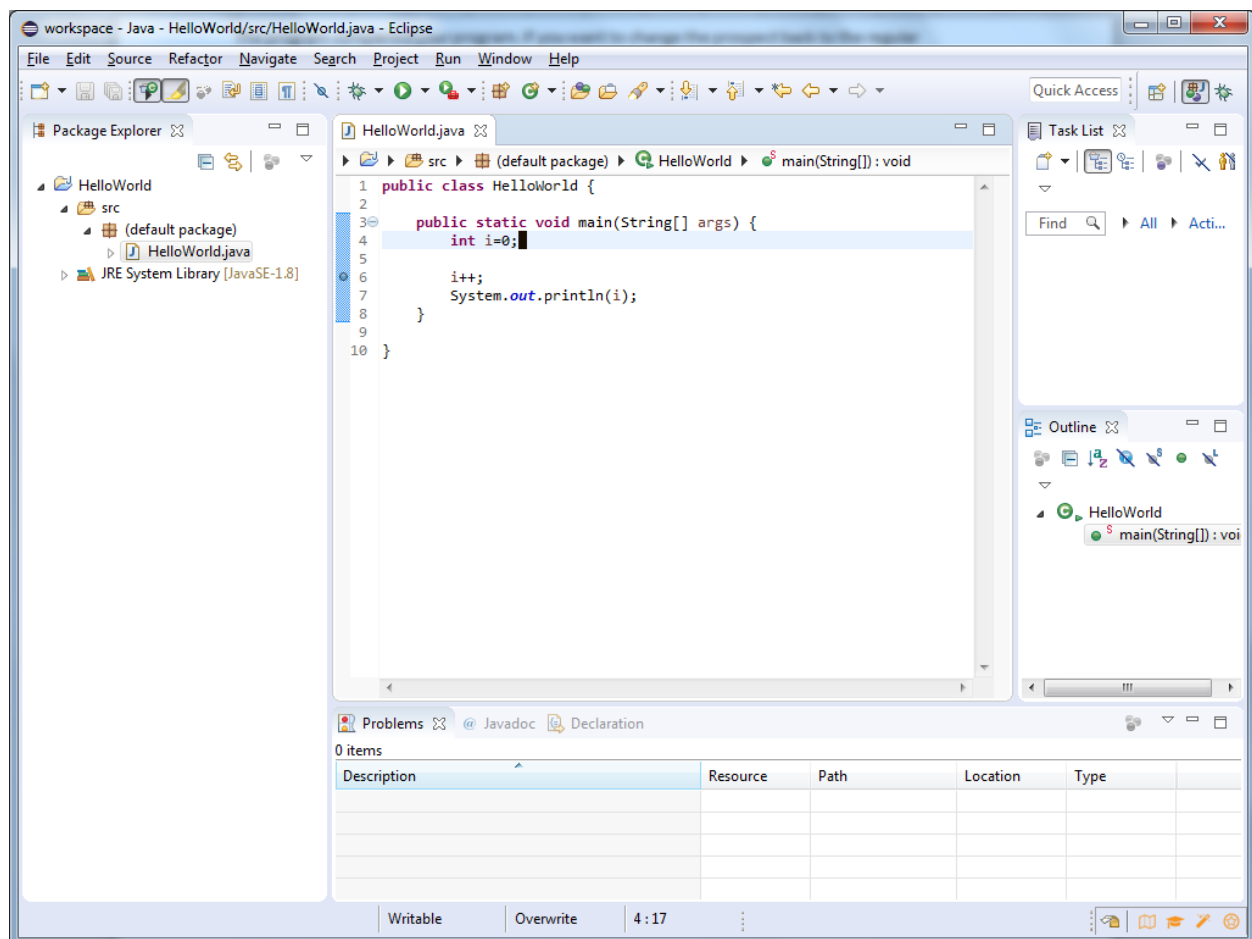
From the **Run** menu you can select **Resume** (F8) to allow the program to finish running.



The debugger completed your program. If you want to change the perspective back to the regular perspective, you can.

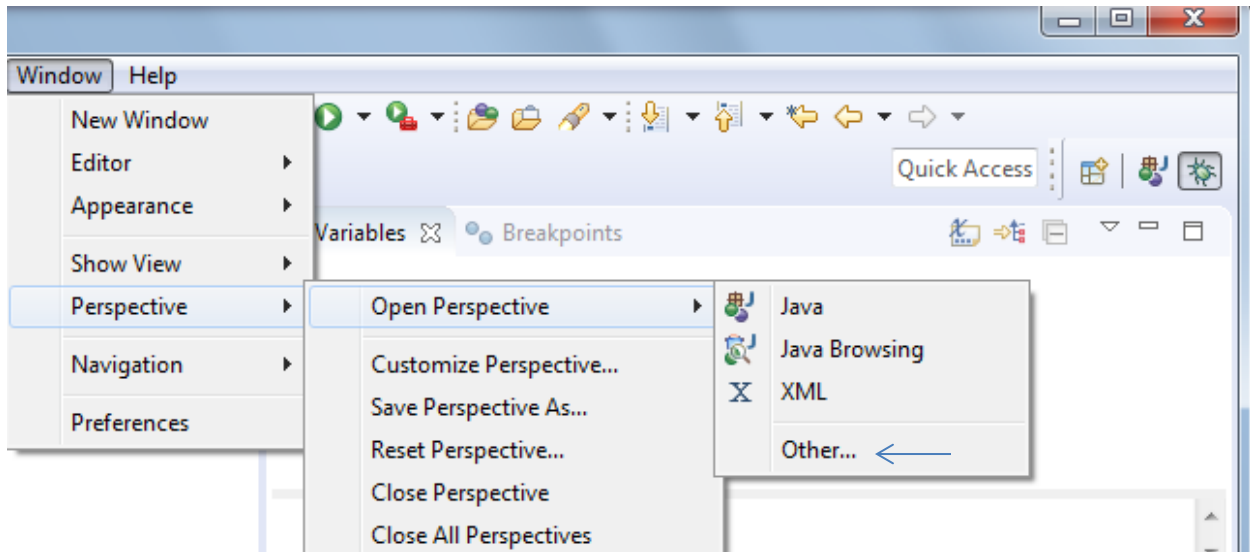


From the **Window** menu, select **Perspective**, **Open Perspective**, and select **Java**.

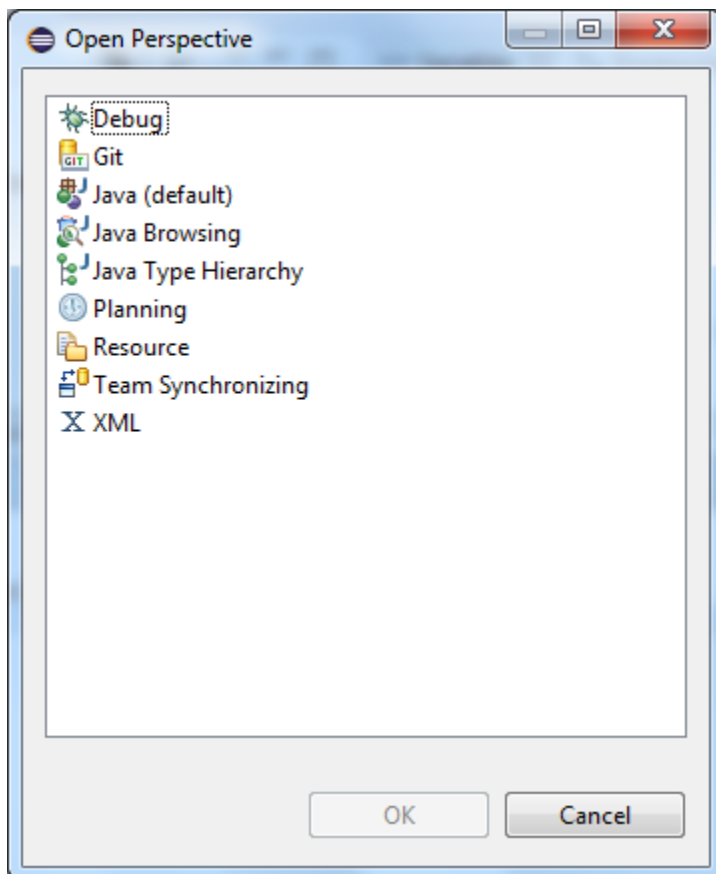


Back as the Java perspective.

If you prefer to work in the “Debug” (or some other) perspective, you can access it from the “Other Perspective” menu.



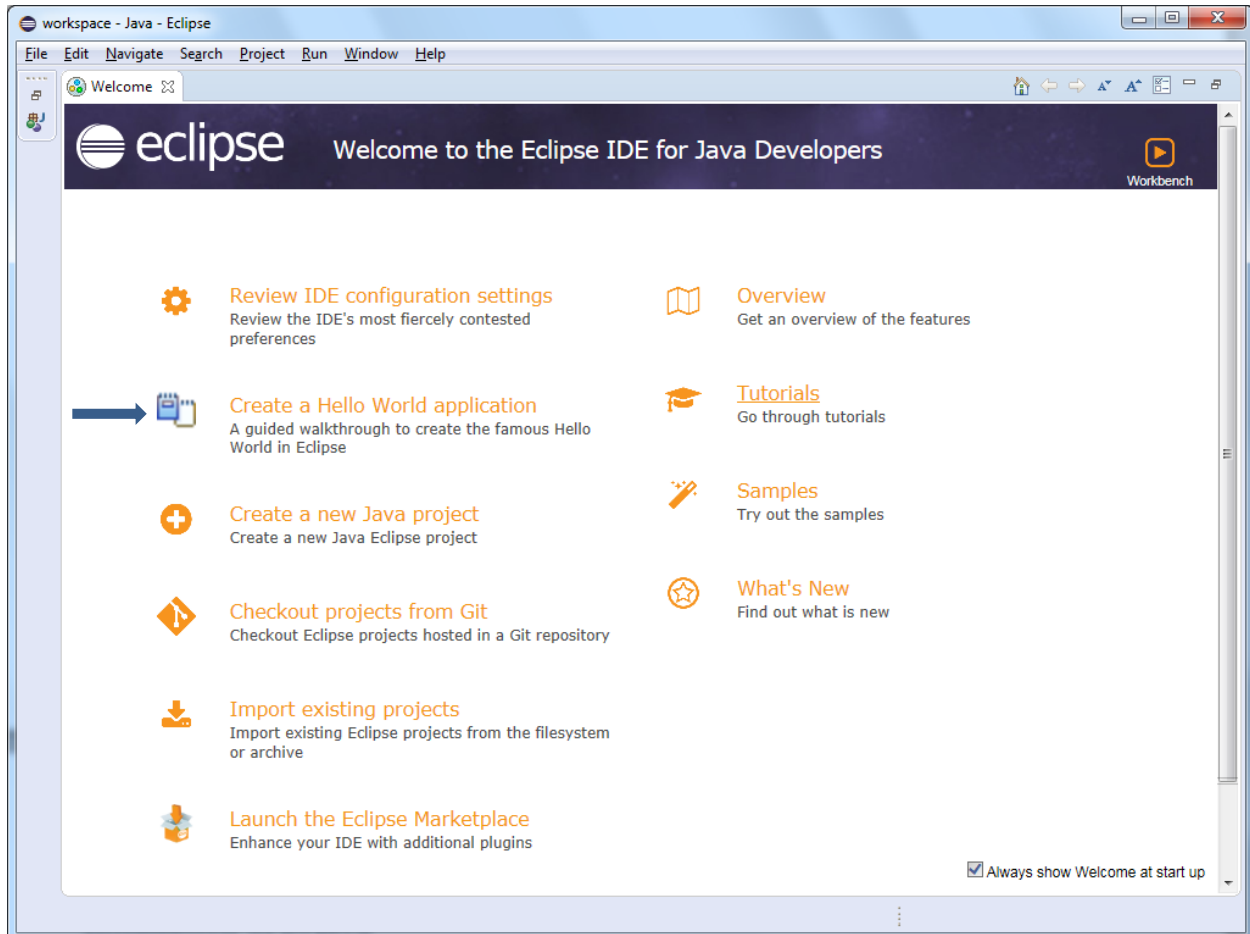
From the **Window** menu, select **Perspective**, **Open Perspective**, and select **Other**.



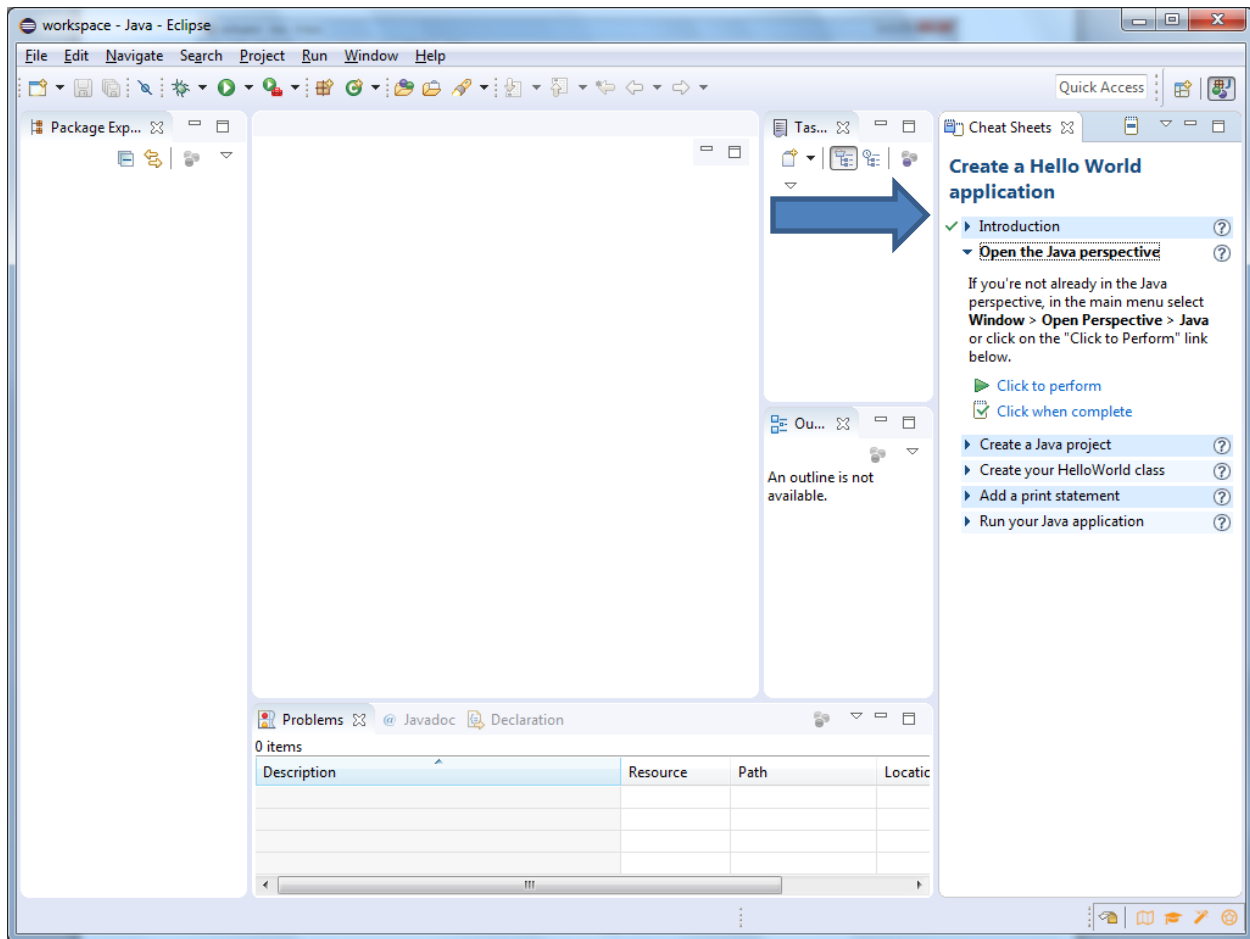
Tutorial: Create a Hello World Application



Select from the **Help** menu, select **Welcome screen**.




Select **Create a Hello World application**.



Follow the guide on the right. Click on the  near a topic to learn more about it. Such as:

▼ Open the Java perspective

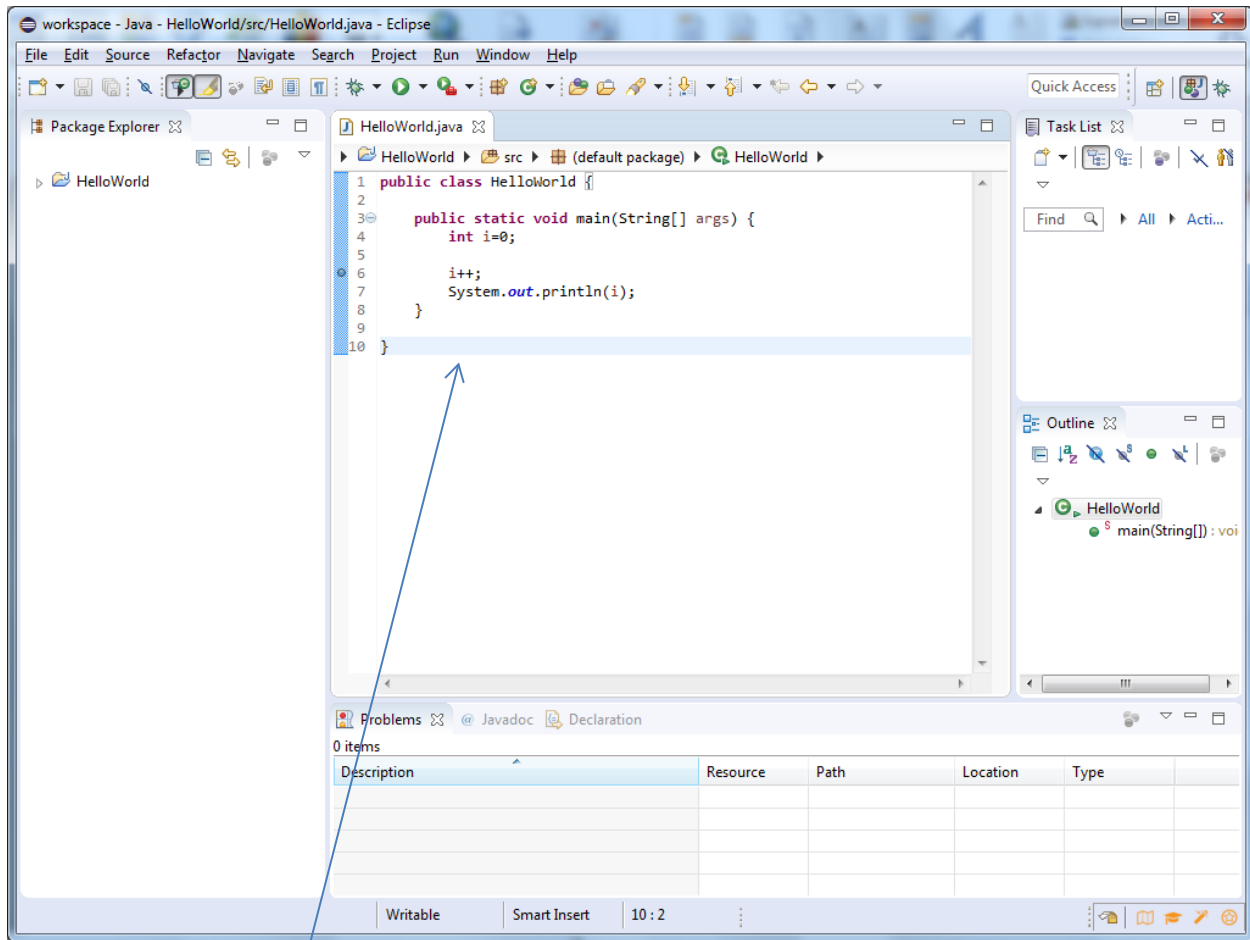
If you're not already in the Java perspective, in the main menu select **Window > Open Perspective > Java** or click on the "Click to Perform" link below.

 [Click to perform](#)

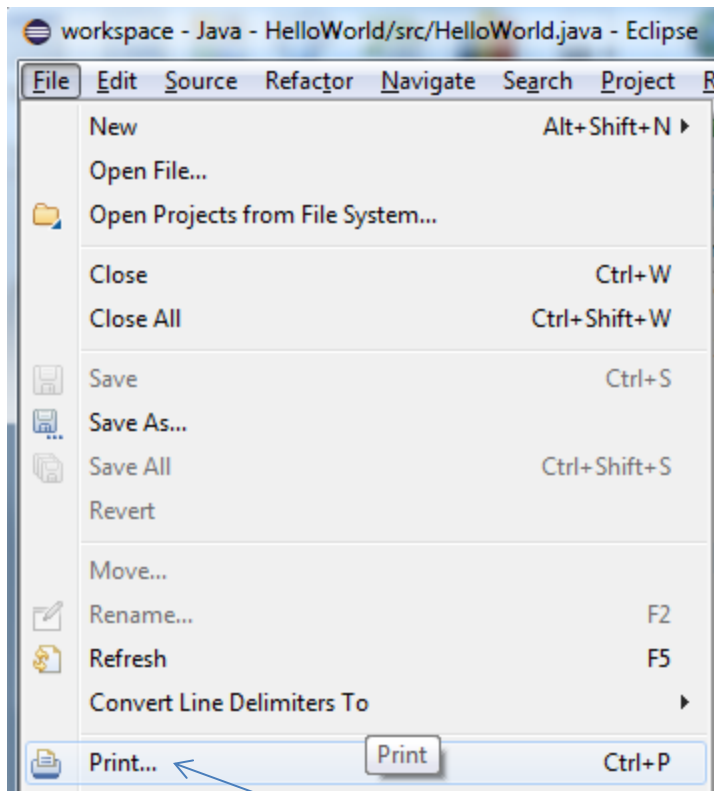
 [Click when complete](#)

Follow the instructions.

Printing



Make sure the editor panel is active.



From the File menu, select **Print**.