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Installation of Java JDK

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

Download the JDK.
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.
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**.
Eclipse Foundation Software User Agreement

April 9, 2014

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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:

![Eclipse Java Neon](image)

![Eclipse Launcher](image)

**Select a directory as workspace**

Eclipse uses the workspace directory to store its preferences and development artifacts.

- **Workspace**: C:\Users\Staff\workspace

- **Use this as the default and do not ask again**

Use the standard Workspace and click on OK.
From the **File** menu, select **New**, then select **Java Project**.
Type in the project name as **HelloWorld** and then click on **Finish**.
From the **File** menu, select **New**, then select **Class**.
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:

```java
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.

```
6    i++;  
```

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 \texttt{i} is listed as \texttt{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 prospect back to the regular prospective, you can.
From the **Window** menu, select **Perspective, Open Perspective**, and select **Java**.

Back as the Java prospective.
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**.