Brooklyn College

DrJava

A Beginner's Guide

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9/7/2018

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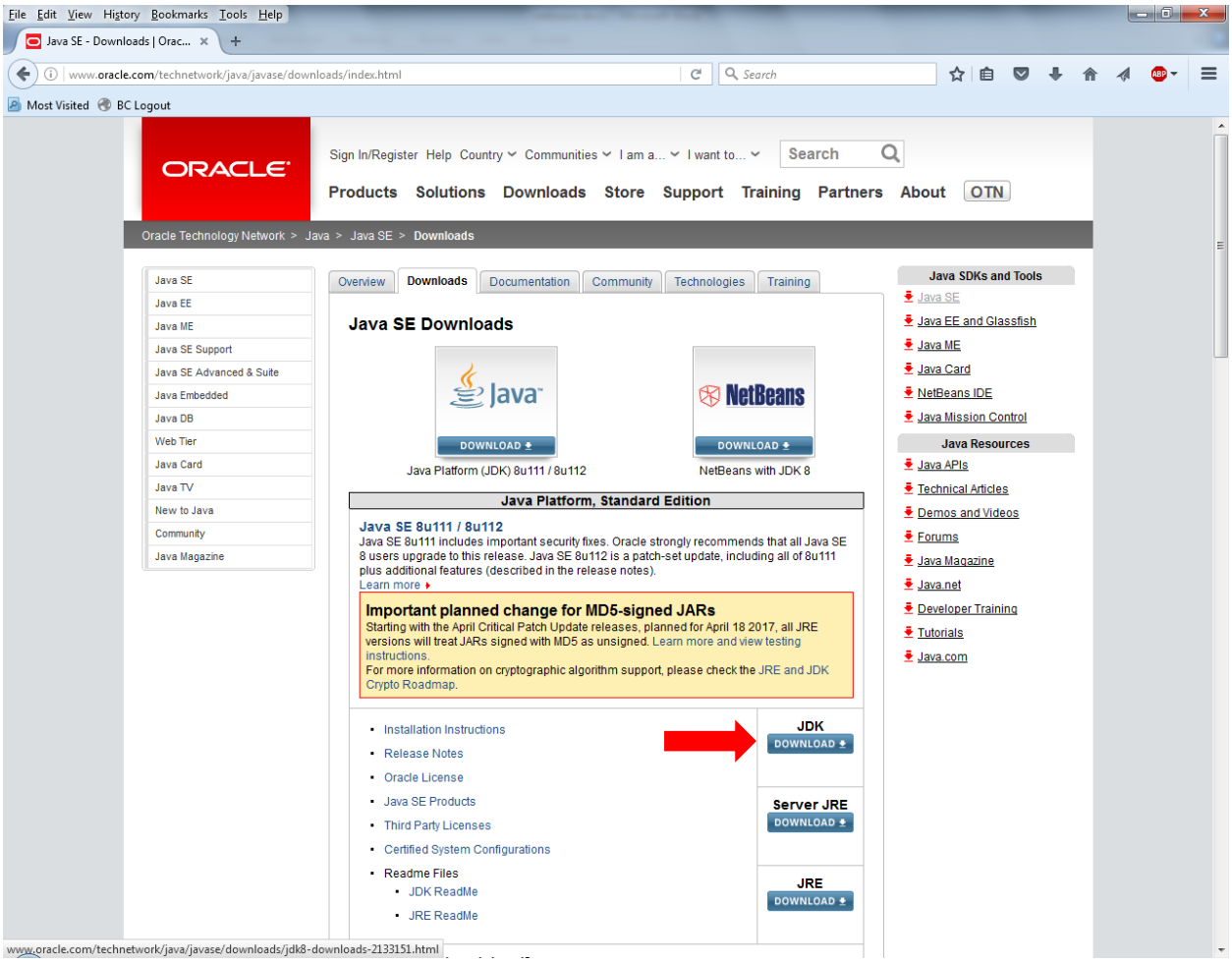
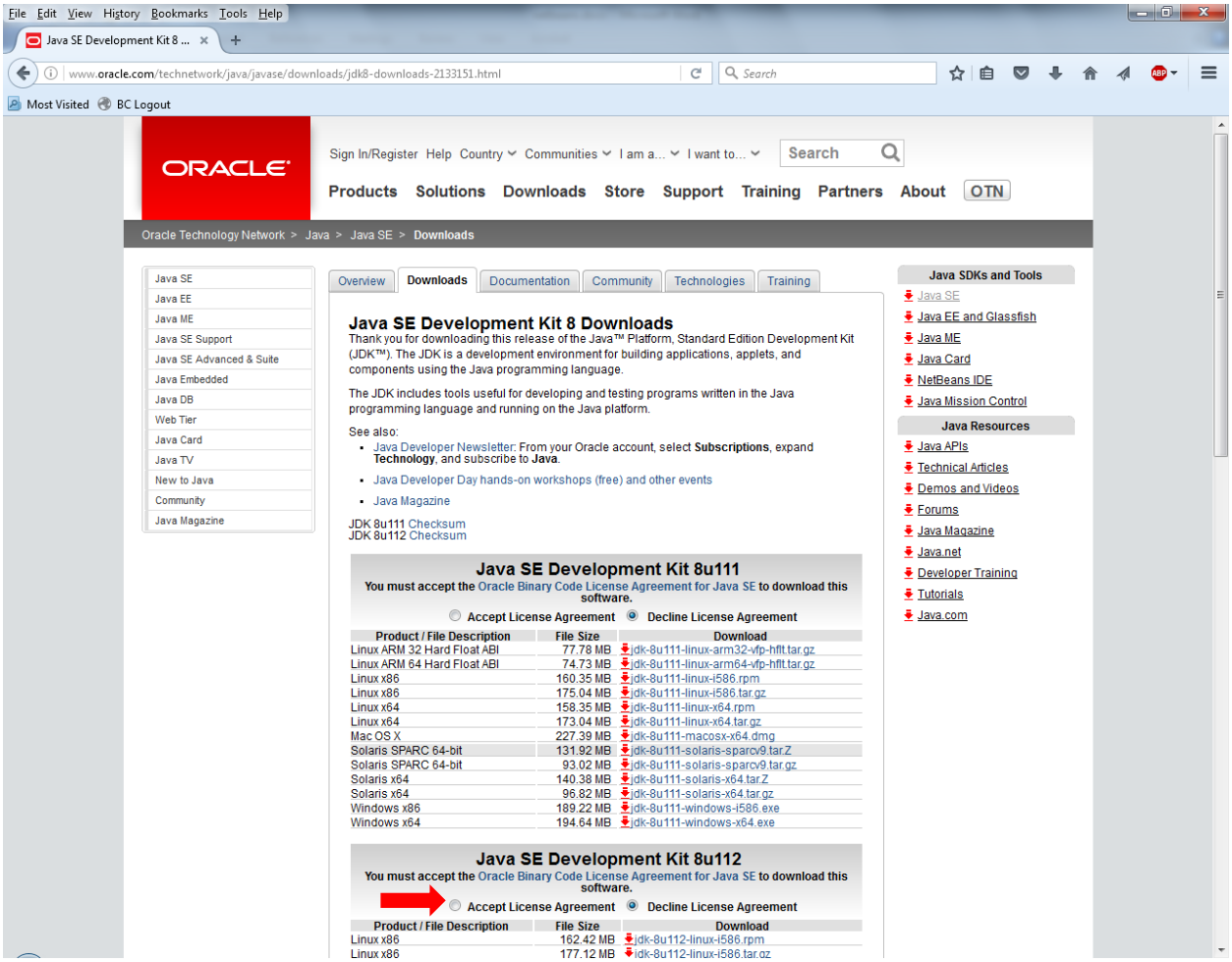
Installation of Java JDK

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

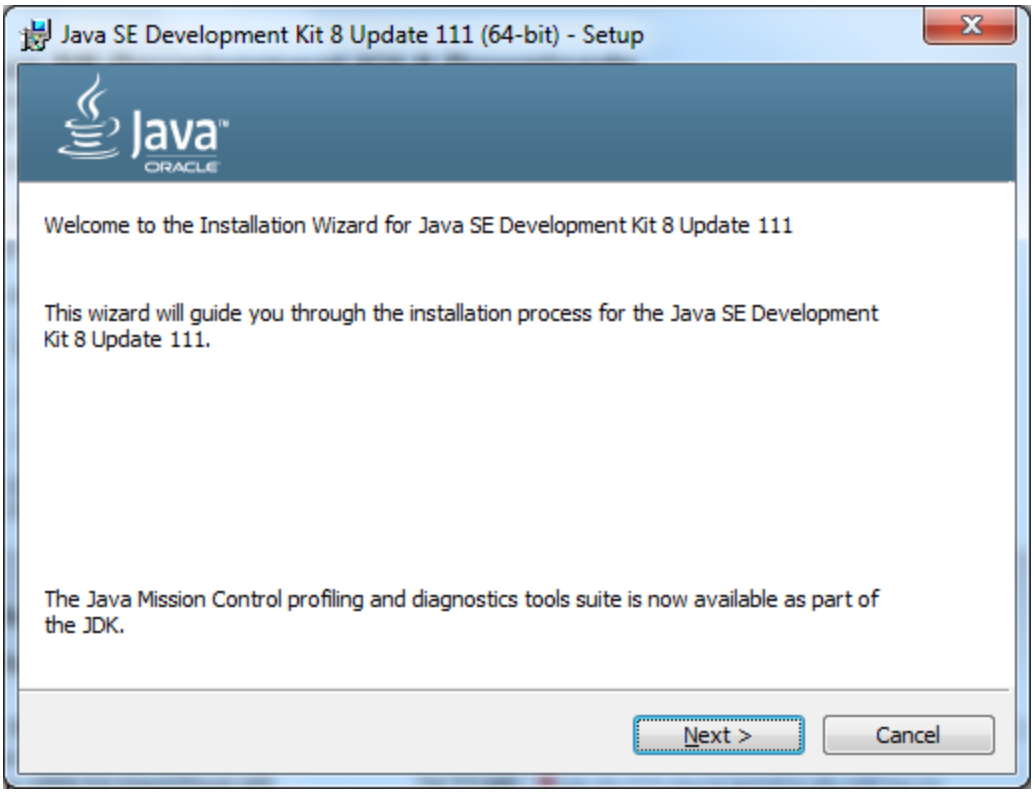


Download the **JDK**.

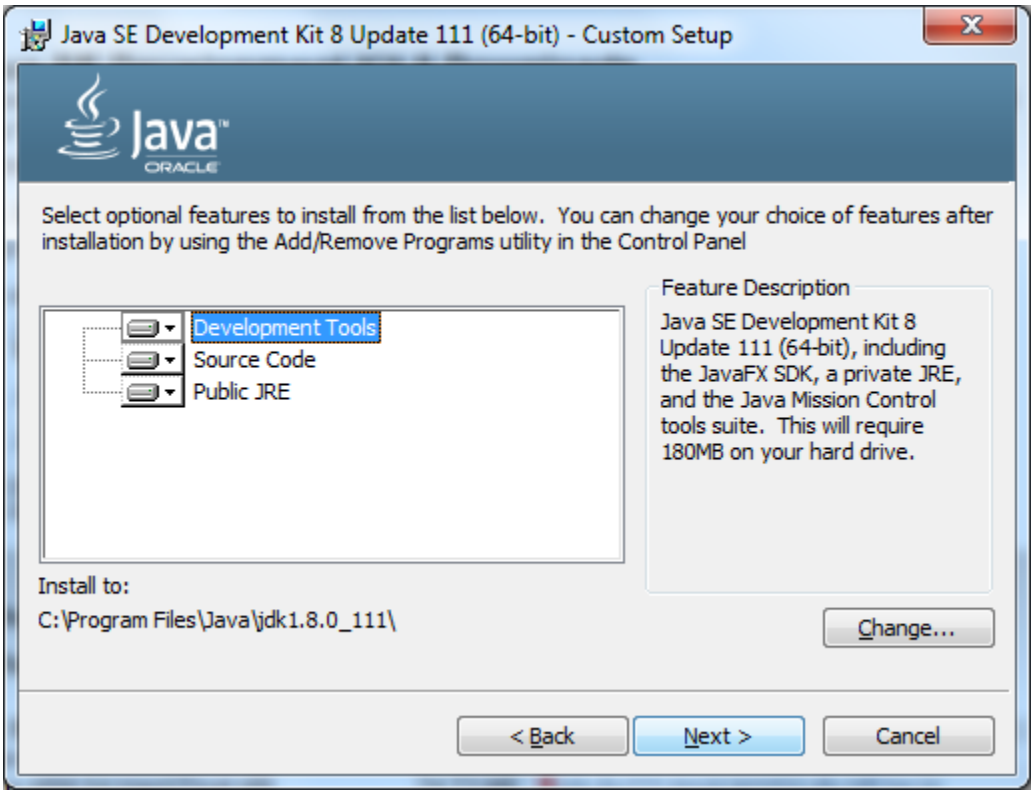


Select to **Accept License Agreement**. Then select the **Download** link next to the Product that matches your Operating System that you are working one (such as Windows x64).

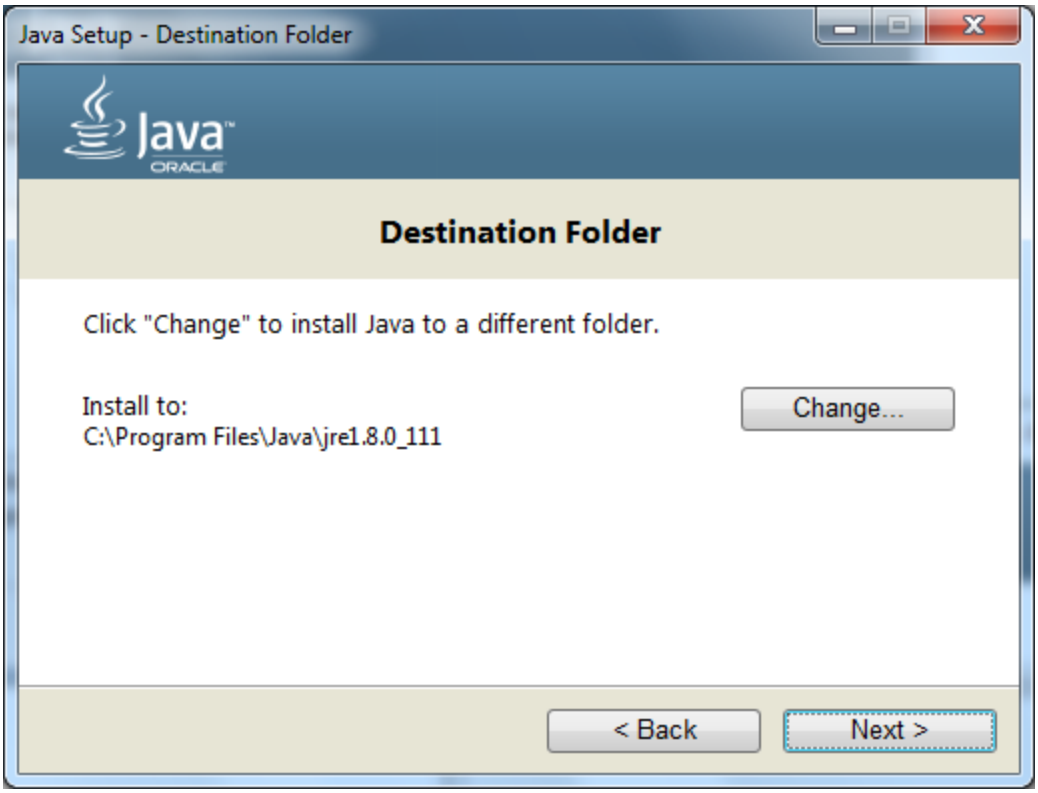
When this download is complete, run the program to install the JDK.



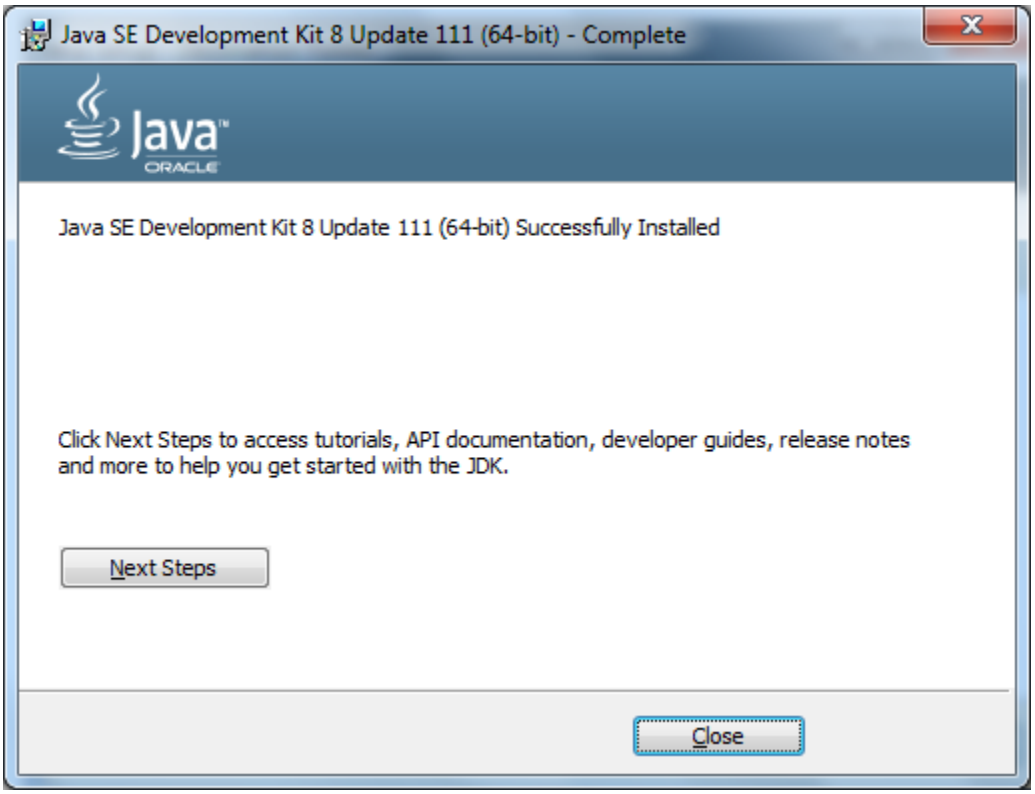
Select **Next**.



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

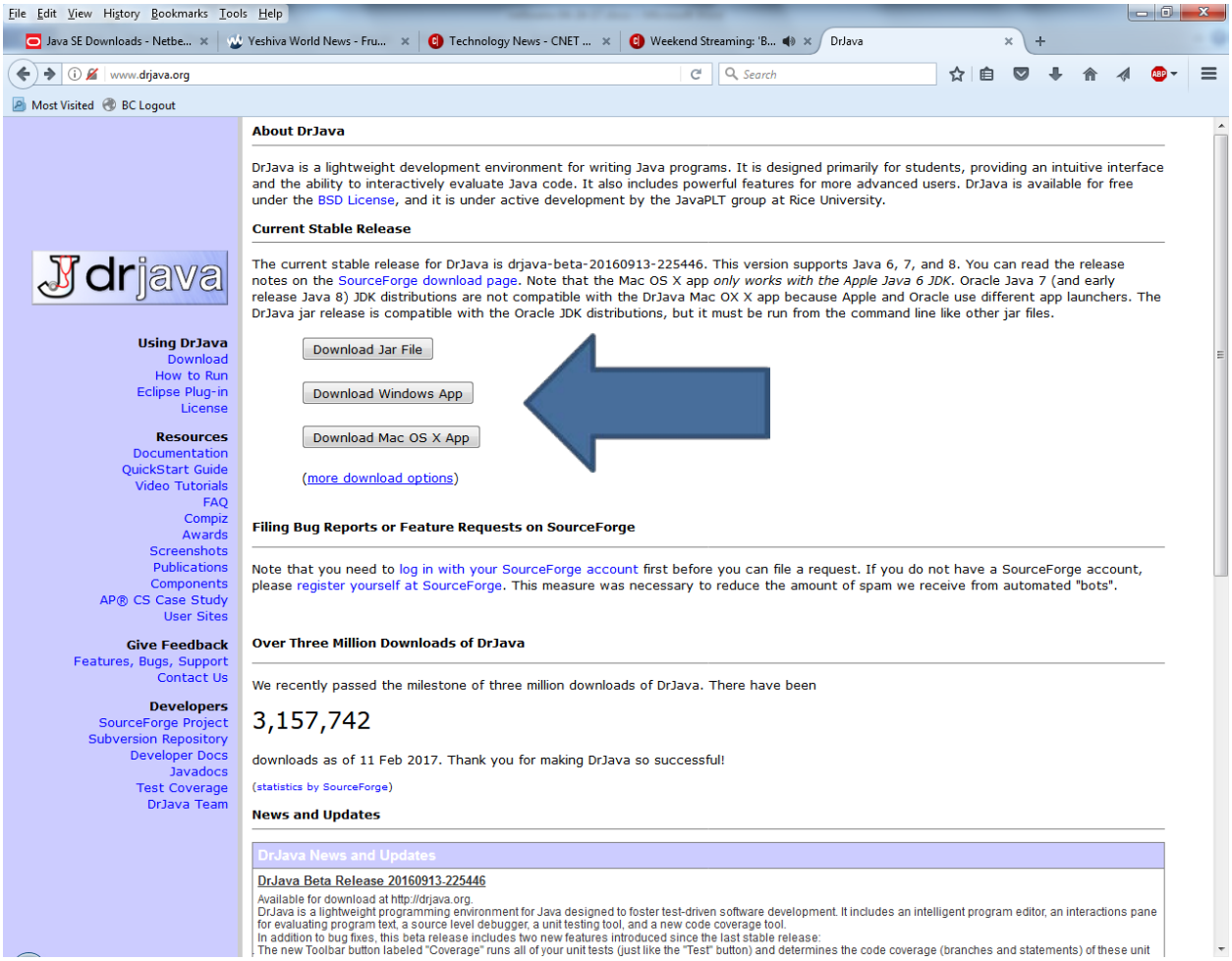


Leave the default values and select **Next**.



Click on **Close**.

Installation of DrJava



http://www.drjava.org/

Select to **Download** for your version of your Operating System, Windows or Mac OS X. If you are on a Linux system (or if the App for your OS does not function correctly), choose the Jar file. A **JAR** (Java ARchive) is a compressed file package that will run on any system with an existing Java instalation.

Please note that on newer Macs you will need to select "Download the Jar file". *Download the Jar file, place it on your Desktop, and then Double Click the icon to start DrJava.*

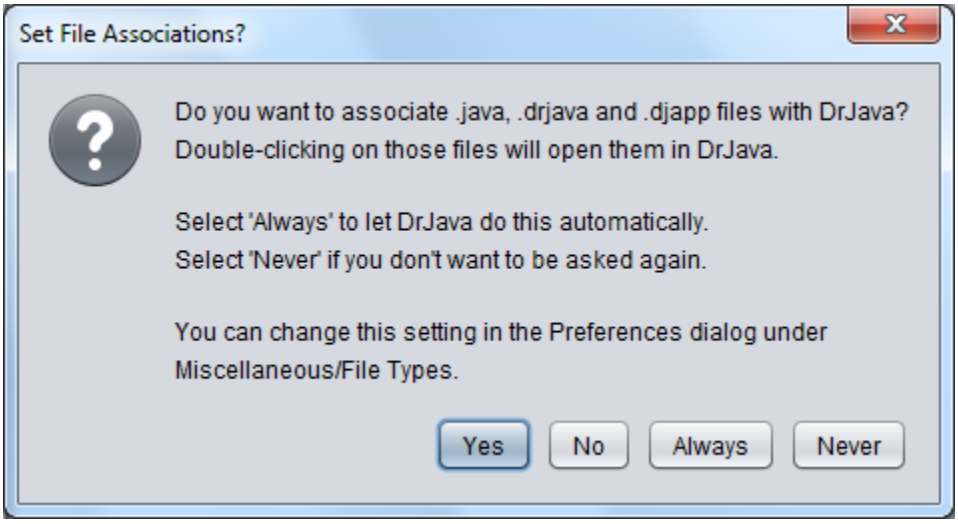
Wait until the download is complete. Then place the file on your Desktop, or in some location that you can easily find it later.

If you are on a Mac and you cannot open DrJava:

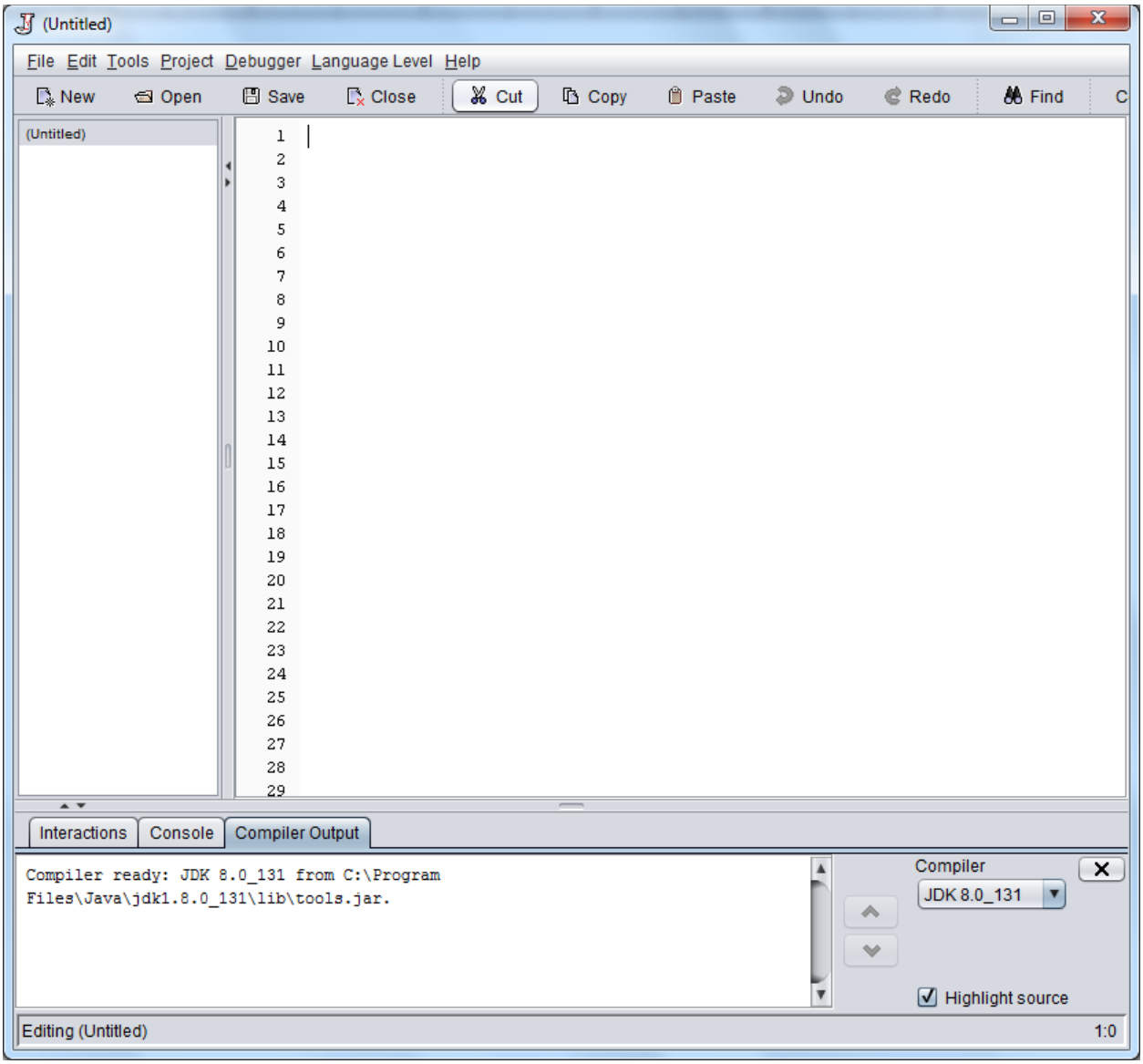
It is likely because of the security settings preventing you from running a program from an unknown developer. You can do the following:

- Open Terminal and then type the following command:
  - **`sudo spctl --master-disable`**
  - You will key icon. Type your password (or the admin password) and press enter.
- Go to the System Preferences on your Mac. "Anywhere" setting will selected.
- Rerun DrJava and if it asks if you would like open it, select **Open**.
- Go back to the Terminal and type the following command to restore the default setting which prevents unauthorized programs from running:
  - **`sudo spctl --master-enable`**

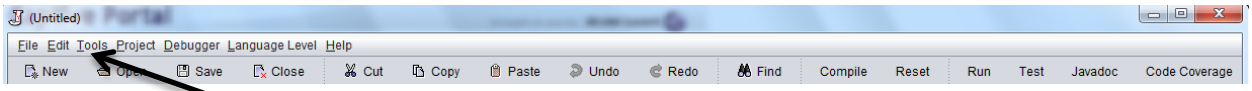
First Program using DrJava



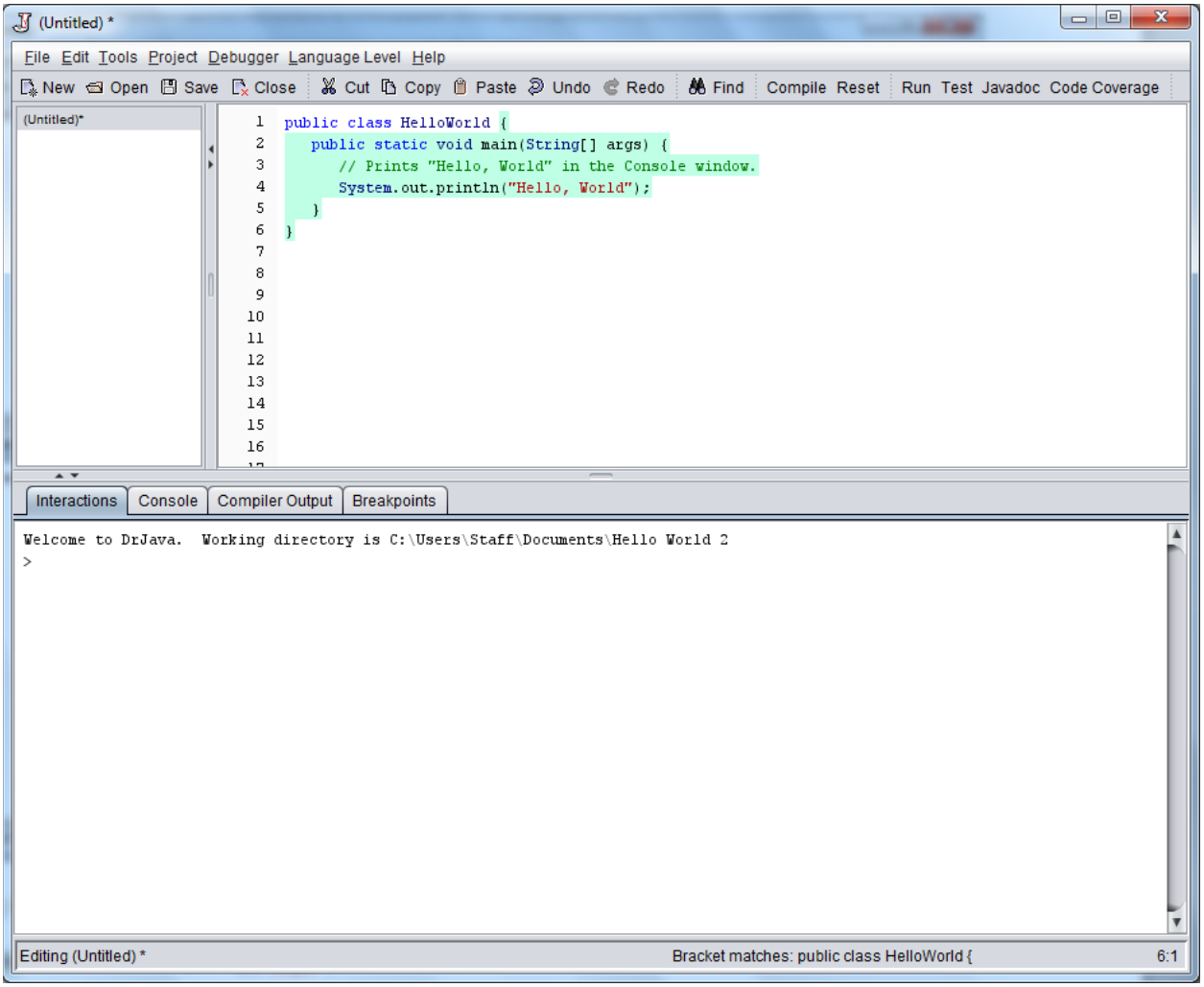
The first time you start DrJava, you will be asked if you want to associate .java and DrJava files with DrJava. If this is your primary Java IDE, select Yes. If you select Yes, then Java files will be associated with DrJava. If you have other IDEs for Java and do not want to make any adjustments, select Never.



If you cannot view the full toolbar at the upper part of the window, you should resize your window.



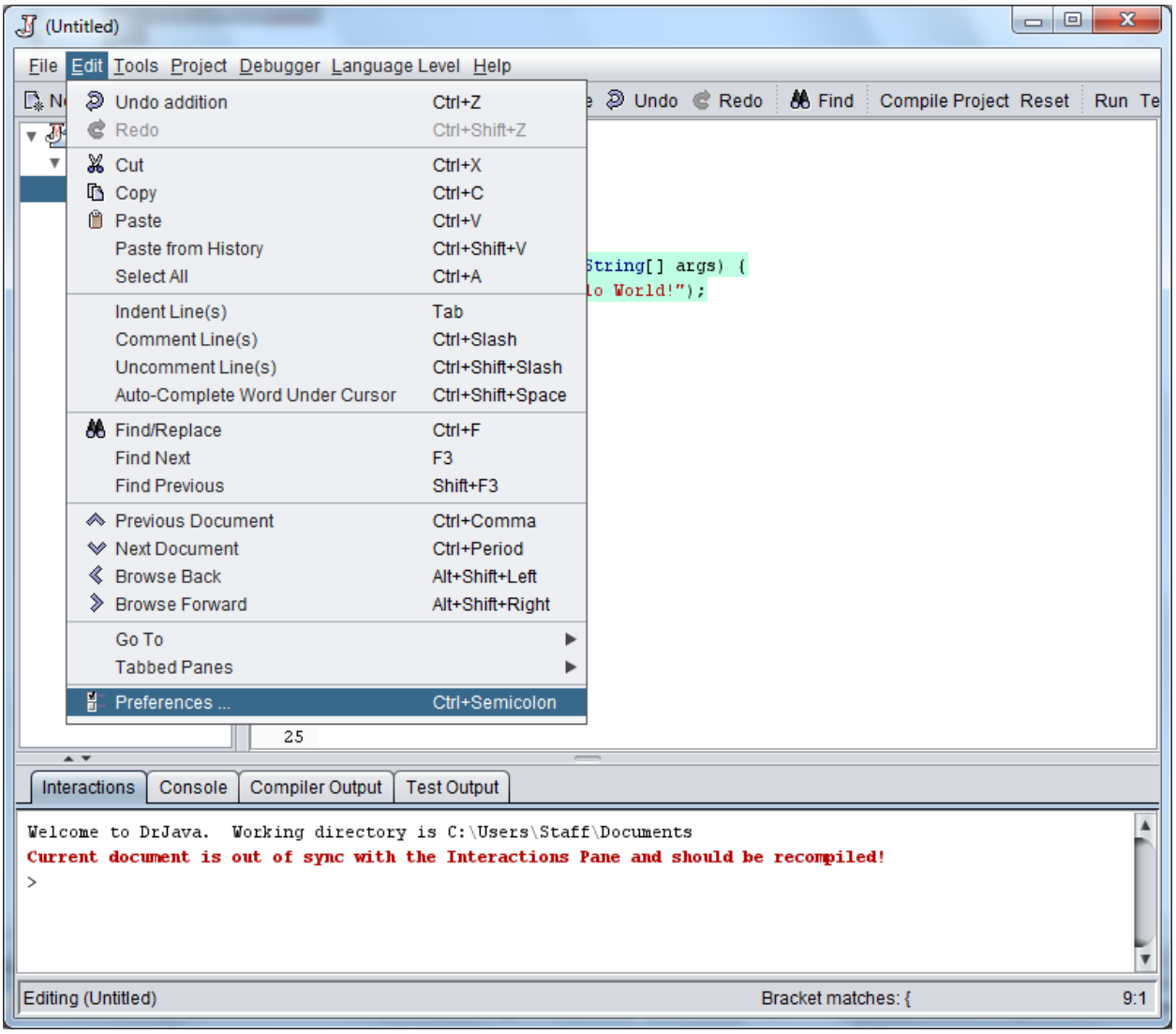
However, if you use the **Tool's** menu, you won't need to use the icons on the toolbar.



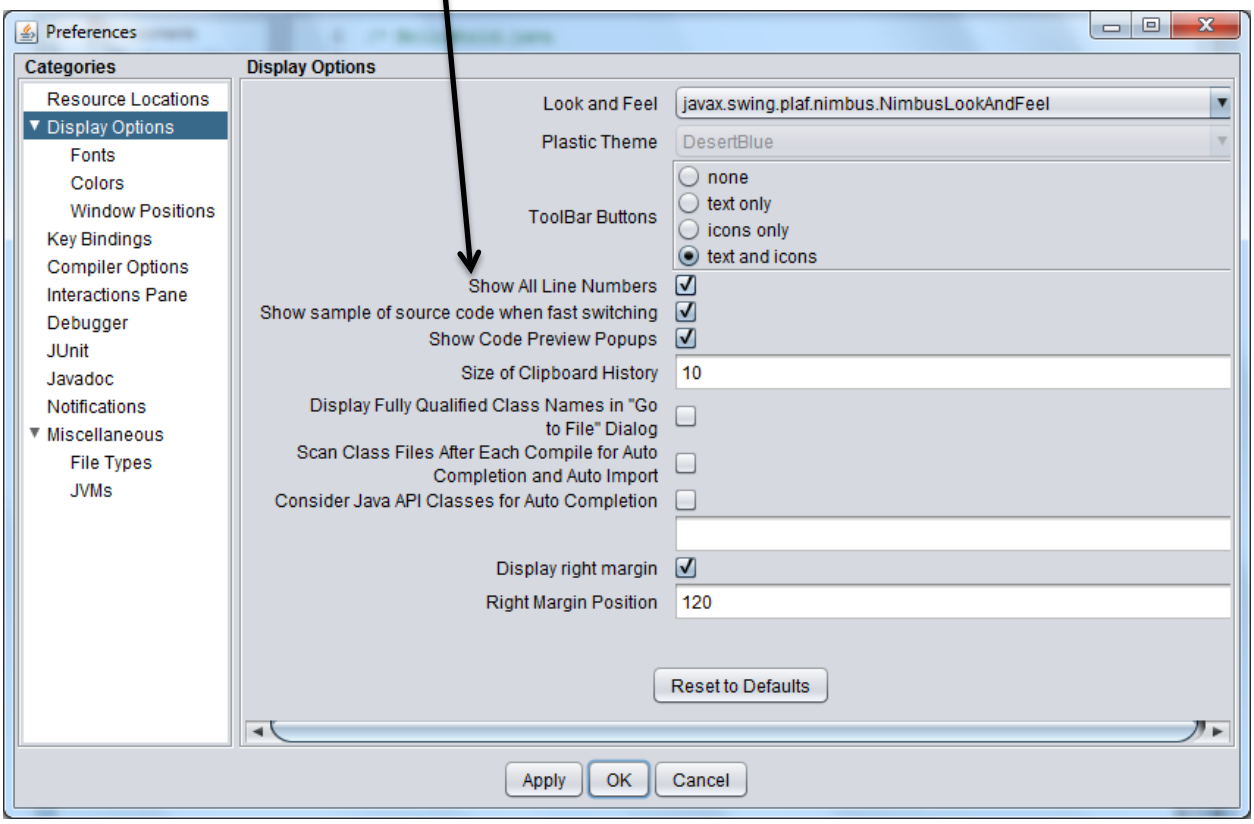
Enter in the following program:

```
public class HelloWorld {
   public static void main(String[] args) {
      // Prints "Hello, World" in the Console window.
      System.out.println("Hello, World");
   }
}
```

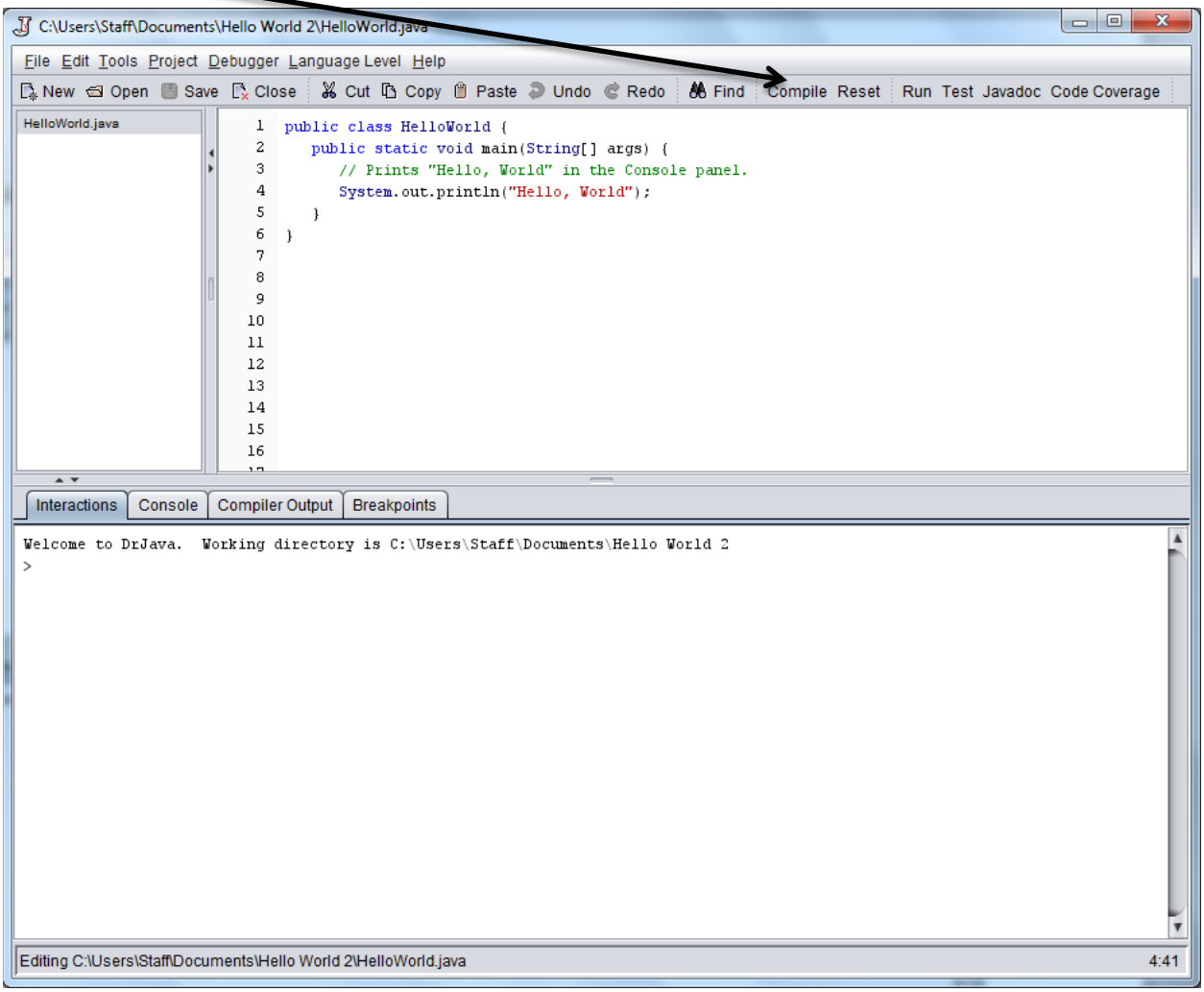
Set the line numbers. Go to **Edit**, **Preferences**.



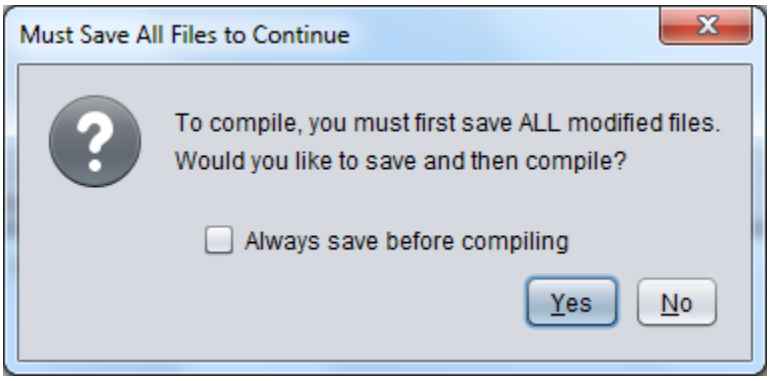
Display Options, **Show All Line Numbers**. Then select **OK**.



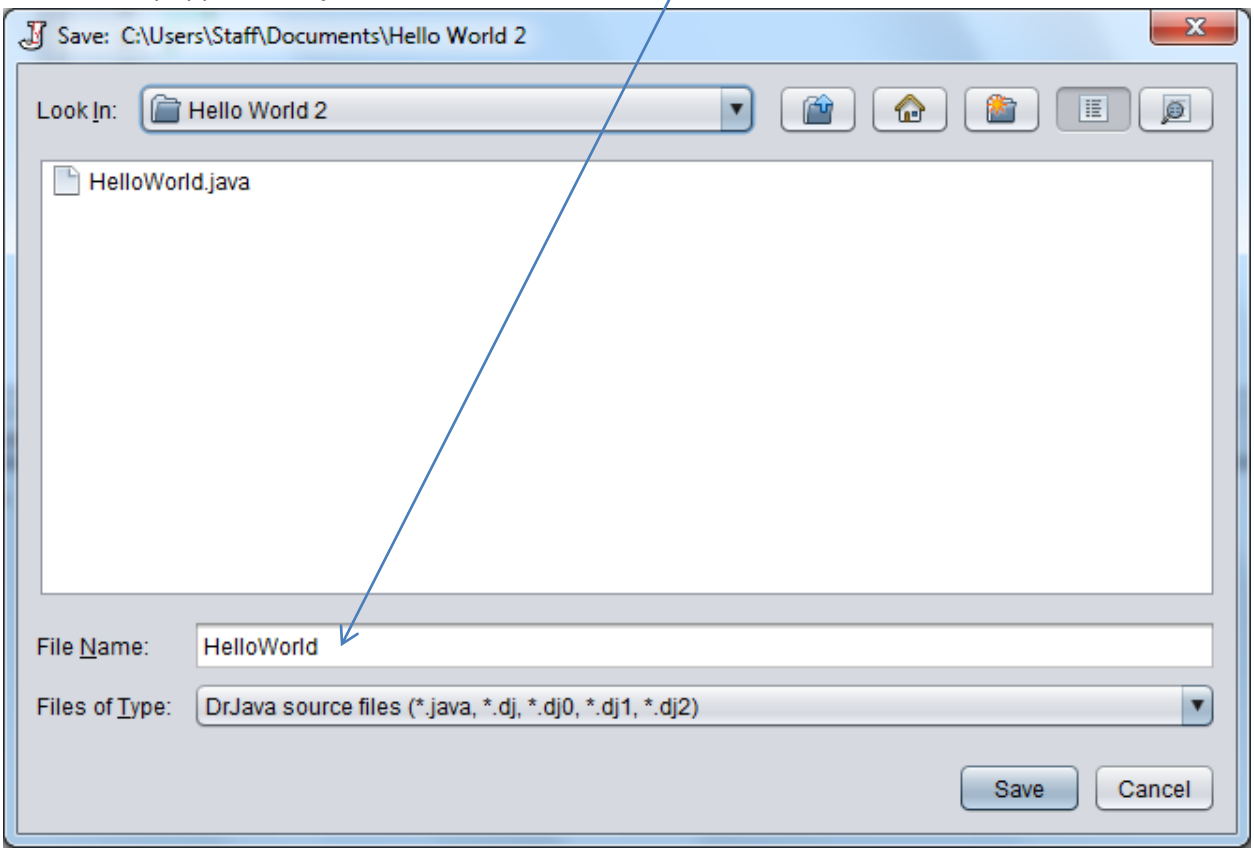
Compile



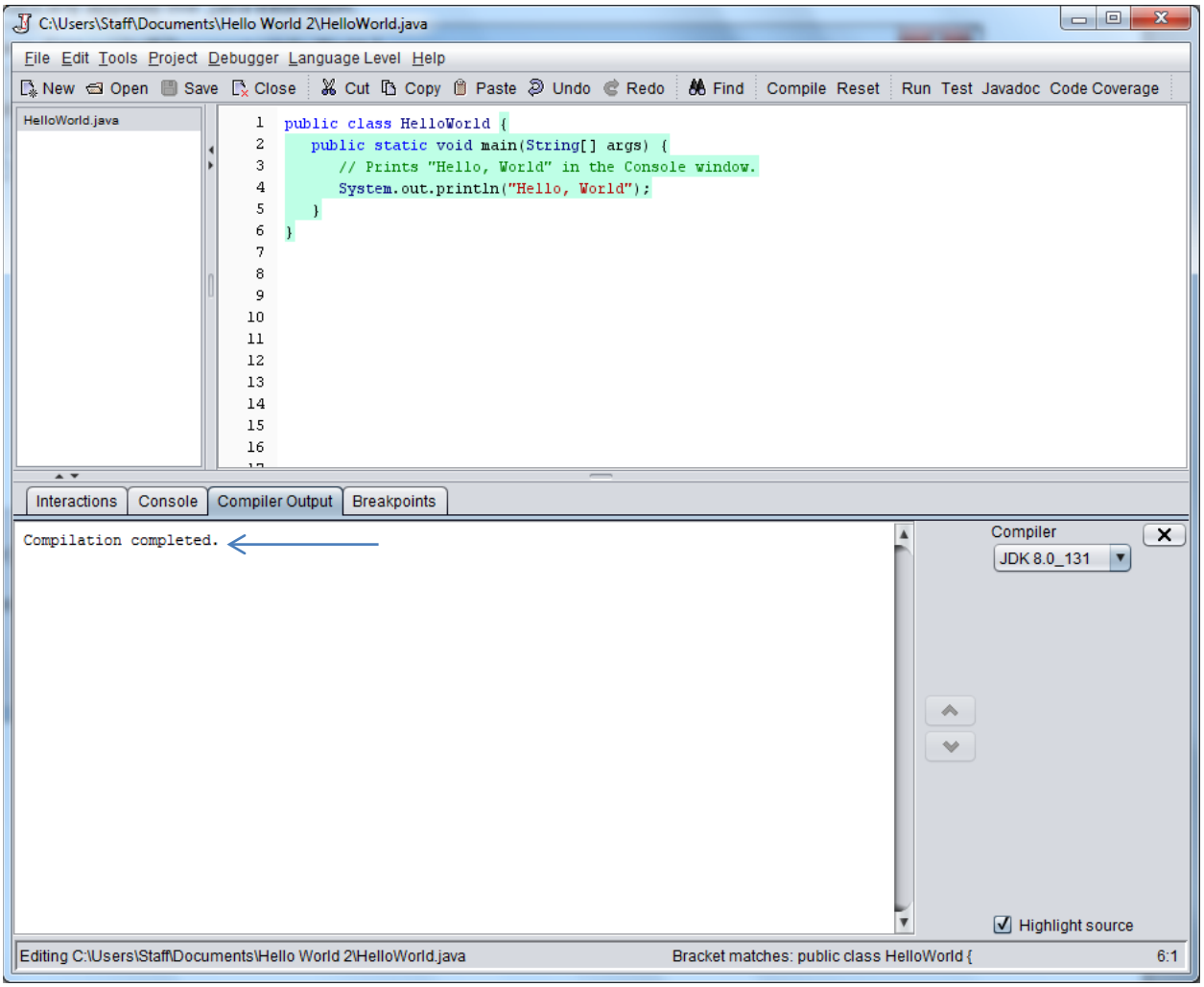
If the first time you are compiling, save the file:



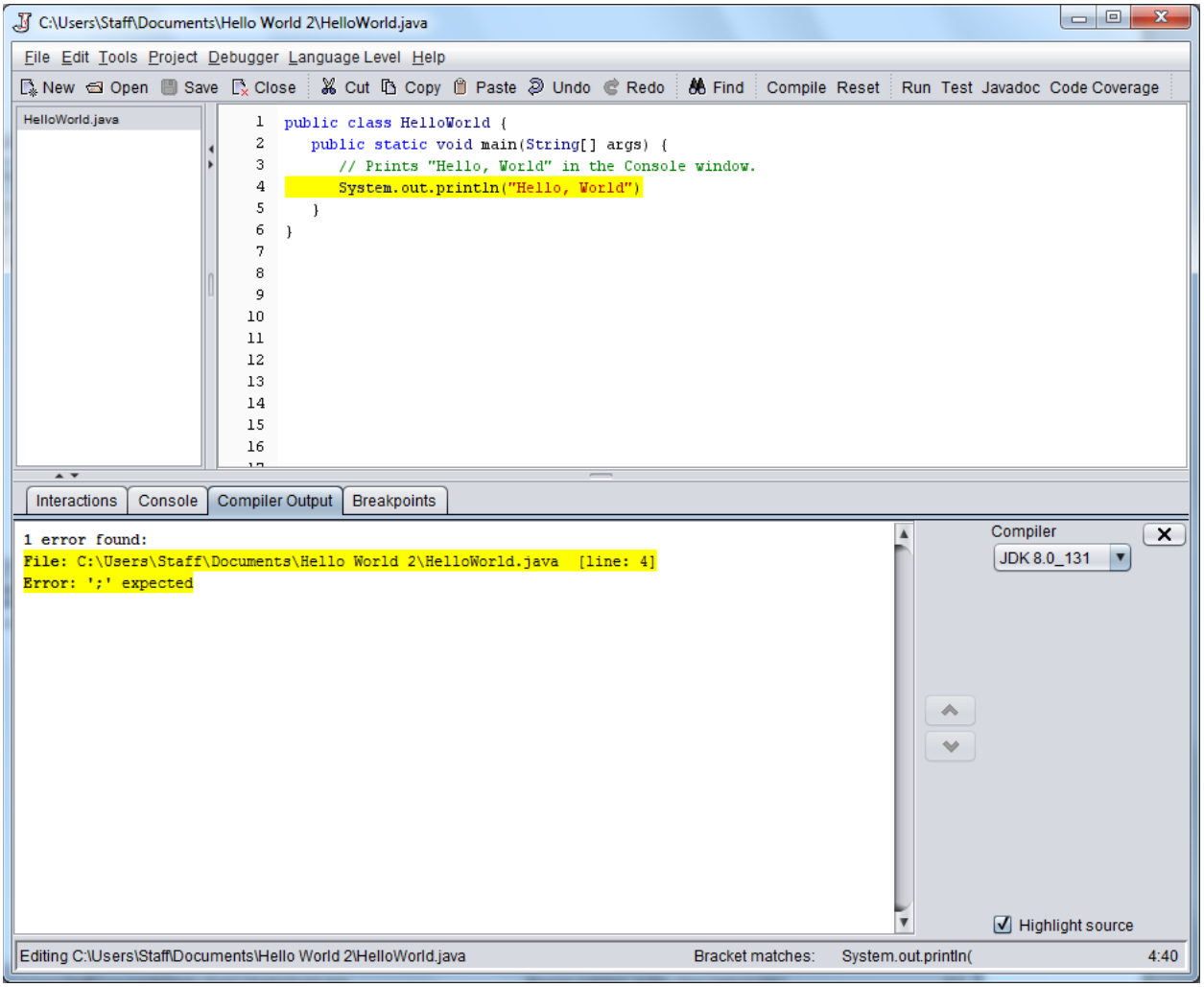
Pick some location to save the file, but just give the file name (without the extension). The program will automatically append the .java extension.



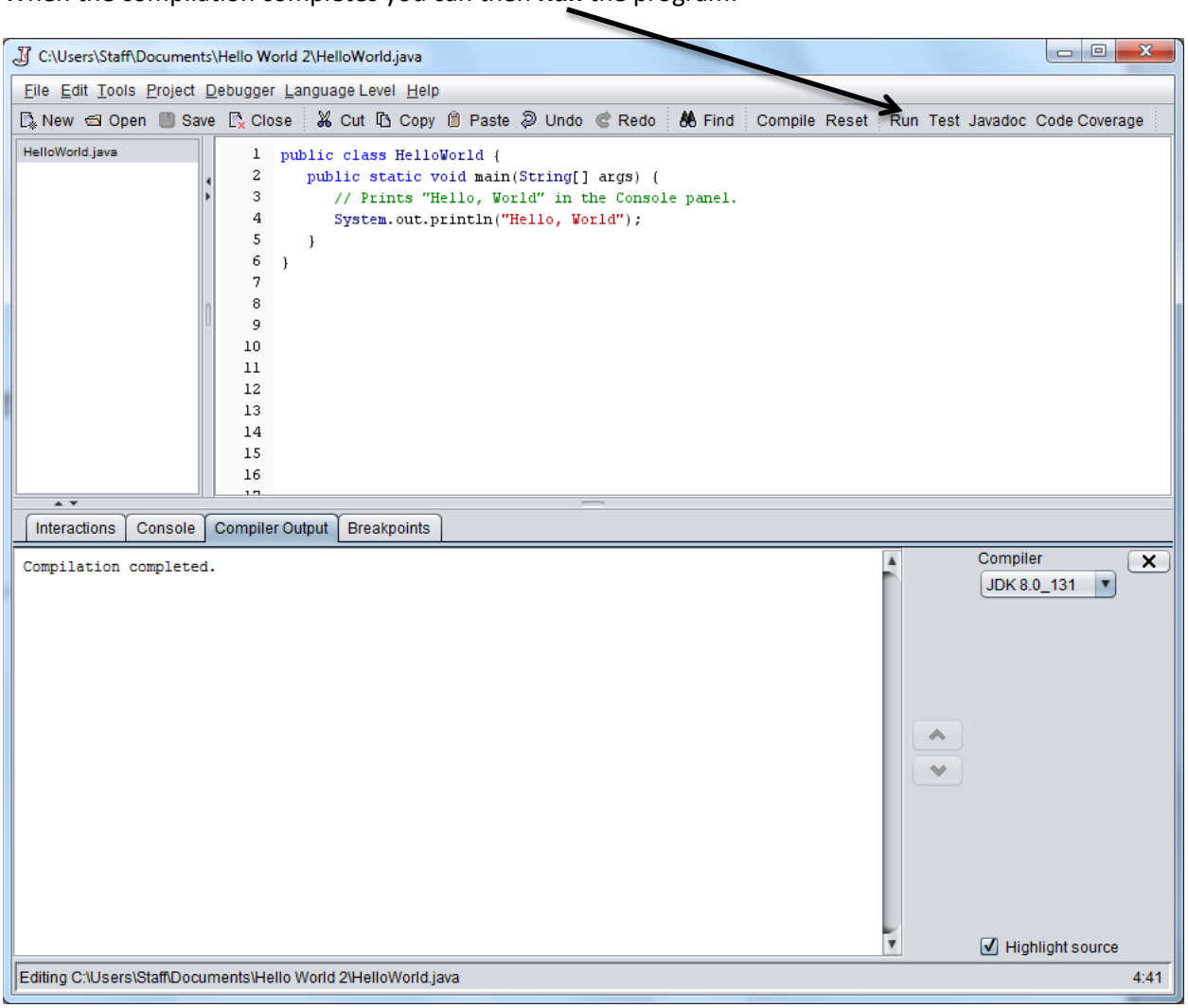
You will get a **Compilation completed** message if no errors are found.



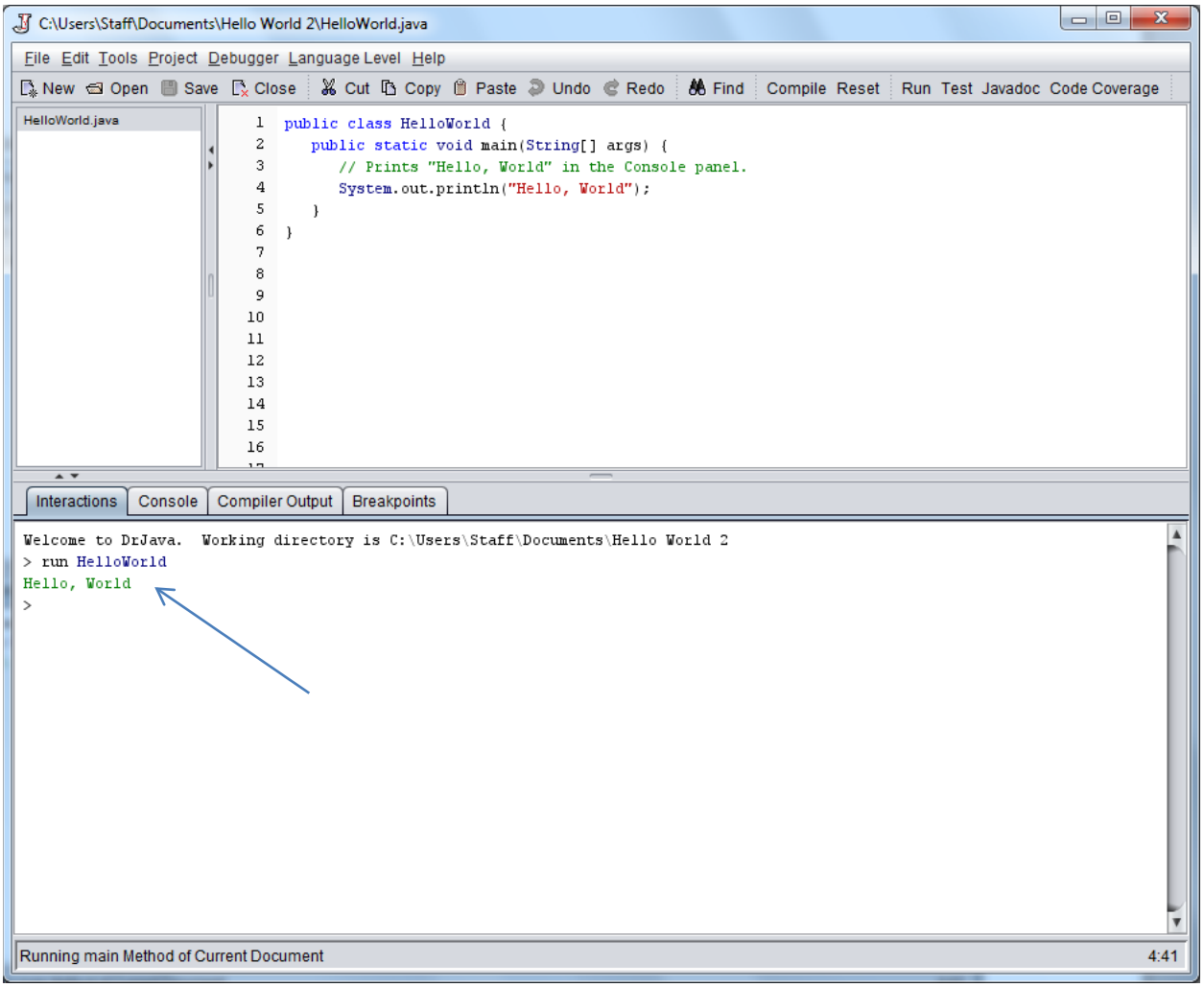
If an error was found it will list the line(s) that the error appears in the Compiler Output panel.



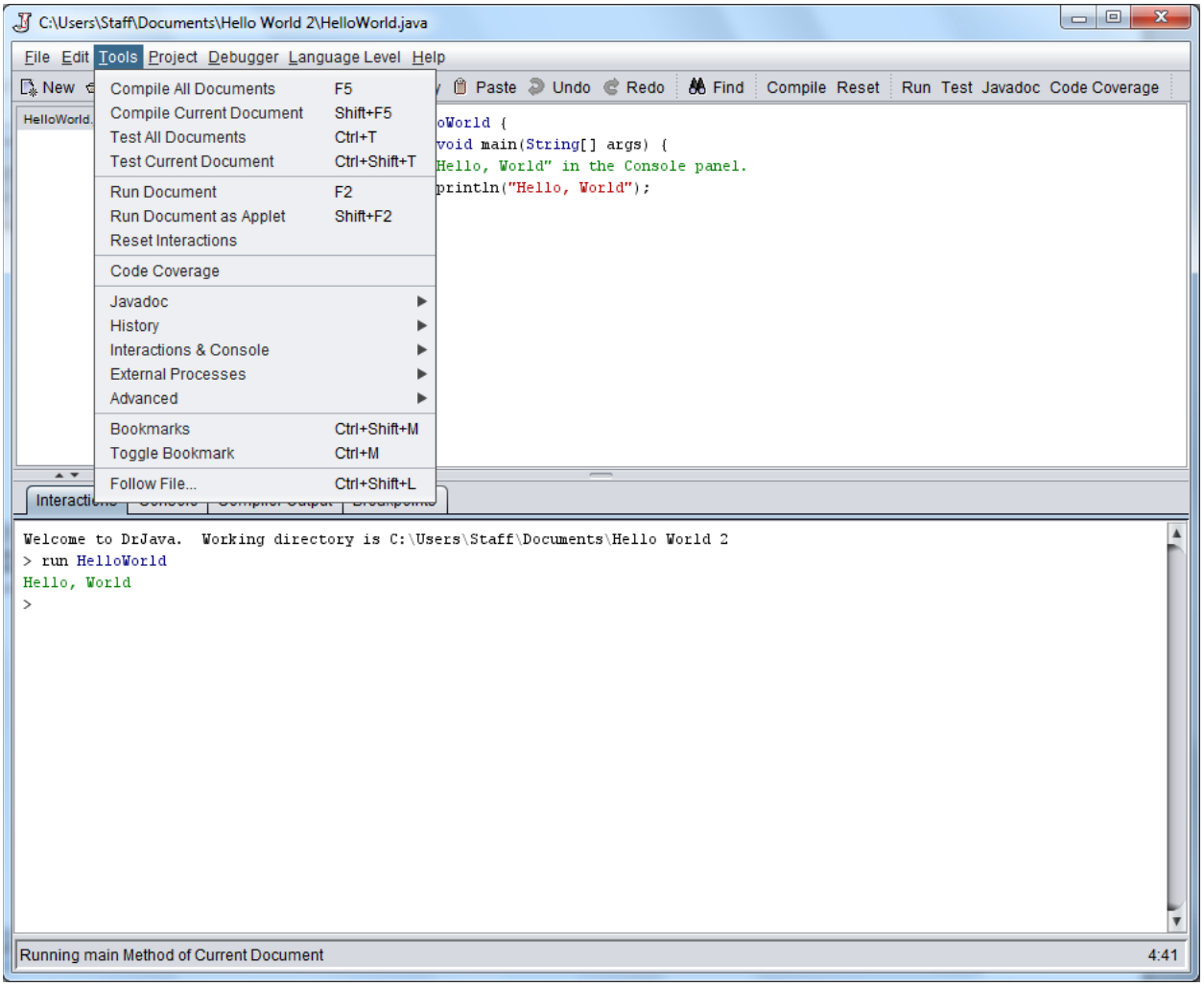
When the compilation completes you can then **Run** the program:



The program runs and the output will appear in the **Interactions** panel.



For your information: The **Tools** menu brings up the **Compile/Run** commands as well as lists the keyboard shortcuts.



Using the Debugger

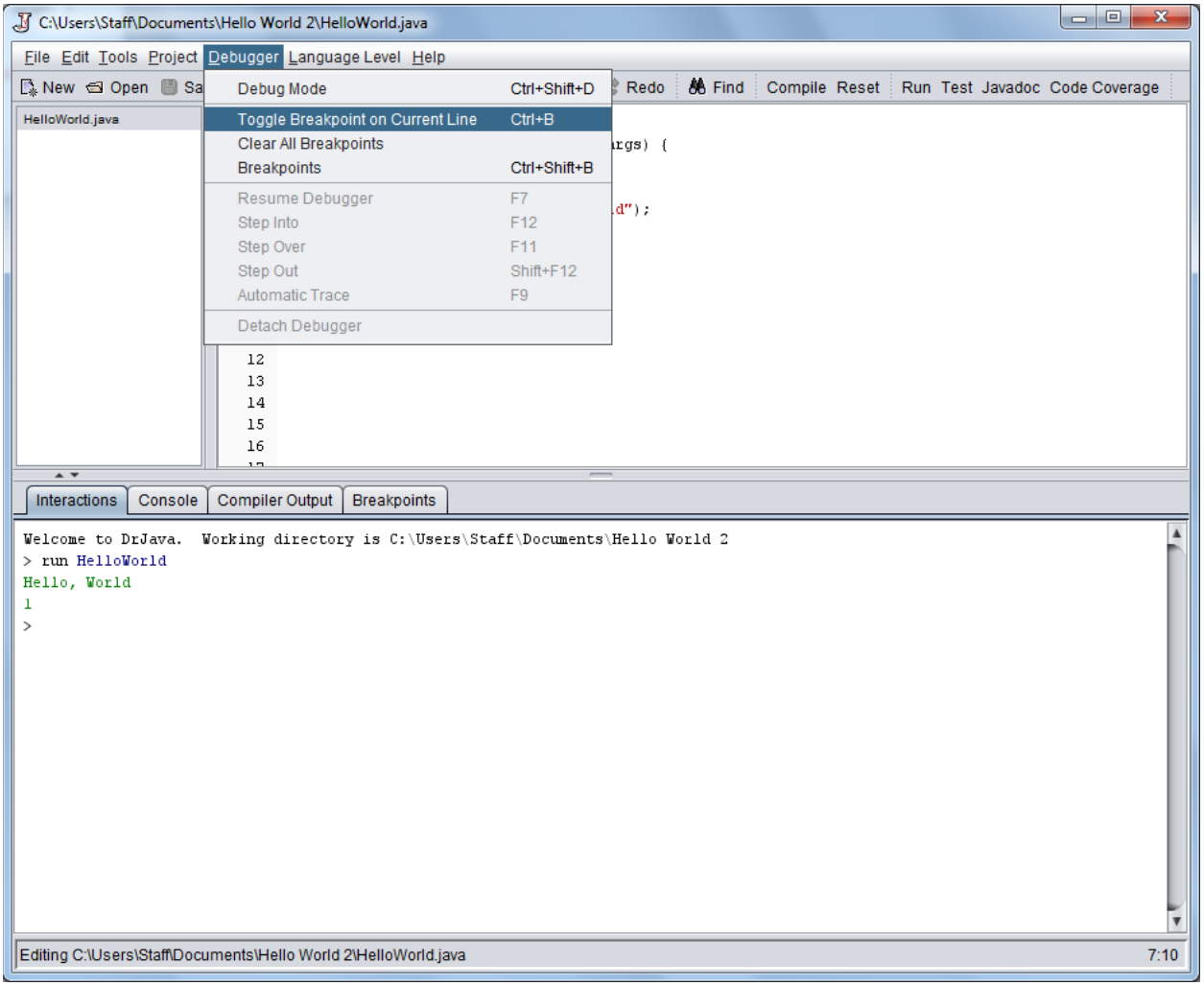
For the debugger, let's use this program:

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

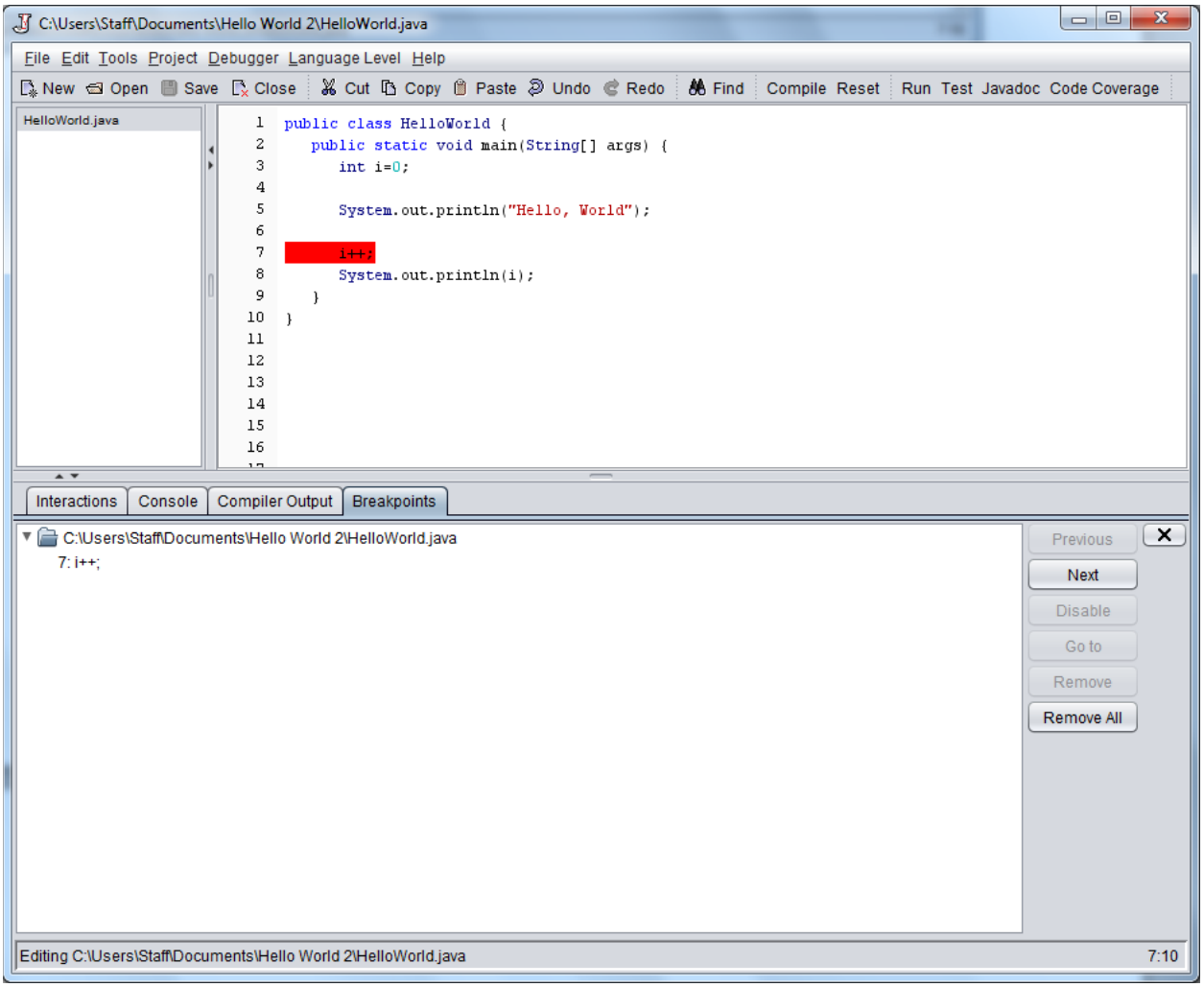
```
1  public class HelloWorld {
2     public static void main(String[] args) {
3        int i=0;
4
5        System.out.println("Hello, World");
6
7        i++;
8        System.out.println(i);
9     }
10 }
```

We will put a line break at line #7.

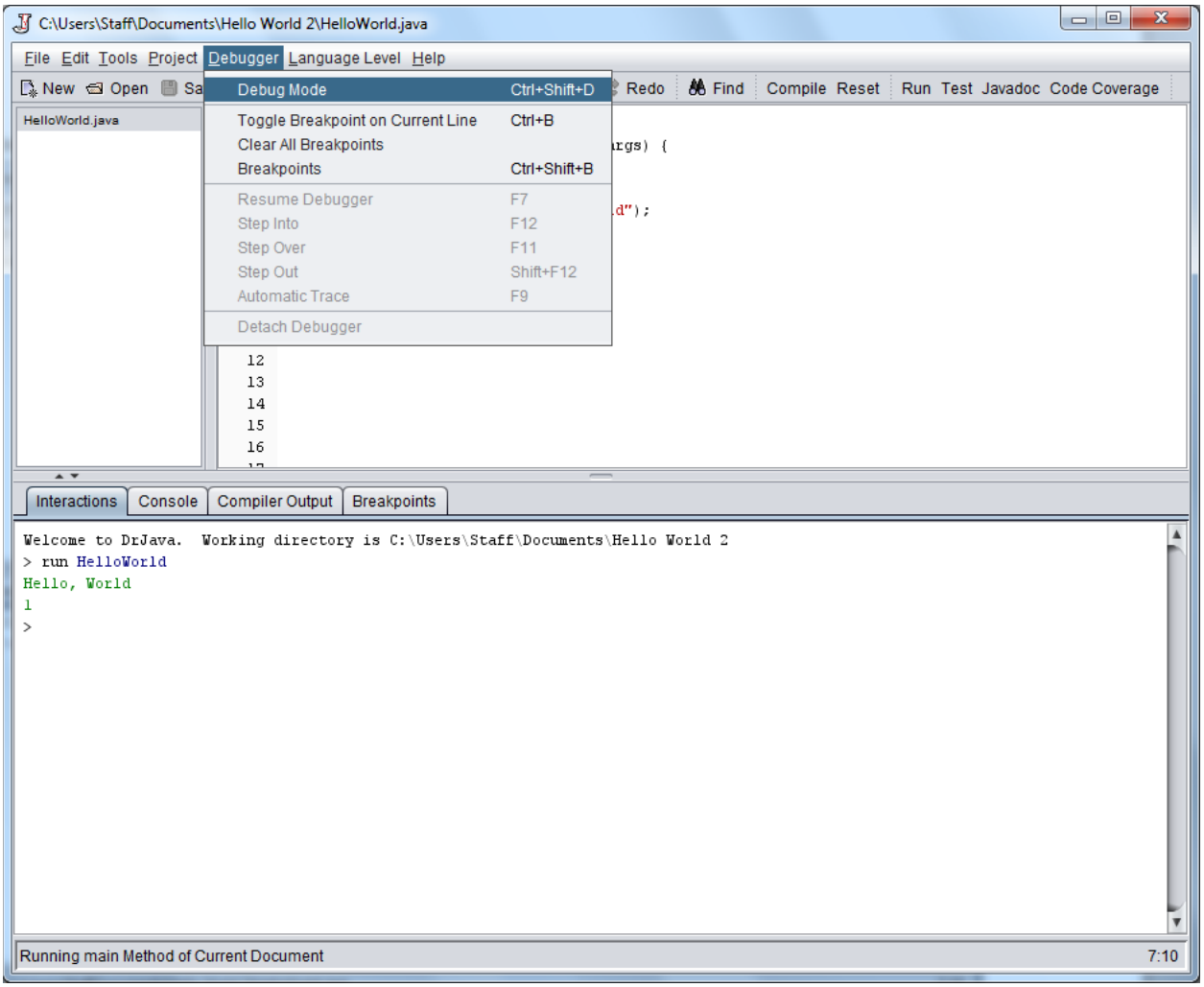
Place the cursor on line #7 and then select from the **Debugger** menu, **Toggle Breakpoint on Current Line**.



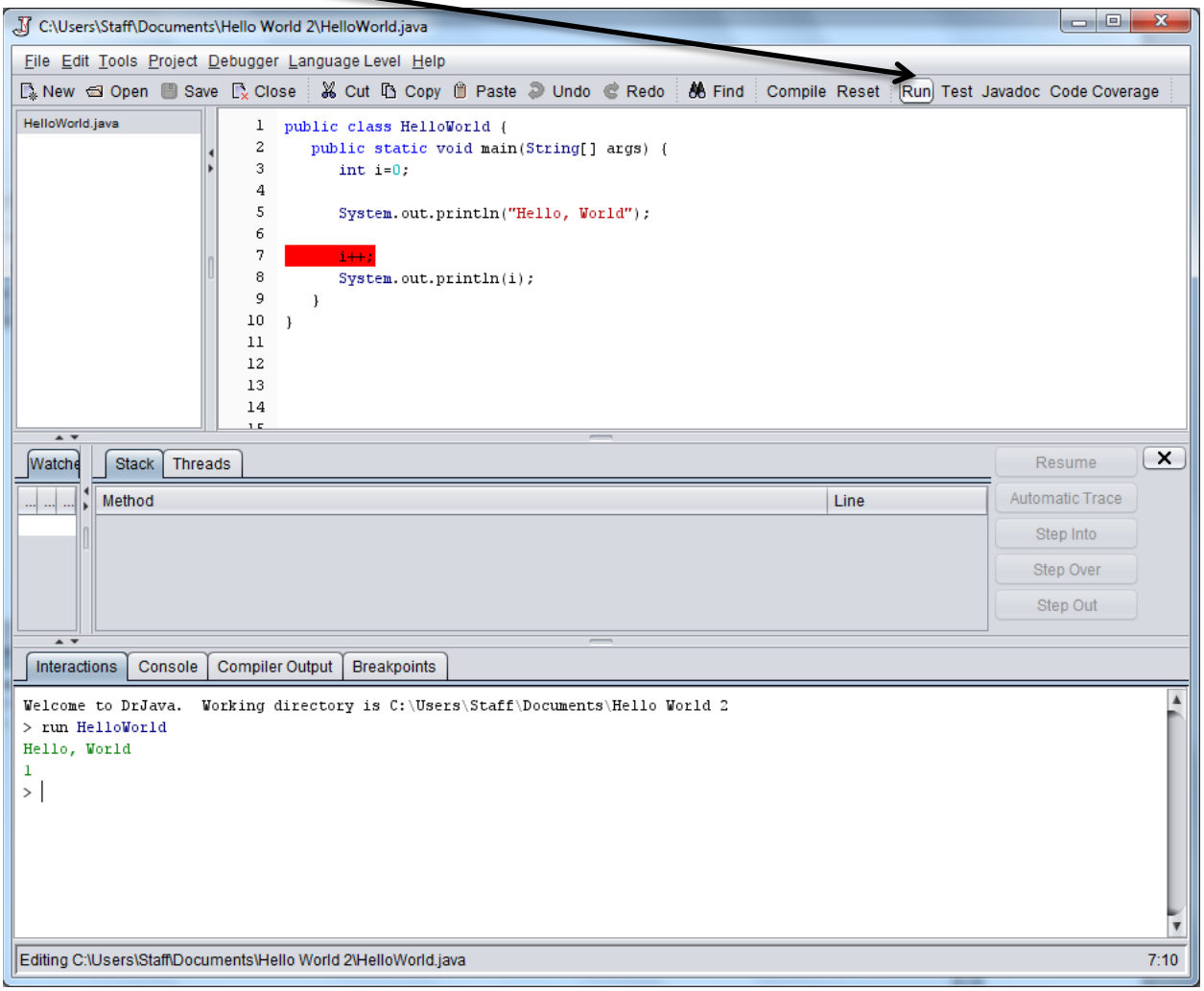
The line Line 7 is in red indicating that it is a breakpoint.



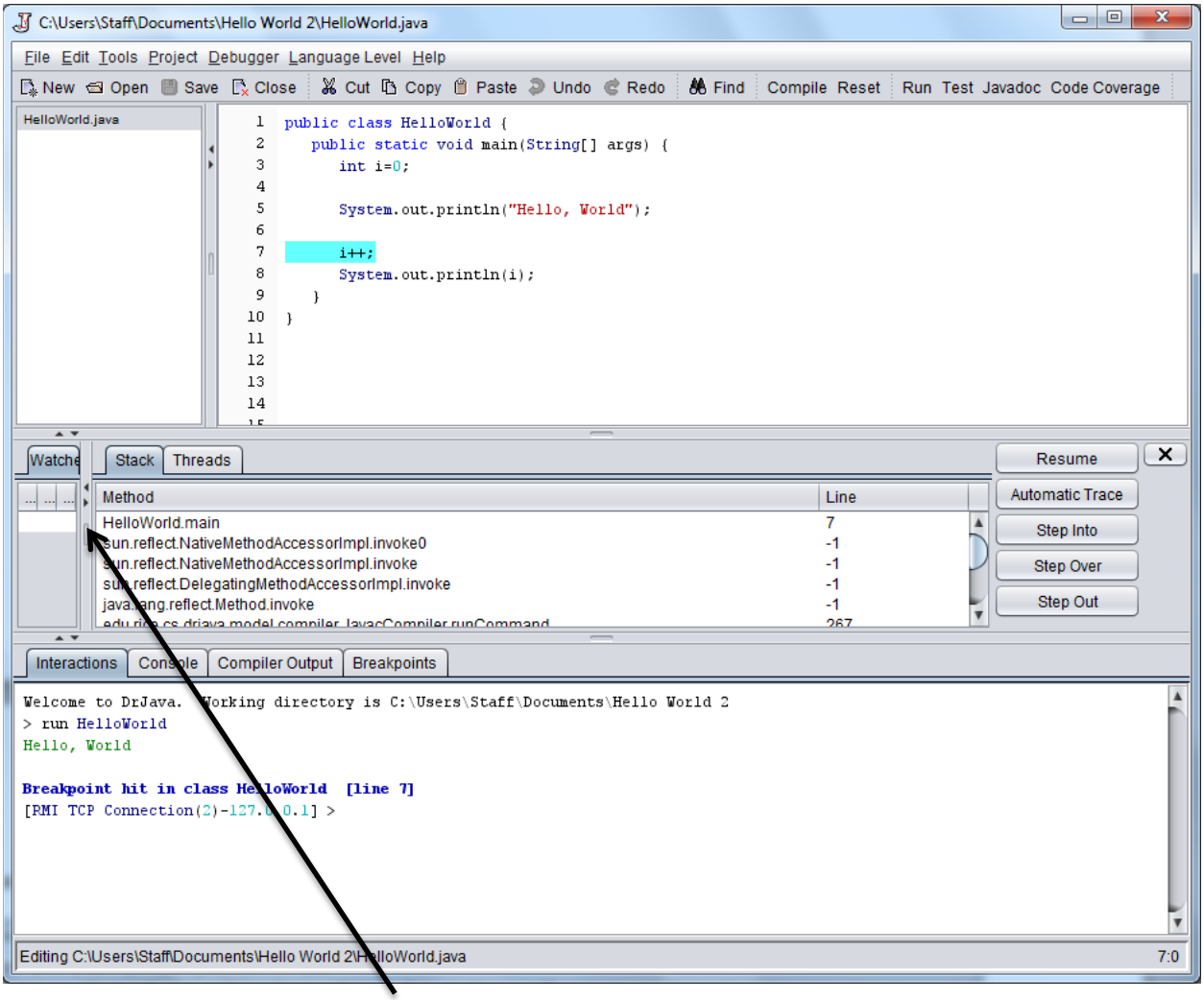
Select from the **Debugger** menu, **Debug Mode**.



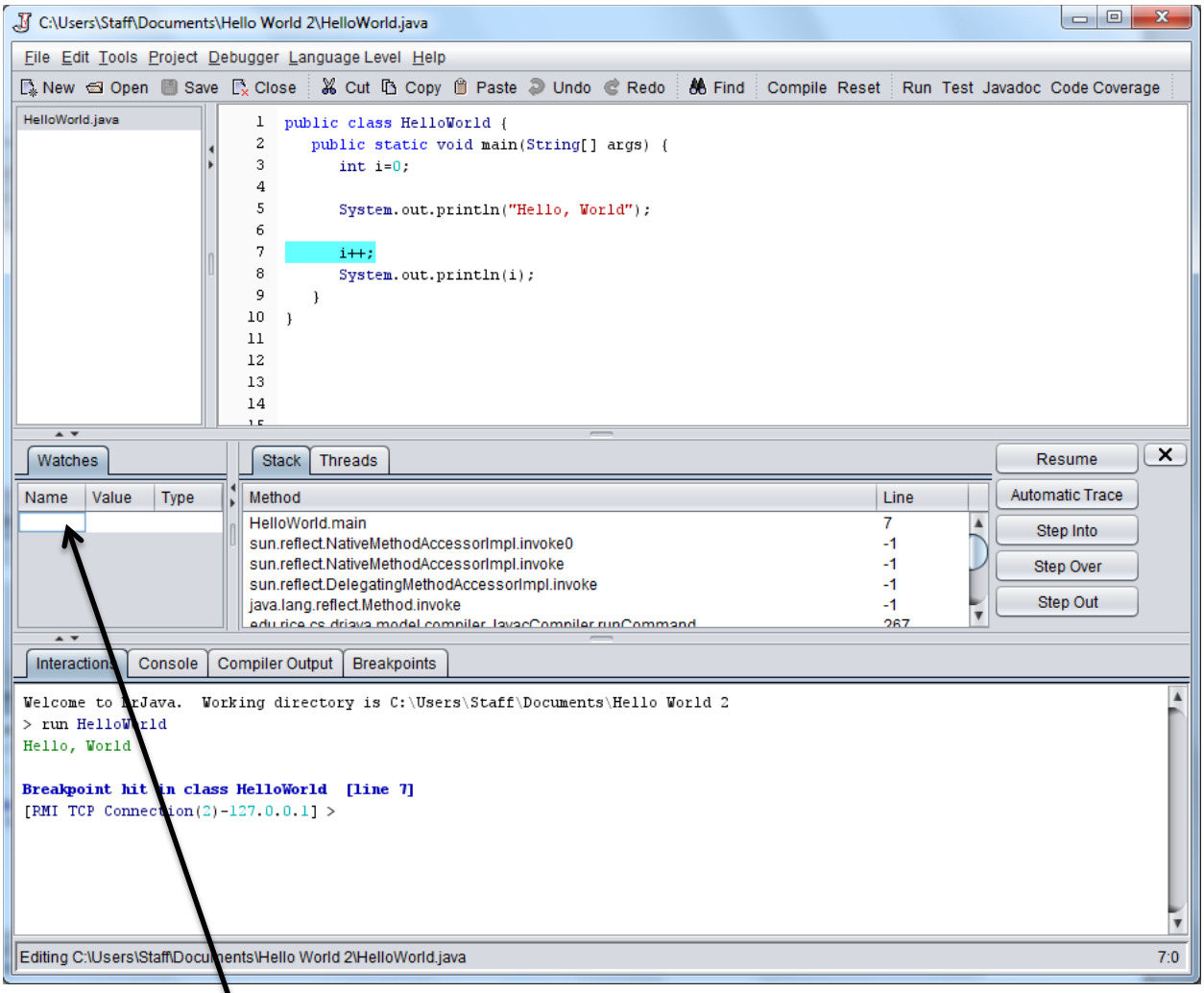
Now select **Run**.



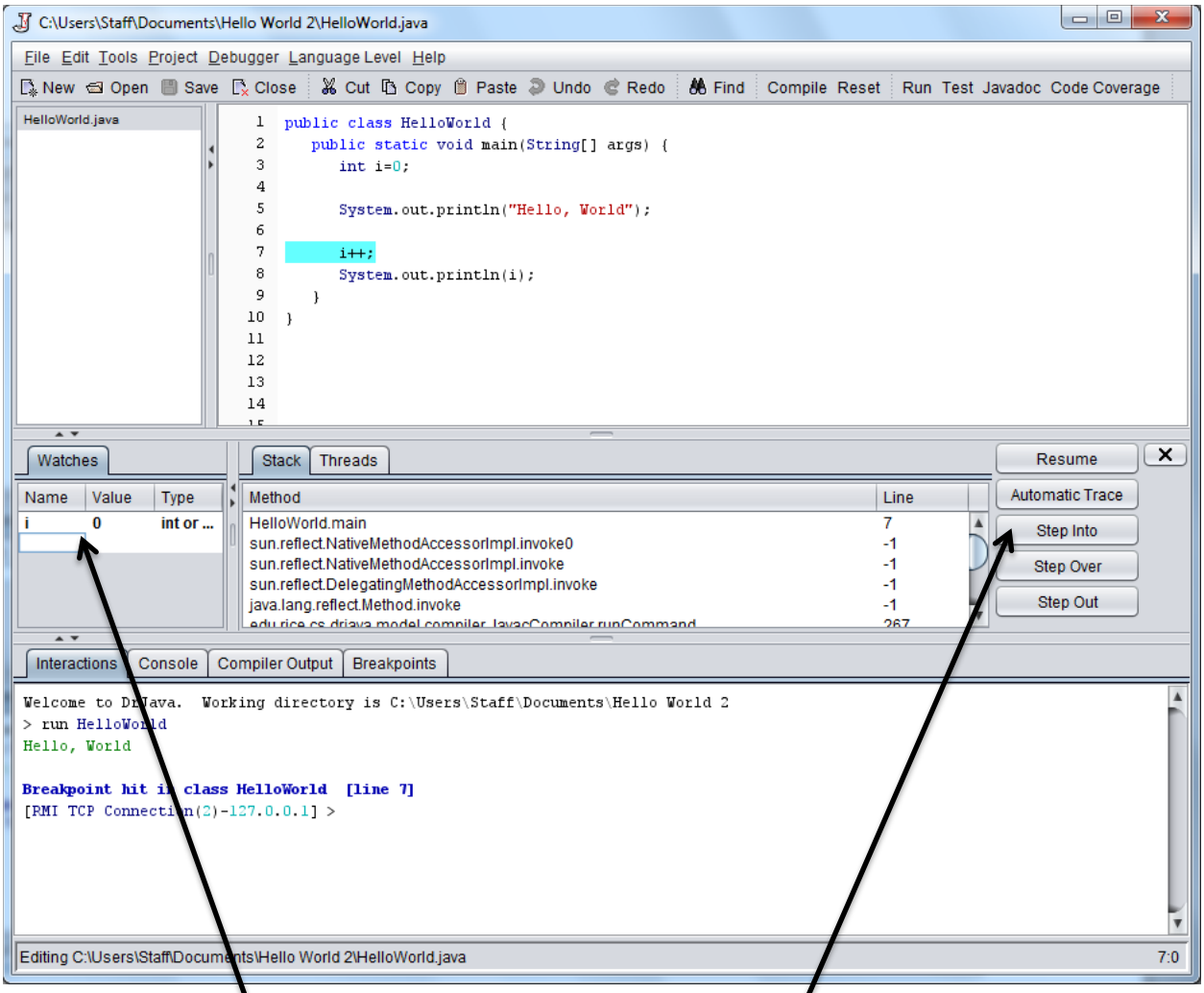
The program breaks at line #7. The program broke "stopped" your program at the break point (line #7).



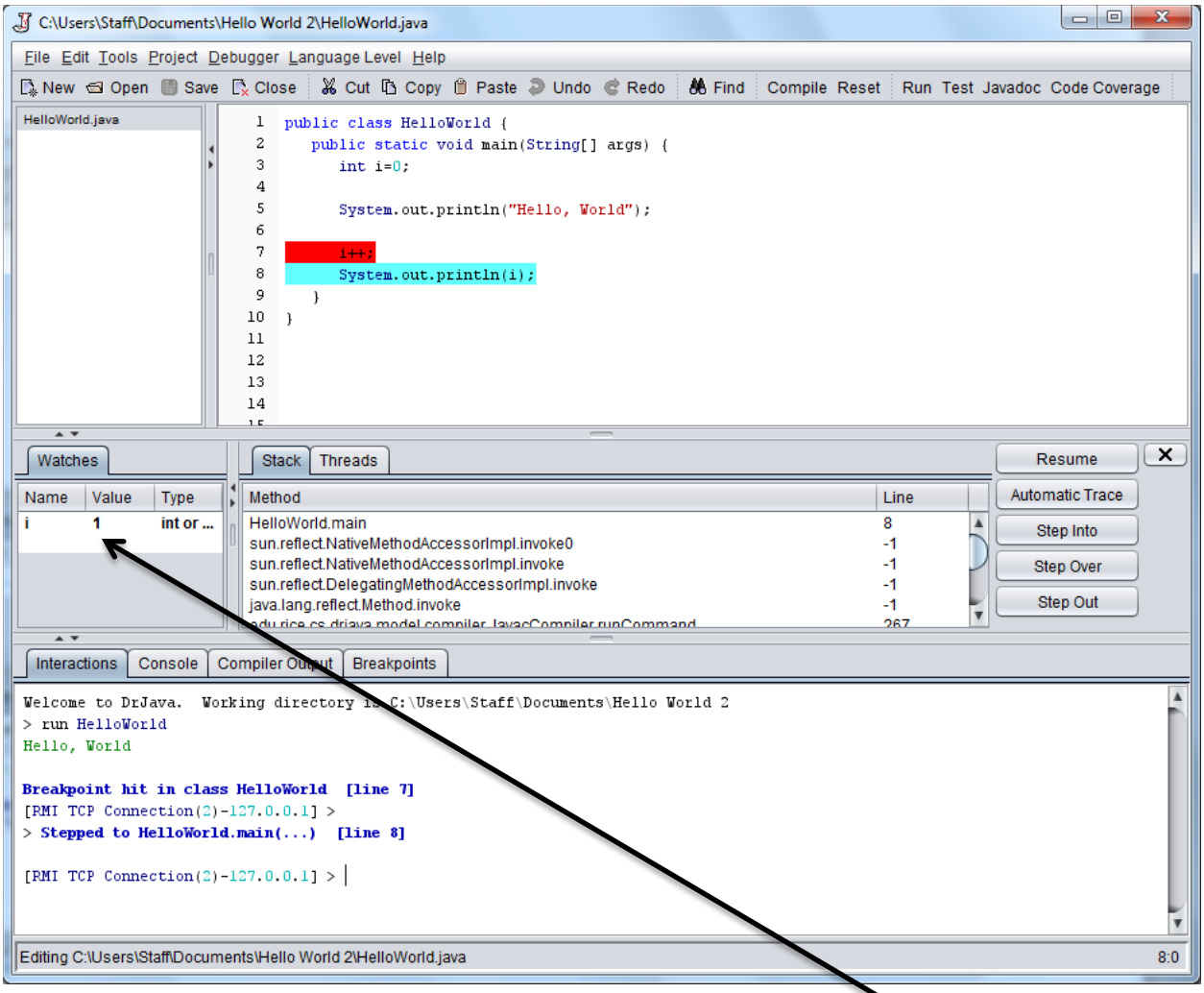
Move the mouse over to the panel divider. The mouse cursor will become a double arrow ⇔. Click and drag the panel to allow more room to appear for the Watches to appear.



Now that the **Watches** panel is open, you can type in a name of a variable to watch.

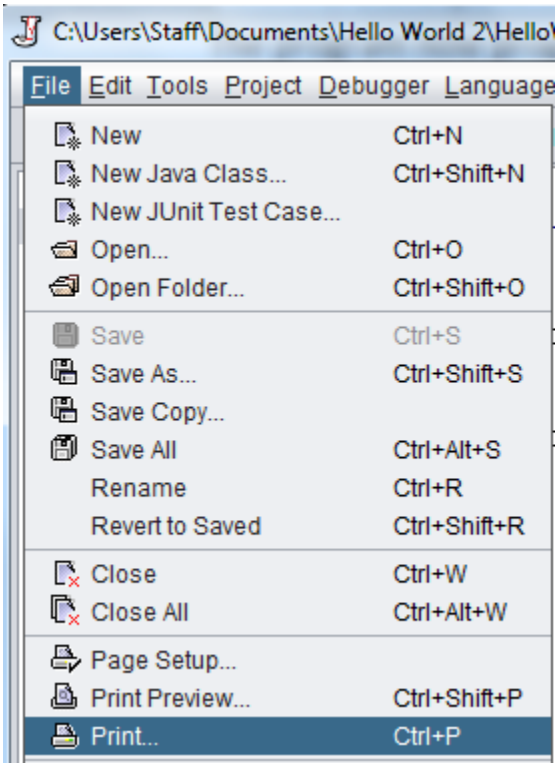


The variable name of **i** is listed and the value is displayed. You can **Step Into** to trace your program.



The program now program executed line #7 and the value of **`i`** went from 0 to 1.

Printing



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