Introduction

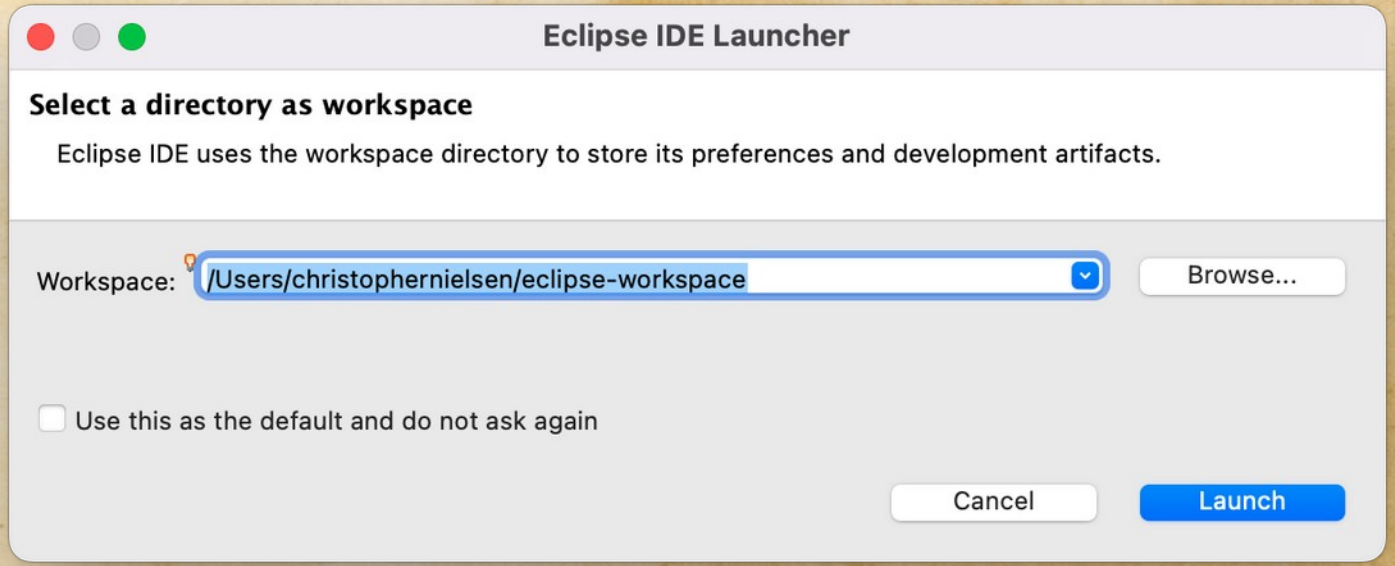
Integrated Development Environment (IDE):
Eclipse – Hello World

Lecture Contents

- Previously, on Installing Eclipse…
- Reset Perspective
- Hello World Program
  - Create a ***project***
  - Create a ***package***
  - Create a **`Class`**
    - `public static void main(String[] args)`
    - `System.out.println("…");`
- What about VS Code?

Previously, on Installing Eclipse...

- When you start Eclipse…
  - the default directory should be fine.
  - **this is where your code will be saved!**

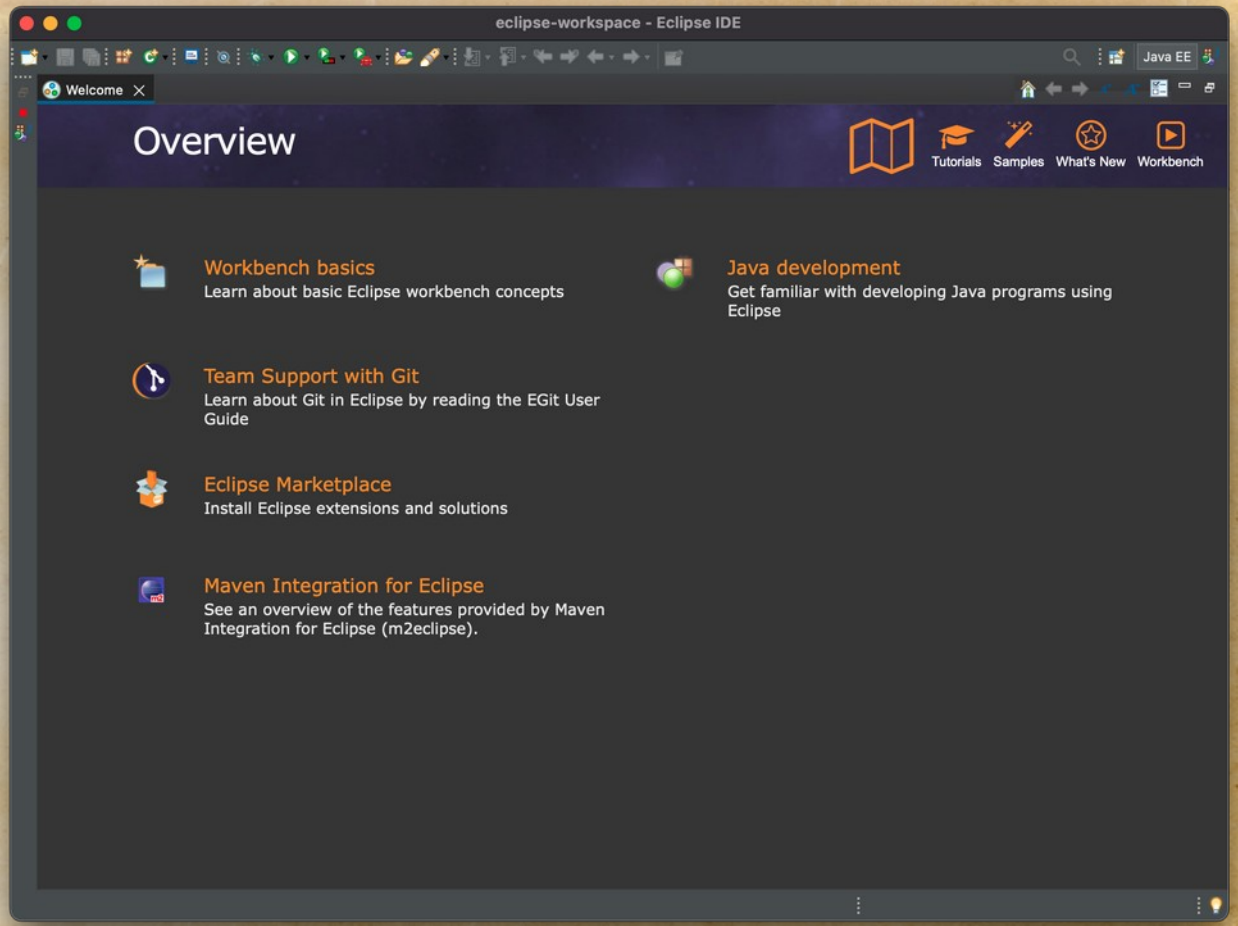


Previously, on Installing Eclipse...

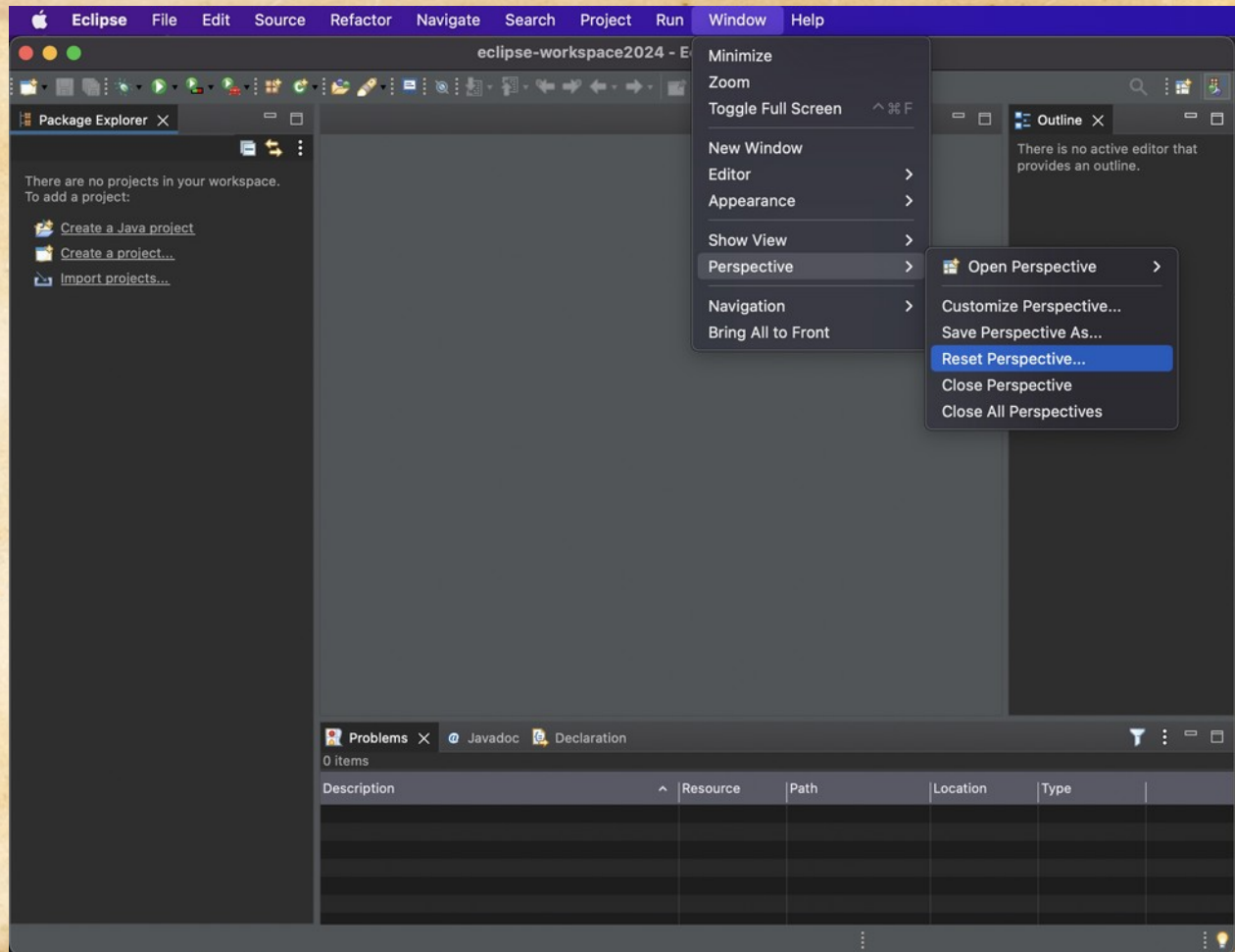
- If you get here, then it seems you have Eclipse installed successfully.

  🎉Congratulations!

- Next step is writing your first Java program!

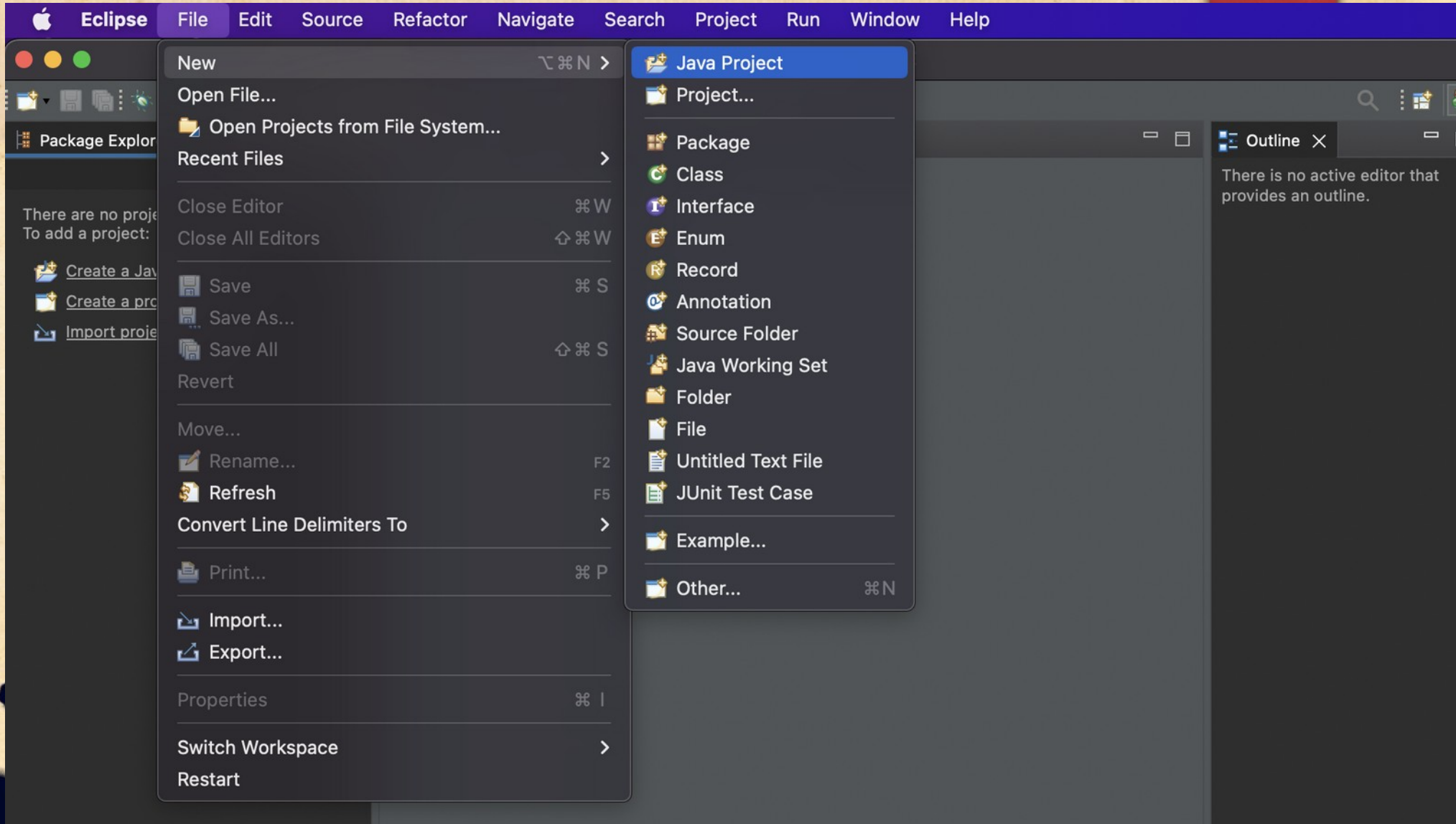


- ***Hint***: If you ever lose your "**Package Explorer**" or other tabs, "**Reset Perspective…**" might restore the interface to the default settings...



Eclipse Project

- “Java Project” is an Eclipse thing, not a Java thing.
  - Simply a directory to organize your files.
- One project is probably sufficient for this entire course, so name your project for this course something like one of these:
  - `APCScA`
  - `AP_CompSci`
  - `iGCSE`
  - `iGCSE_CS`
- The next page shows where to find the menu option to create a new Java project.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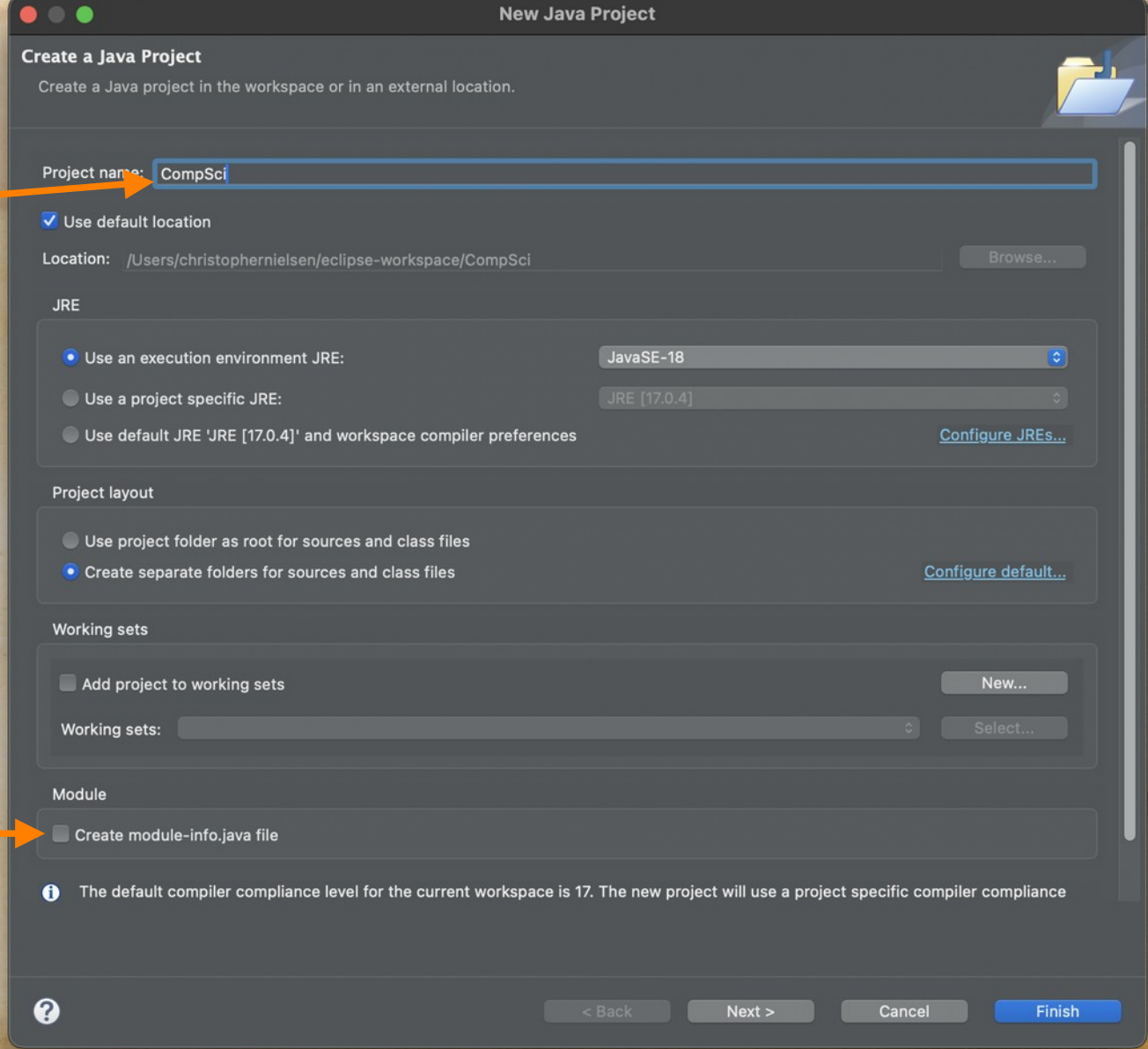
Select an appropriate project name;
no spaces

Probably one project for all the code you'll write for this entire course.

Uncheck this box

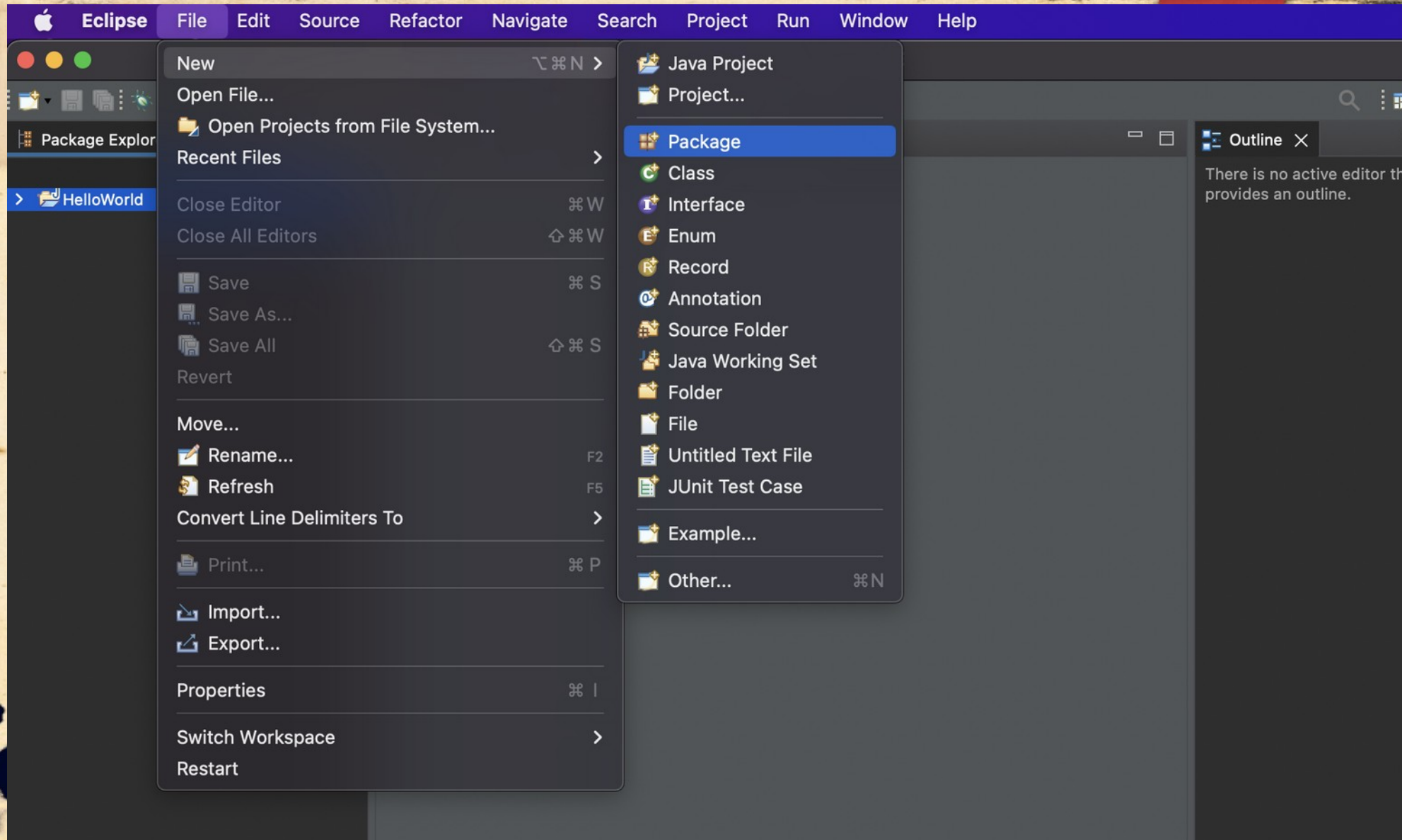


Java Package

- This is an example Java package name

  `com.nielsenedu.`*`name`*`.introjava`

- Java package names start with your domain name, reversed.
  - Code designed by a developer at "`nielsenedu.com`" will have Java package names starting with "`com.nielsenedu`".
- The remainder of the package name should be a descriptive hierarchy. For students naming their packages, replace "*`name`*" with your name.
- The next page shows where to find the menu option to create a new Java package.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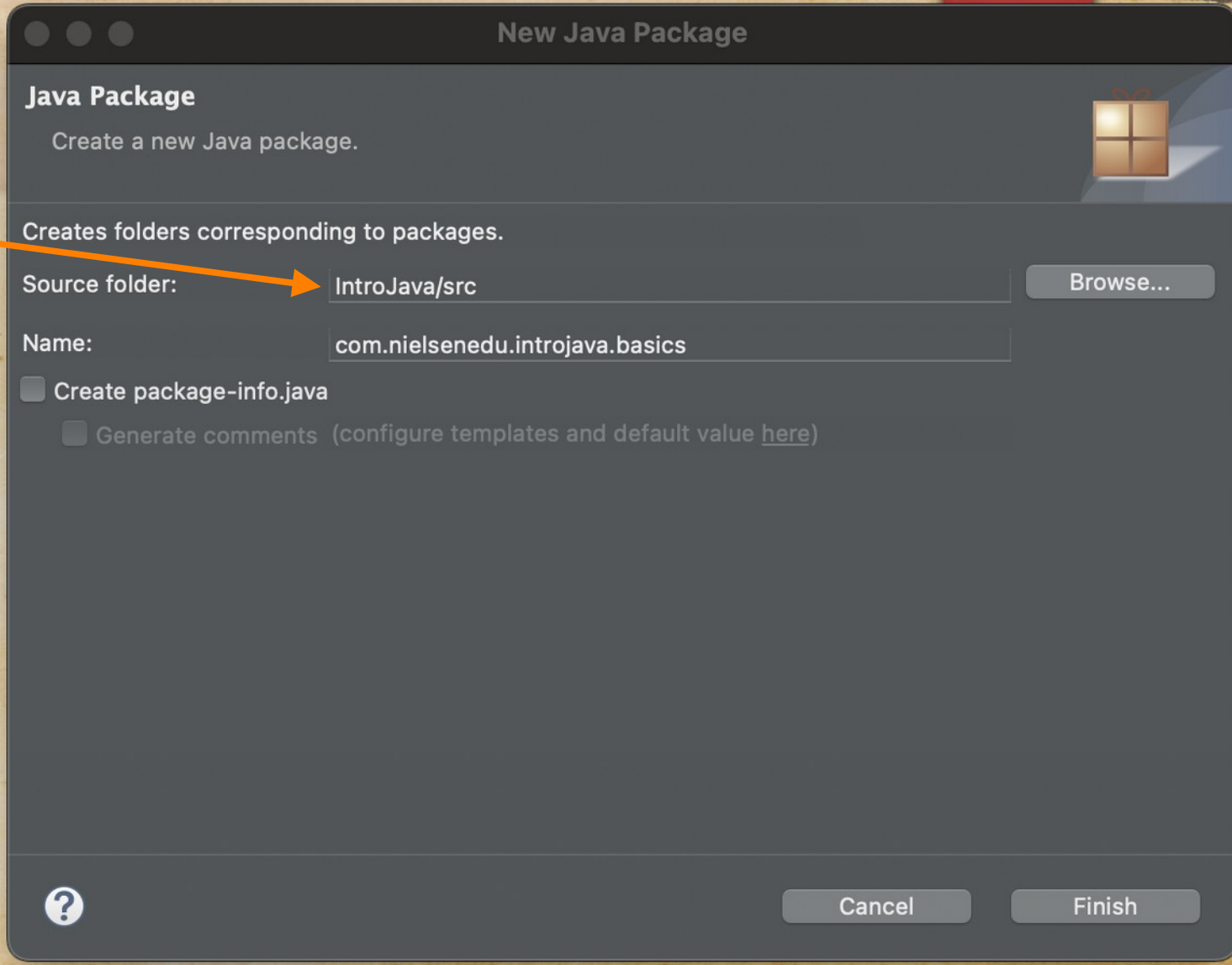
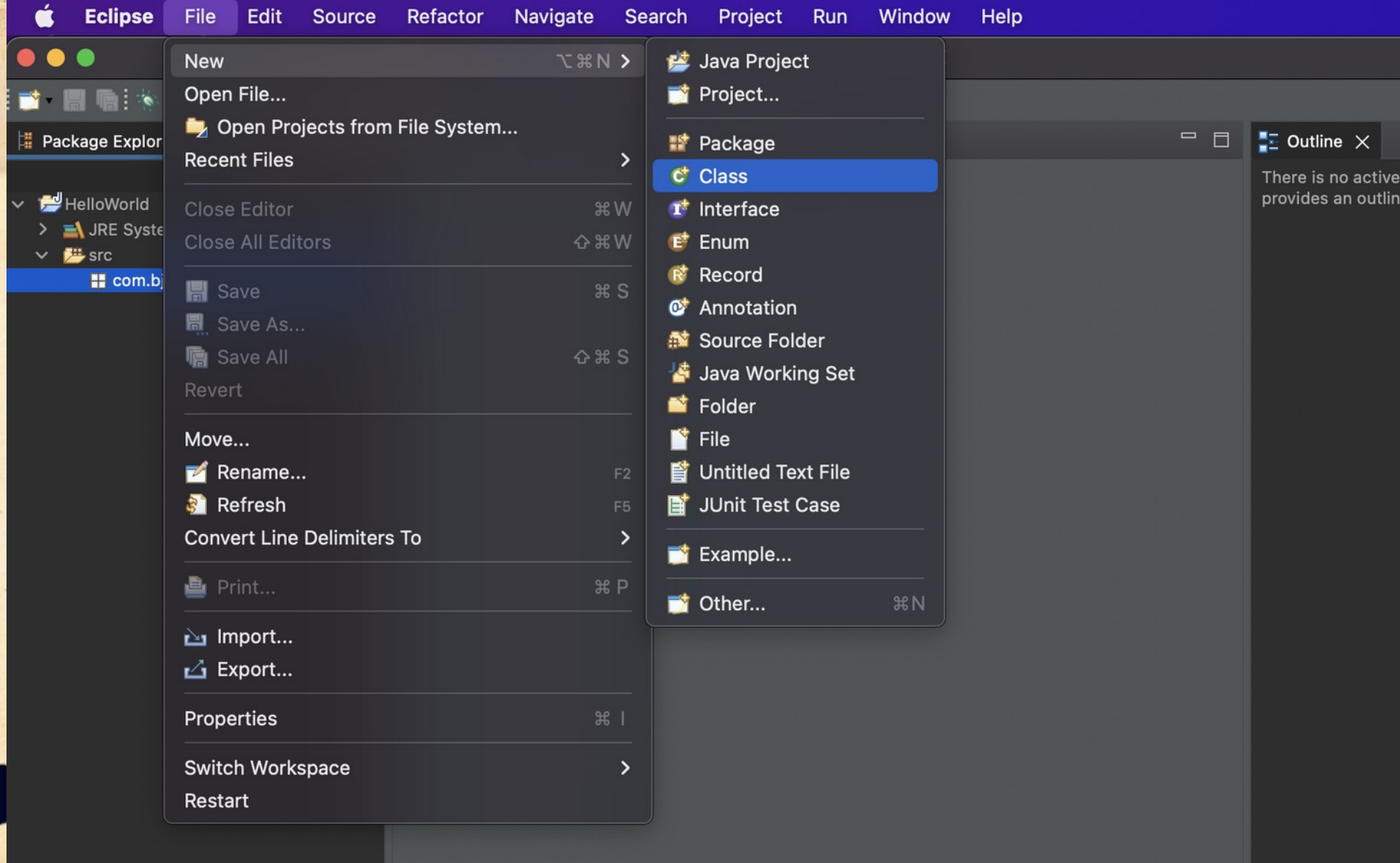
If this is not automatically filled, ensure the project name is highlighted before creating a new Java Package so Eclipse knows where you want to create the package.



Java Class

- Java programs are organized into ***classes***
- Each Java file contains one class.
- Classes are named using camel case (no spaces and the first letter of each word is capitalized). for example:
  - `HelloWorld`
  - `BasicOutput`
  - `Graphing`
- The next pages show where to find the menu option to create a new Java Class, and naming a class `HelloWorld`.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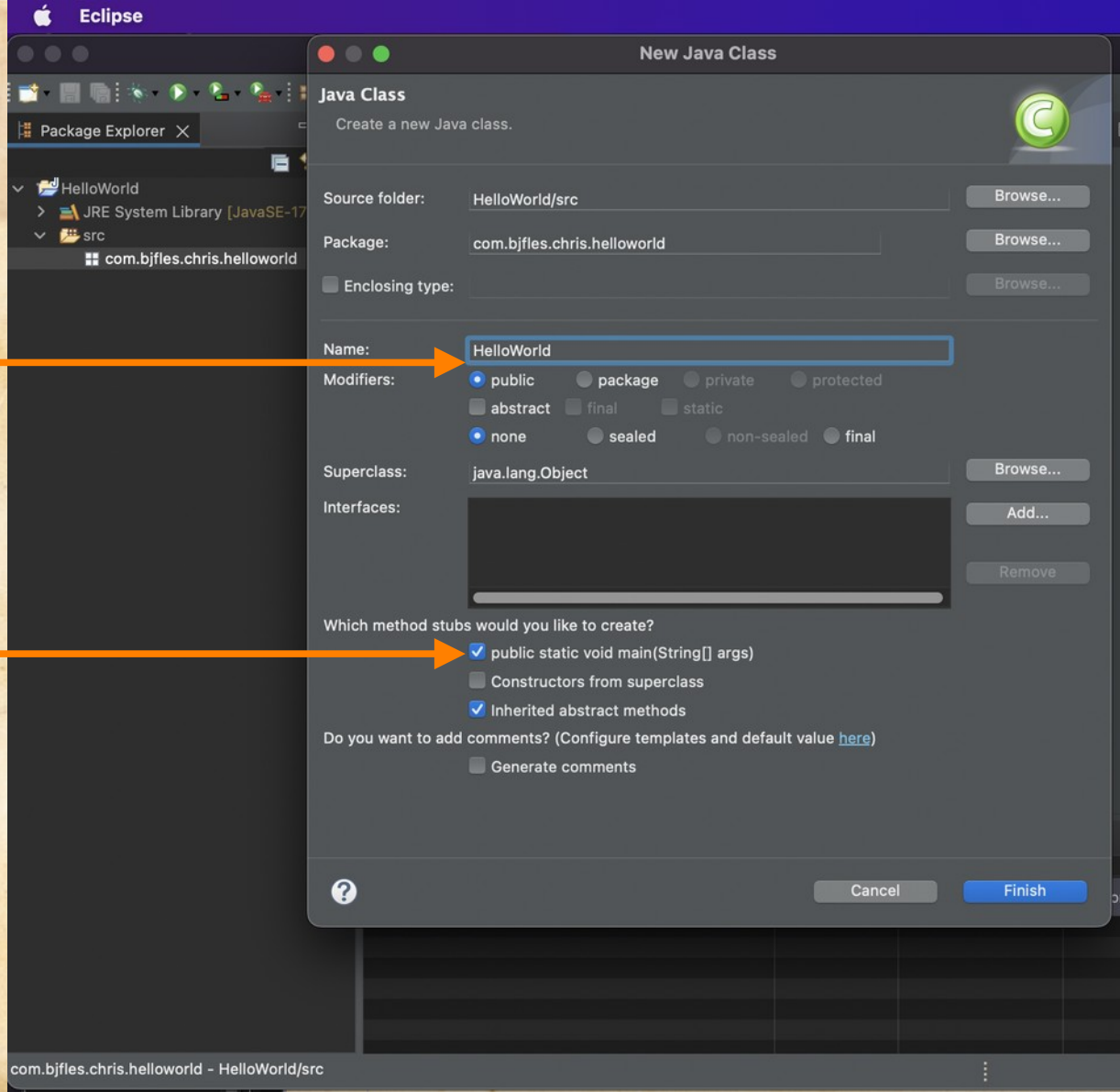
Java Class

The naming convention for a Java class is ***Pascal case***, also known as ***upper camel case***.

There are no spaces, and the first letter of each word is upper case

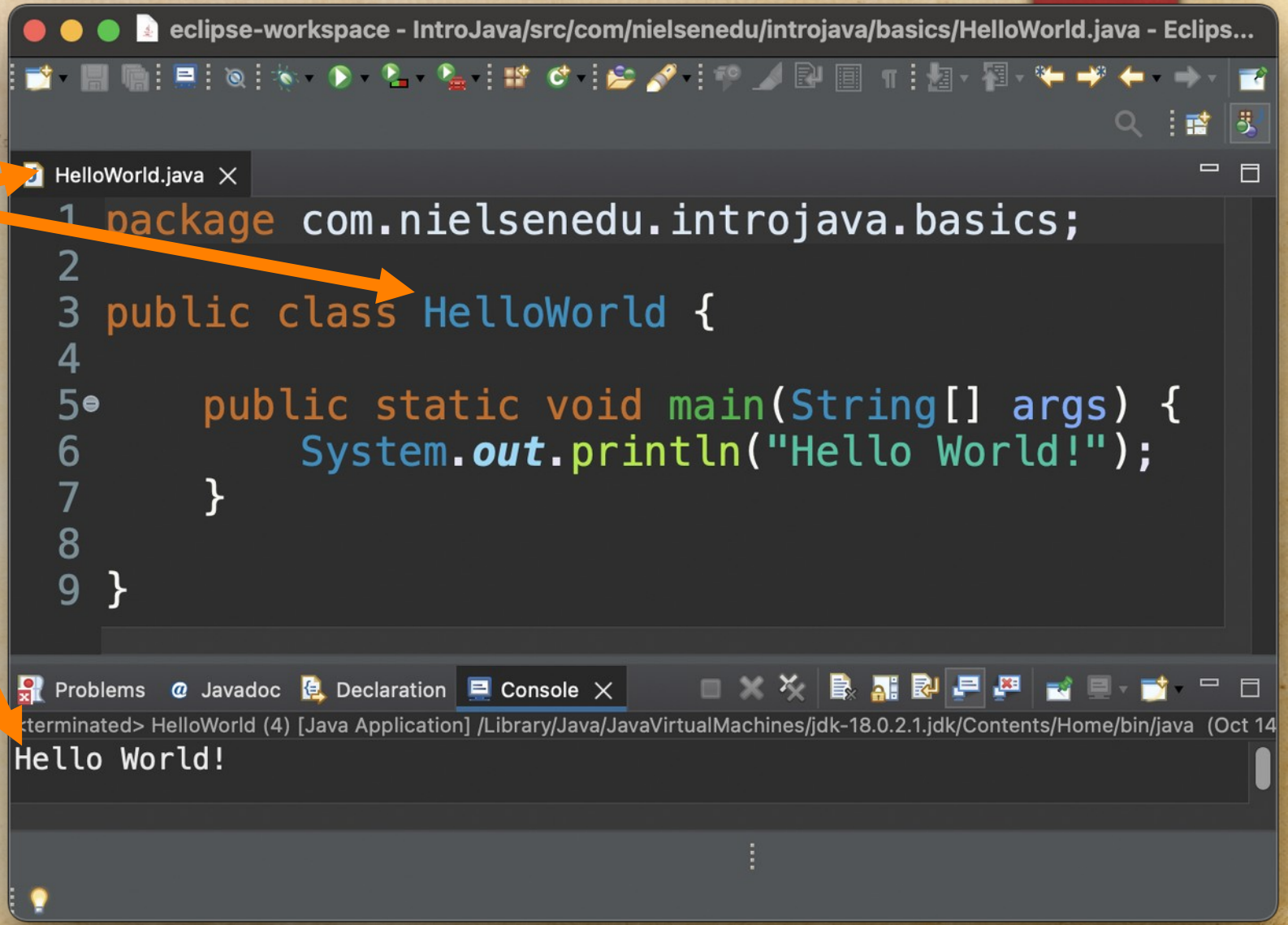
Selecting this will add template code for the **`main`** method, which is where the Java program will start running.



Java Class

Filename and package name match.

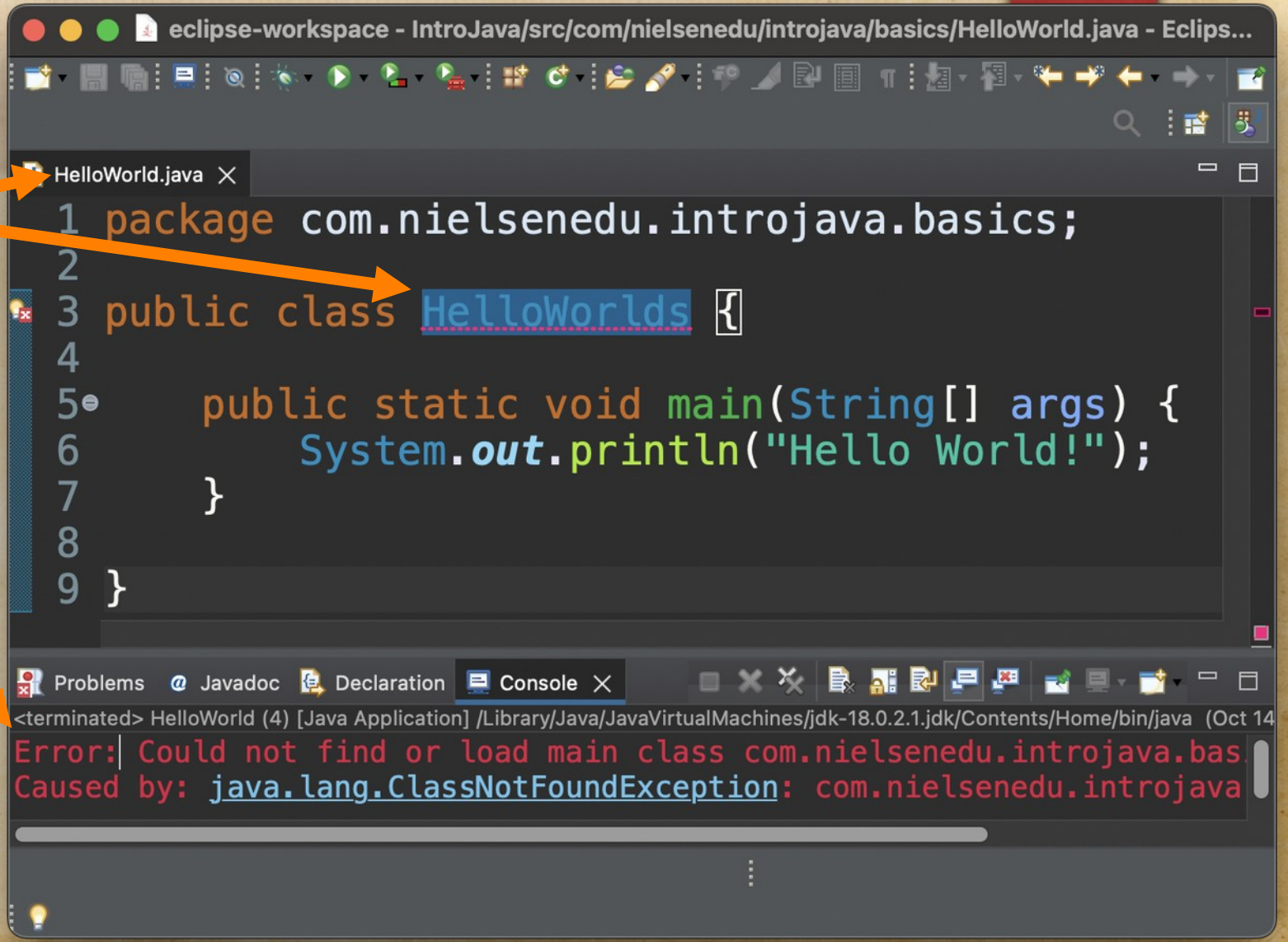
The program runs.



Java Class

Filename and package name do **NOT** match.

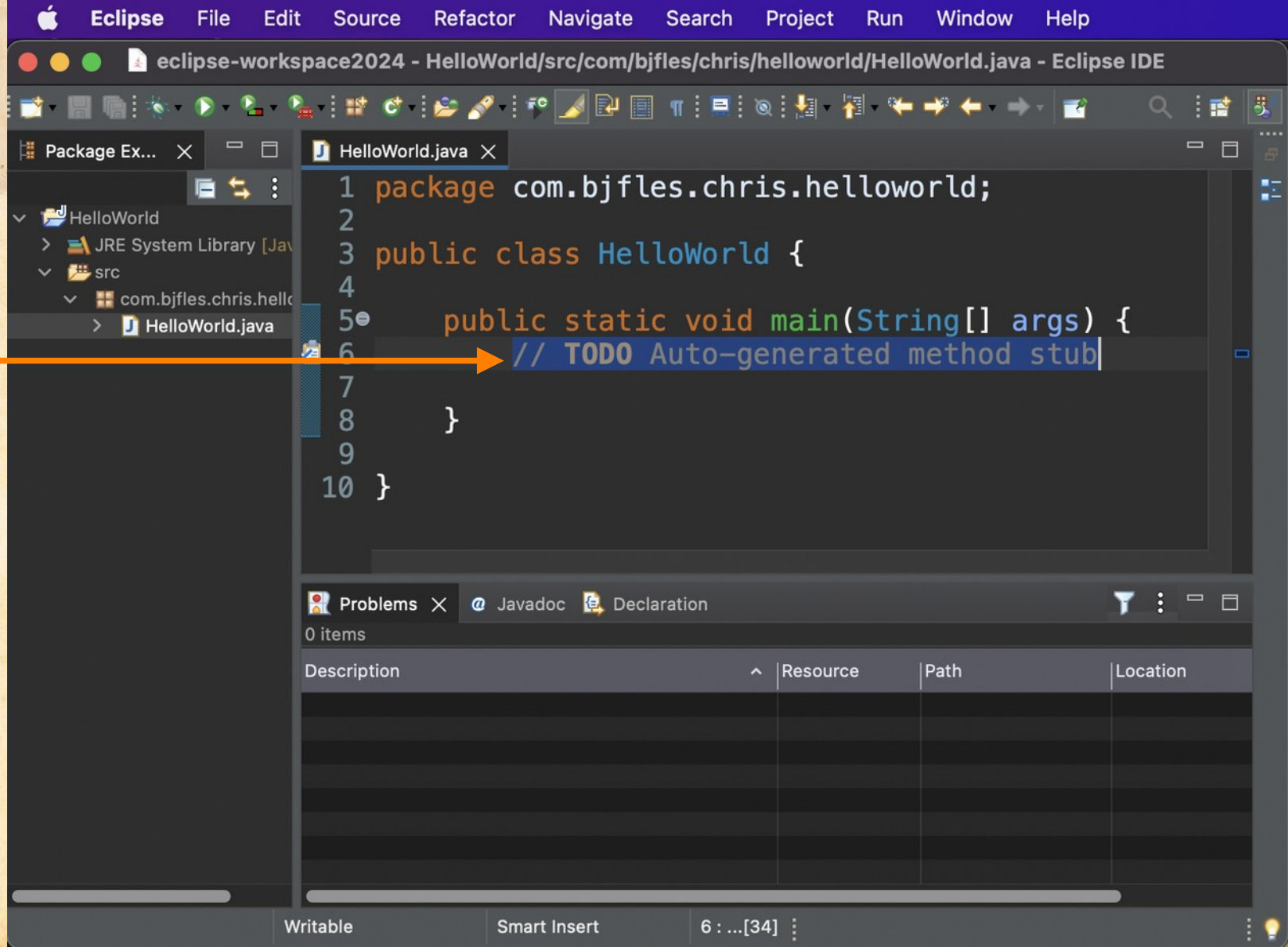
The program will not run.



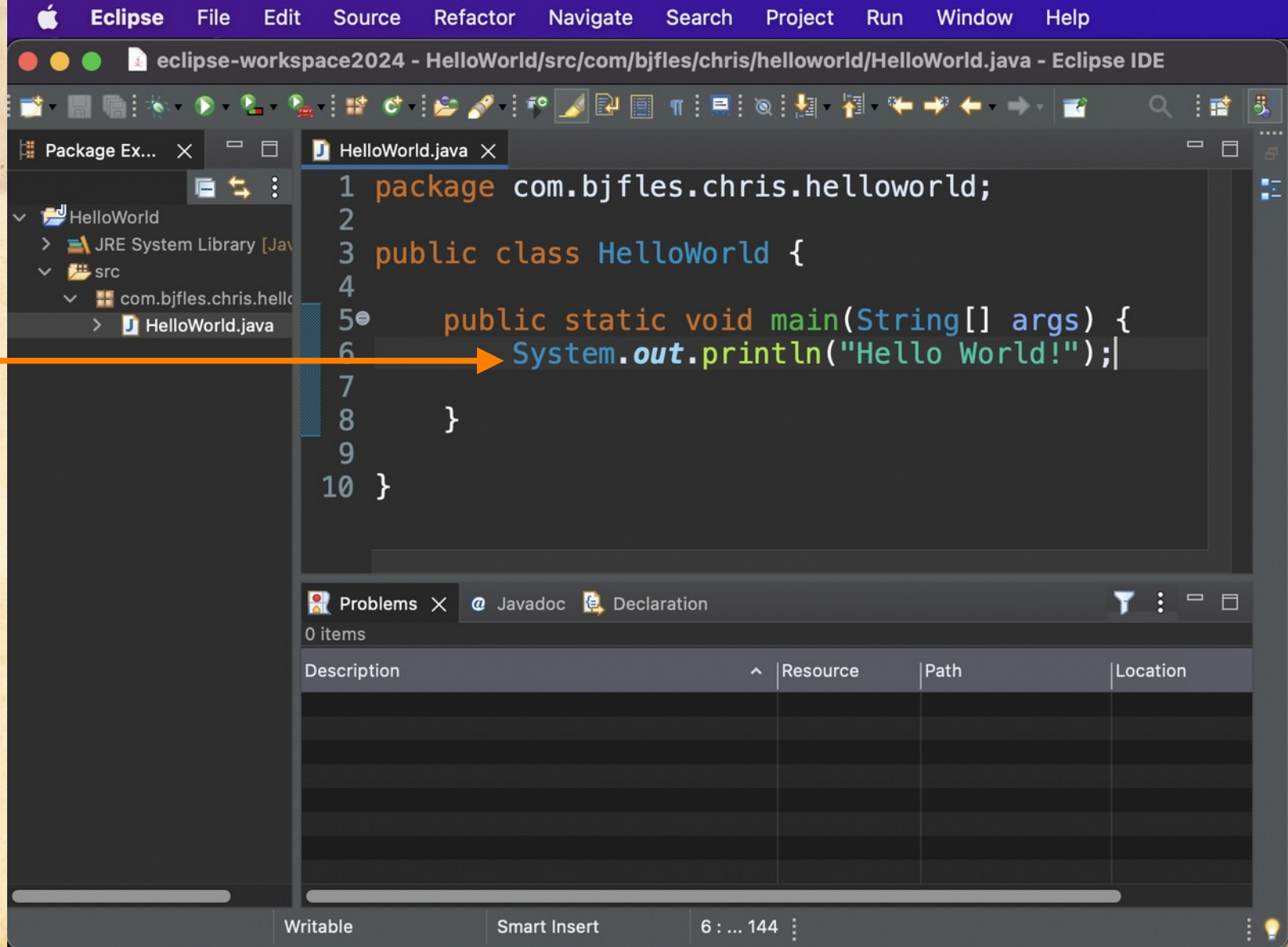
Java Class

- Java programs are organized into ***classes***
- Each Java file contains one class.
- Java classes are named using camel case; examples:
  - `HelloWorld`
  - `BasicOutput`.
- The filename must be the same as the class name, for example:
  - Inside `HelloWorld.java` there will be `class HelloWorld`

Replace line 6...

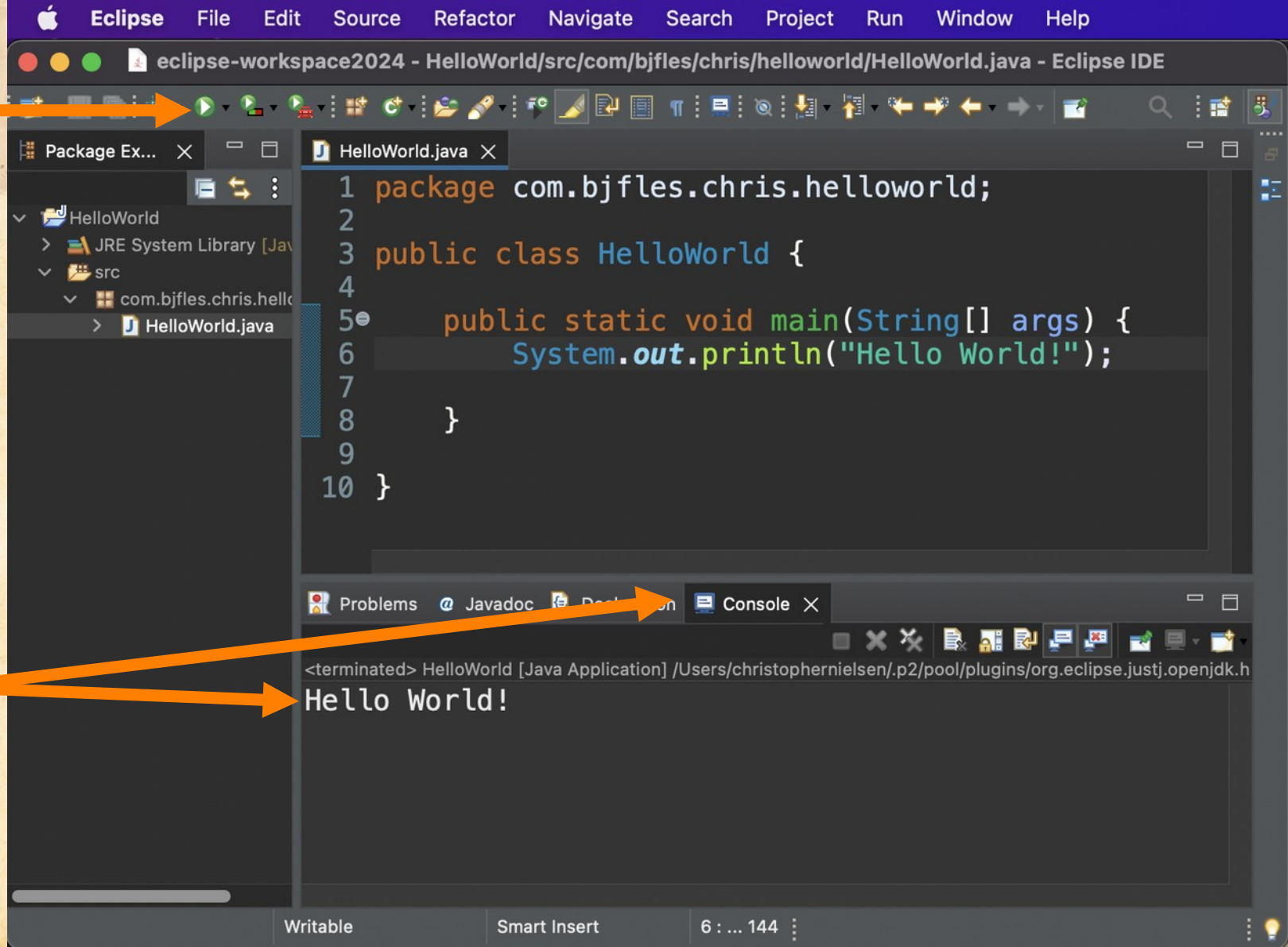


Replace line 6… with this.



Click here to run.

Check the output in the console.



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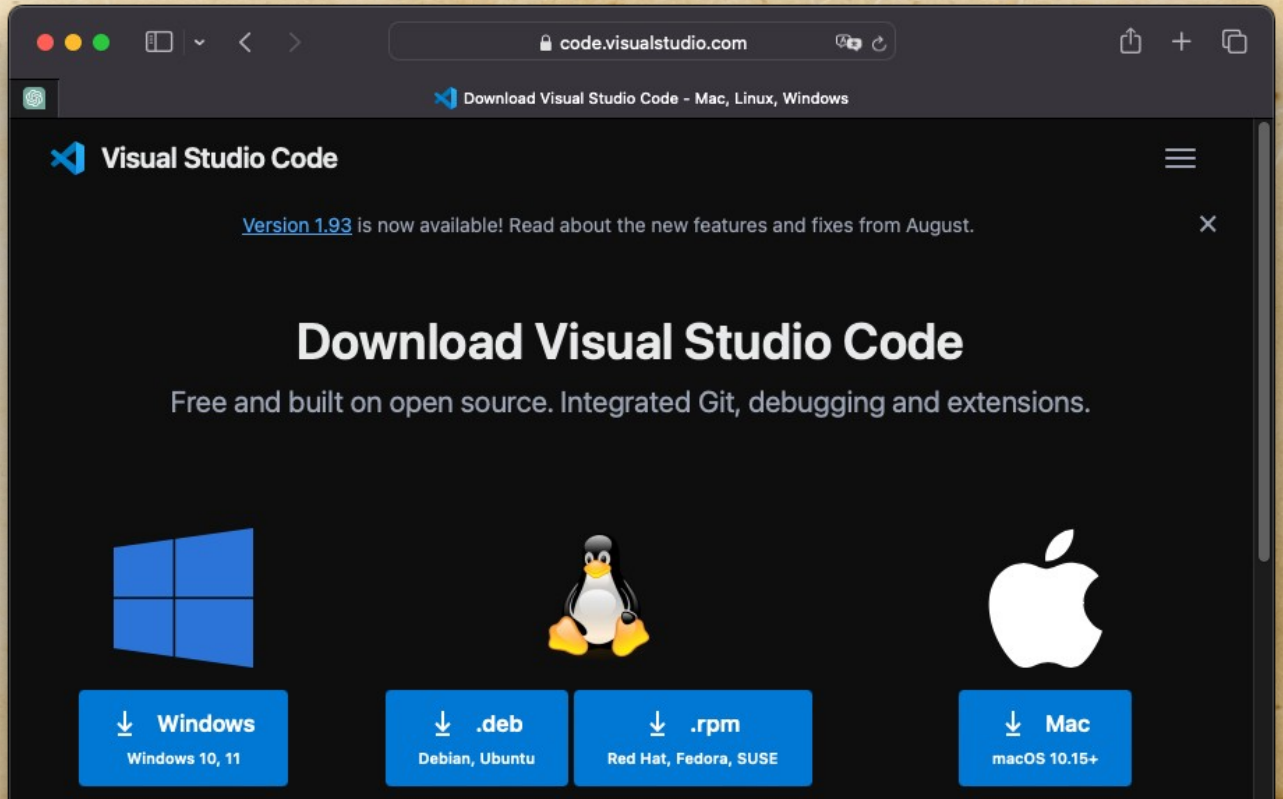
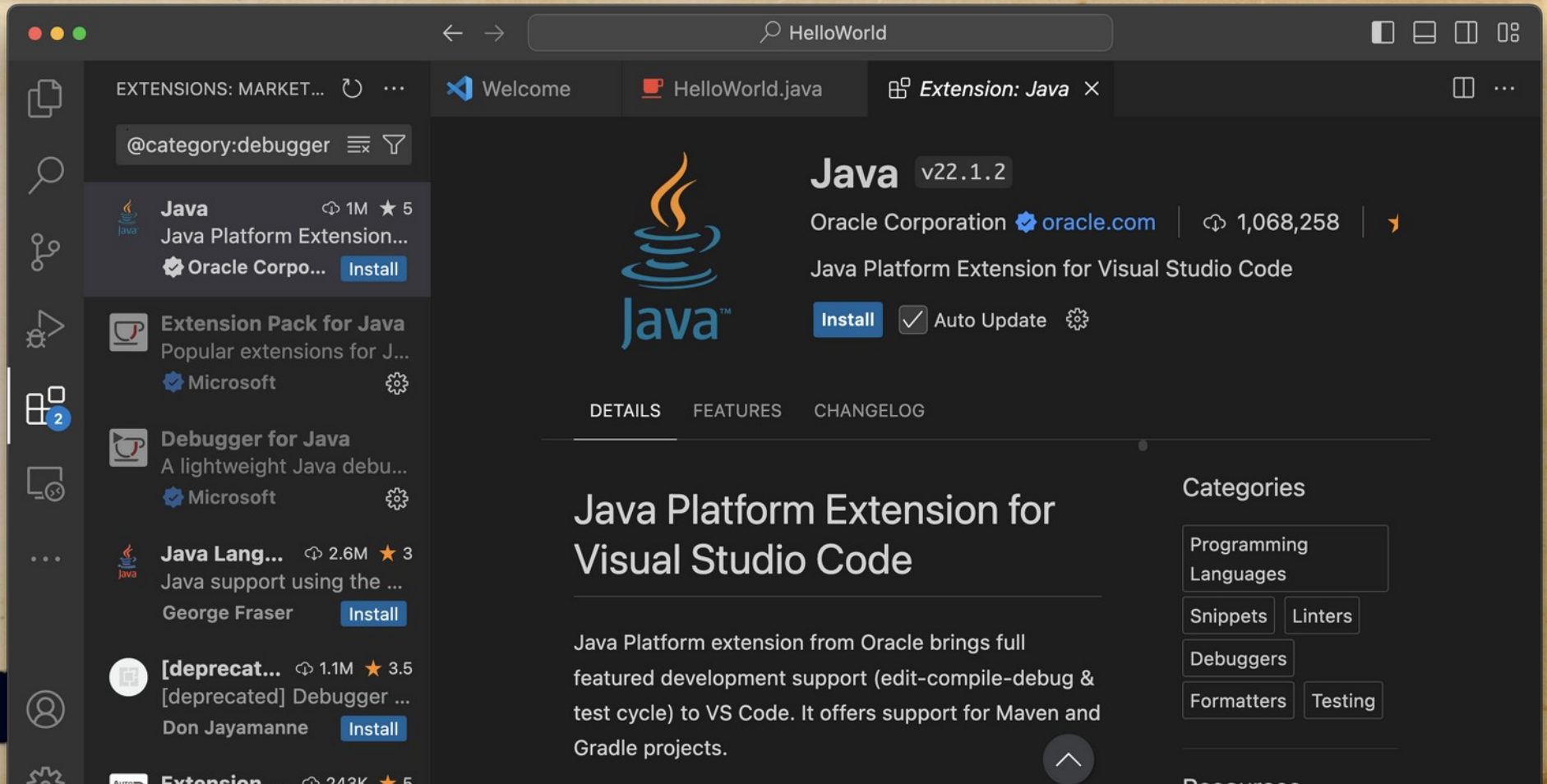
What about VS Code?

- If you downloaded VS Code: ***code.visualstudio.com***



What about VS Code?

You will need to either install the JDK or an extension such as this one:



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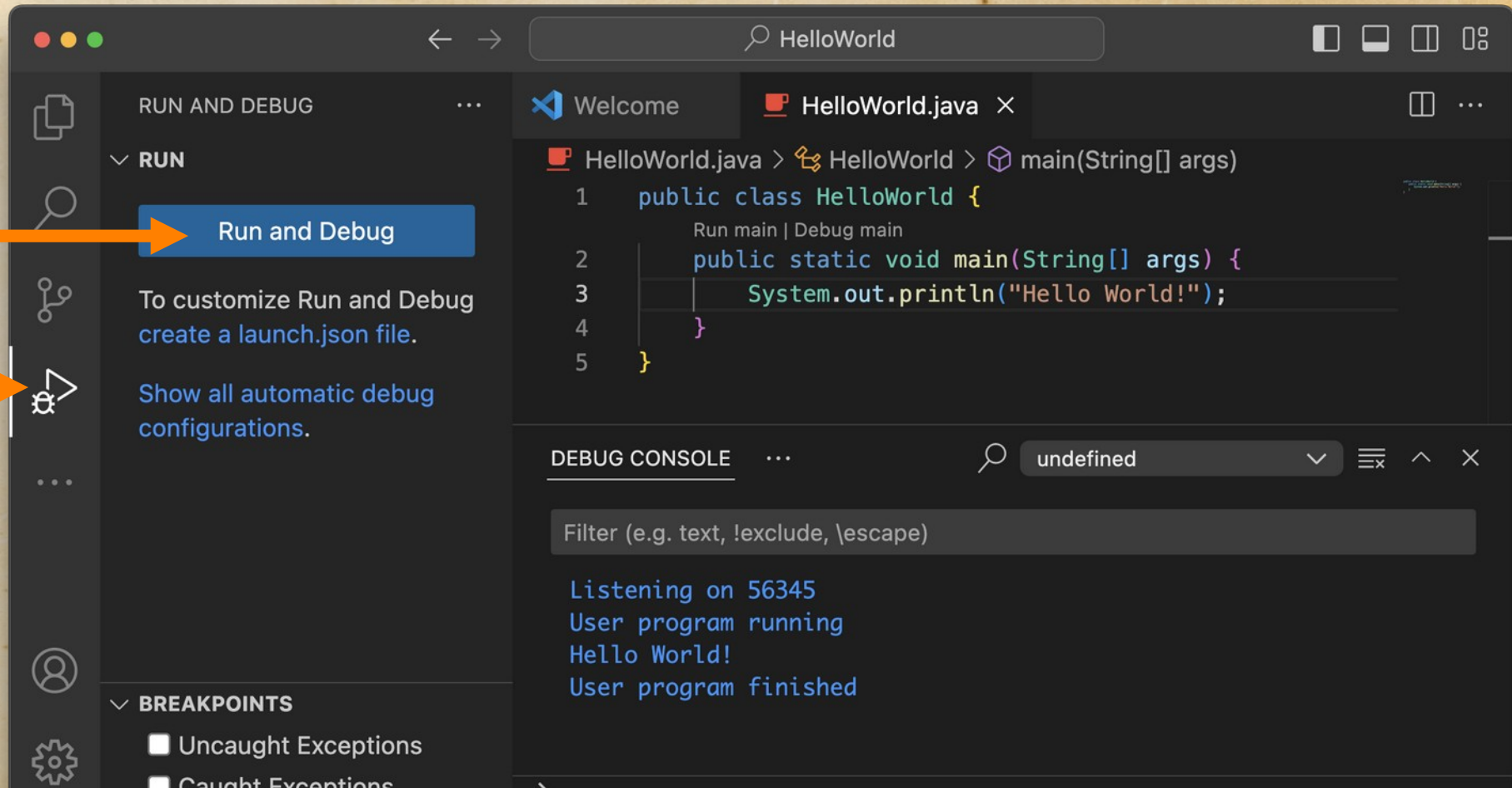

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