# Lesson 1: Hello World

## 1.1 Introduction:

In this lesson, we will introduce you, the student, to Java programming with a simple program called "Hello World". Without human interaction, computers are little more than shiny pieces of metal. Hidden within that metal is incredible power. It is up to you, the programmer, to draw that power out. One of the most valuable features of a programming language, and often the first feature to be taught is having the computer display something. This program does exactly that, displaying the phrase "Hello World". Think of your computer like an infant child, this phrase will be its first words, a precursor to something magical.

## 1.2 Setting Up:

To begin, open the application "Eclipse" and create a new Java Project. Name this project "Hello World" and hit finish.
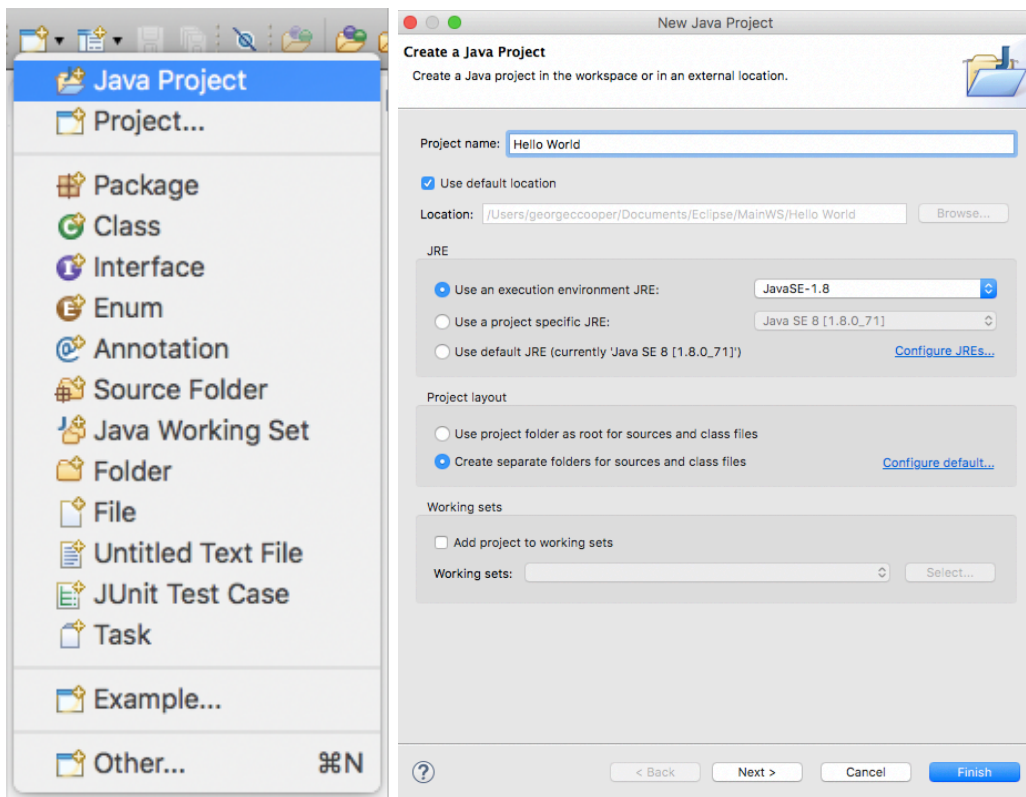


Now expand the project "Hello World", select the file "src", right click and navigate to New->Class.
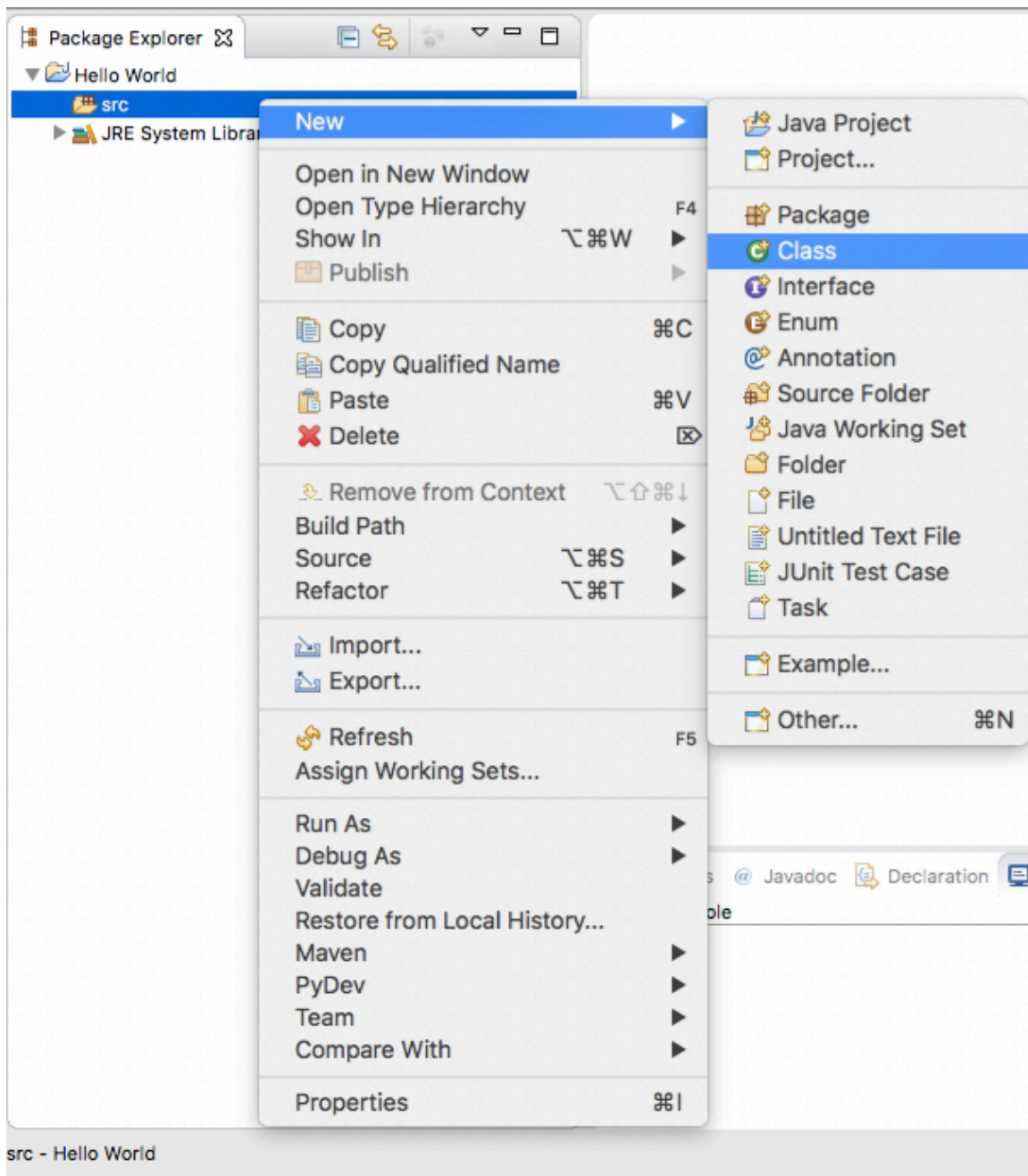
Name this class "Hello_World", ensure that "public static void main(String[] args)" is checked and hit finish. You can safely ignore the warning at the top.
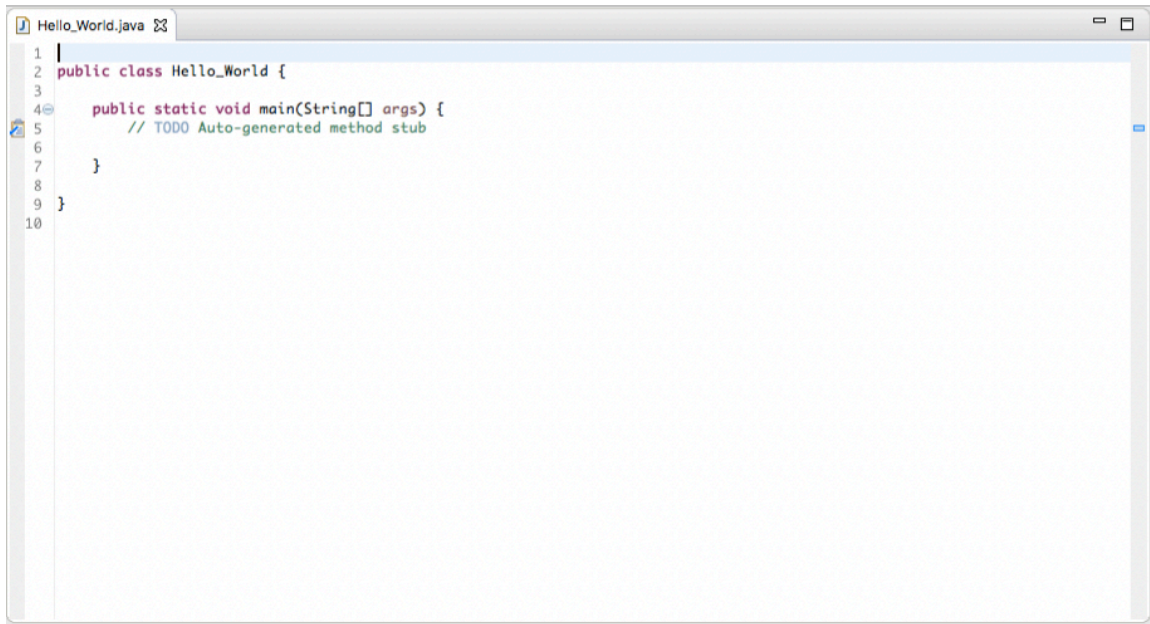
Congratulations, you have now created the space you will use to write your program! It should look like this now:

```
Hello_World.java ⊠
  1
  2  public class Hello_World {
  3
  4⊖     public static void main(String[] args) {
  5         // TODO Auto-generated method stub
  6
  7     }
  8
  9  }
 10
```
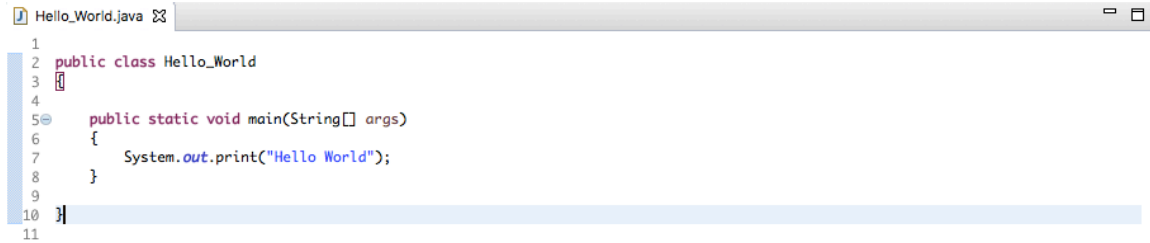
## 1.3 Writing Your First Code:

For now, don't worry about what any of this means. Just know that every project should look like this at the beginning. We will explore what this means, and why we start like this in a much later lesson.

The task at hand is to make the computer print out a simple statement "Hello World". How do we do that? Let's break down the problem.

• We want to tell our "system" to do something.

• We want that something to be an output.

• We want that output to be printing a phrase.

• We want that phrase to be "Hello World"

Fortunately for us, Java has a built in way to do exactly that! Delete the line of code that starts with two "/" marks and type:  System.out.print("Hello World");
 Notice how similar this is to our breakdown of the problem. Hit the run button and watch what happens.

```
 1
 2  public class Hello_World
 3  {
 4
 5⊖     public static void main(String[] args)
 6      {
 7          System.out.print("Hello World");
 8      }
 9
10  }
11
```

Congratulations! You just wrote your first computer program!

**1.4 Closing:**

   The "Hello World" program is a very common first program in many languages.  It is fairly quick to create and introduces the programmer to basic syntax of a language. Syntax is the set of specific rules that a program needs to run properly. The core concepts we see in "Hello World", regarding syntax are the requirement for curly brackets to enclose blocks of code and the need to finish instructions with a semi-colon. Syntax is a rather complex topic that is difficult to study and learn but very easy pick up over time. Programming is hard. Expect to make a lot of mistakes, especially with syntax, as you learn.