Queens College, CUNY
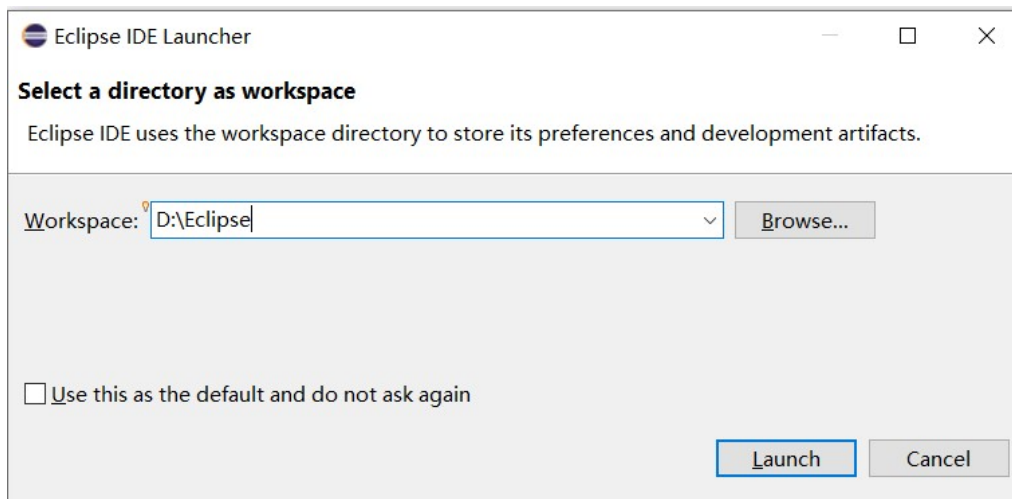**Department of Computer Science**
CSCI 212/612 Lab - Object Oriented Programming in Java
Spring 2023

Lab1

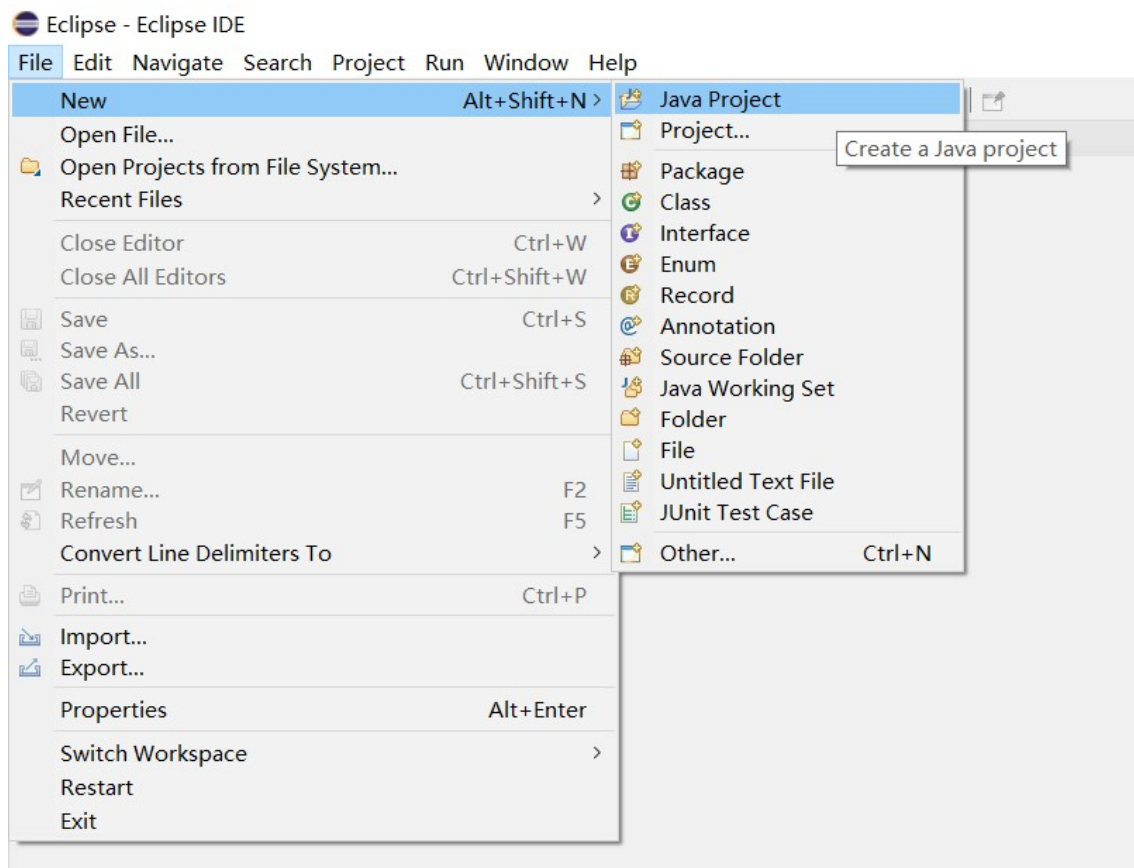A. Tutorial for creating the package and class and running your first Java project on **Eclipse**:

Picking a workspace

The Eclipse IDE prompts you for a workspace to store its configuration. Select an empty directory and click the OK button.

1. **Create project**

   Select File > New > Java project from the menu.

Enter the project name and press the finish button to create the project.
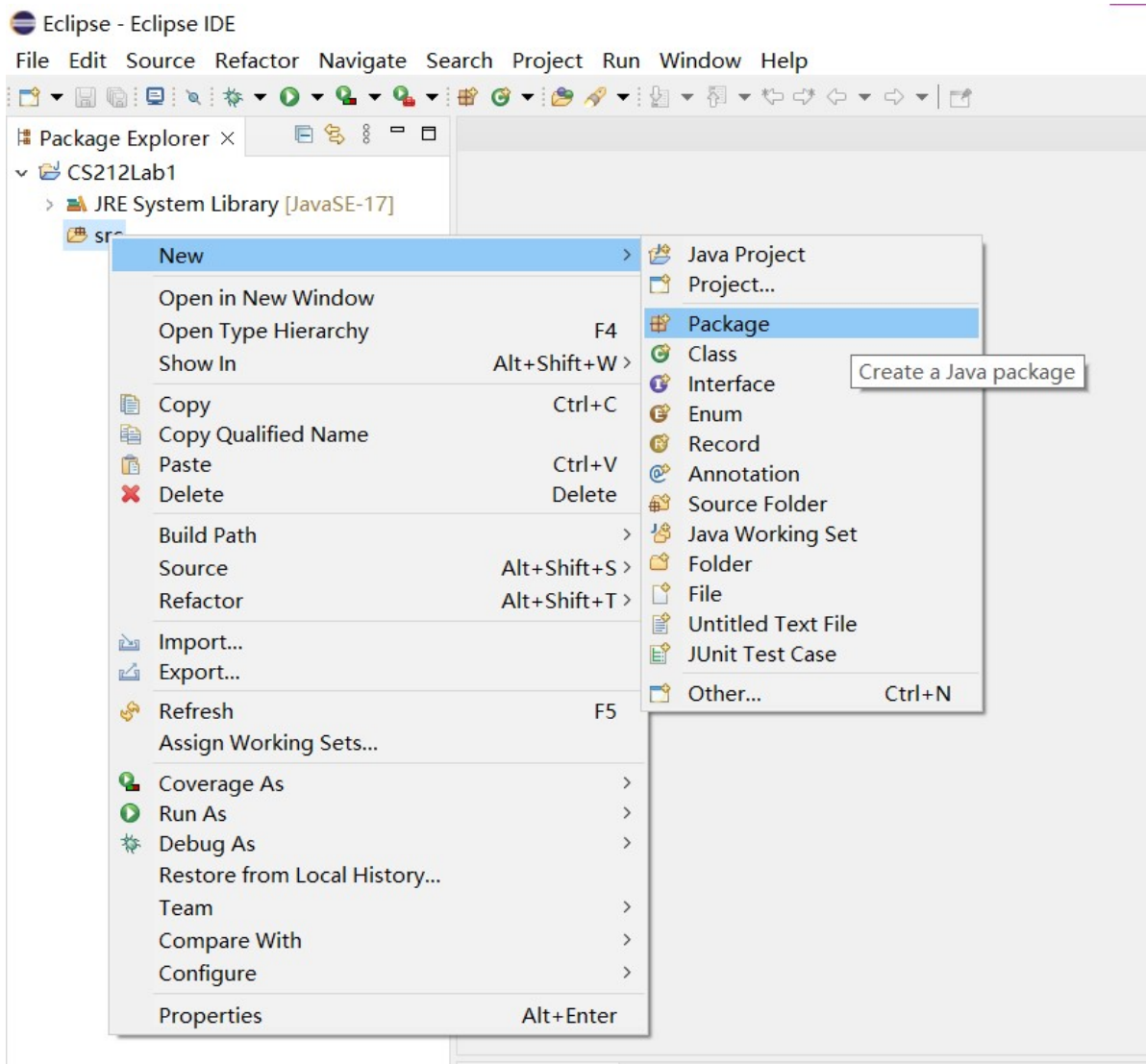
A new project is created and displayed as a folder in your workspace.

After a new project is created, you should see the Package explorer on the left side. If it is not showed, go to Window > Show View > Other > Java > Package explorer, and press Open button.
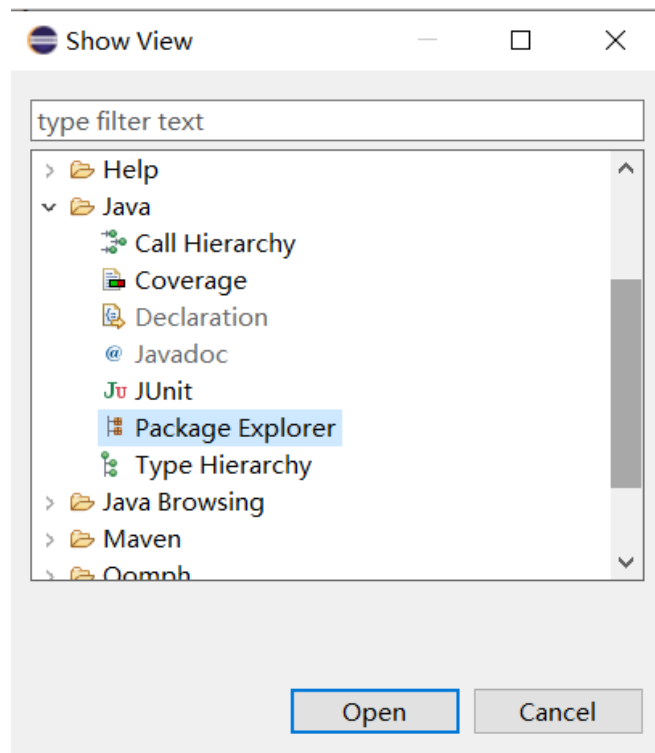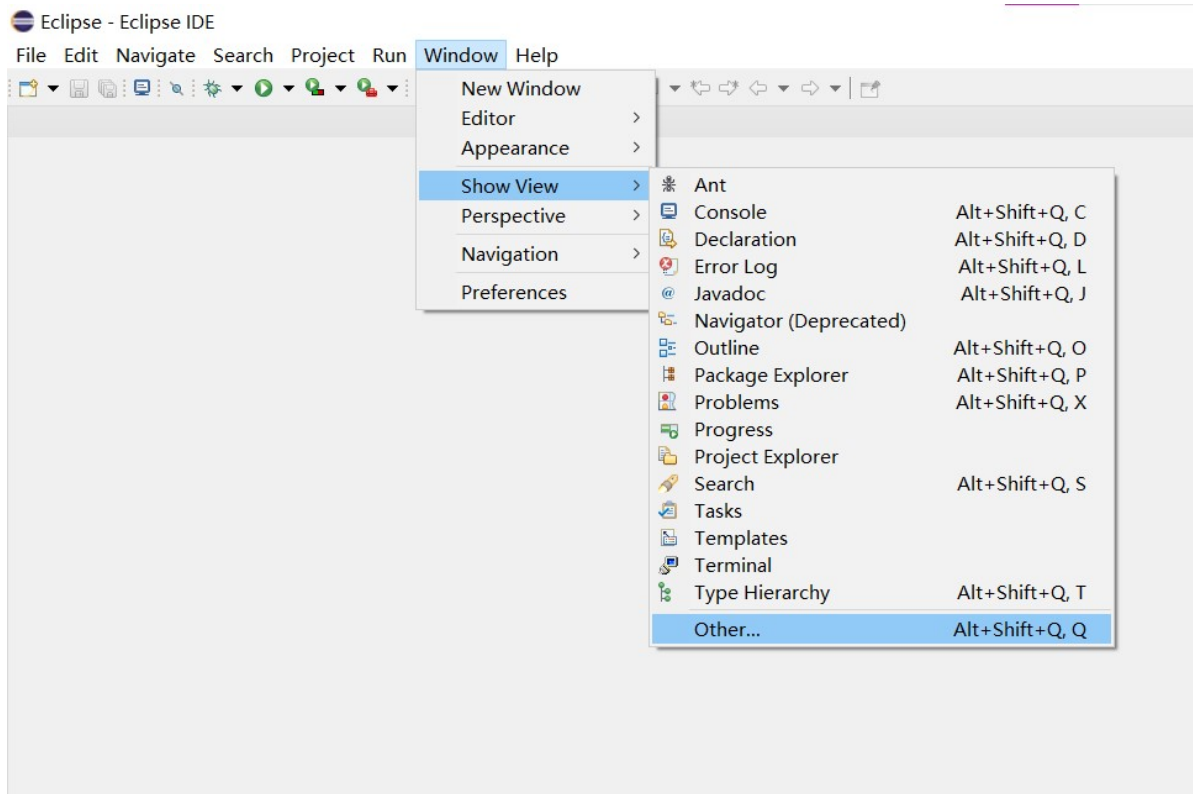
2. Create package

Create the package by selecting the src folder, right-click on it and select New > Package.

A package in Java is used to group related classes. Think of it as a folder in a file directory. We use packages to avoid name conflicts, and to write a better maintainable code. Packages are divided into two categories:

 - Built-in Packages (packages from the Java API): There are many built-in packages such as java, lang, awt, javax, swing, net, io, util, sql etc.

- User-defined Packages (create your own packages): Package names are written in all lower case to avoid conflict with the names of classes or interfaces.
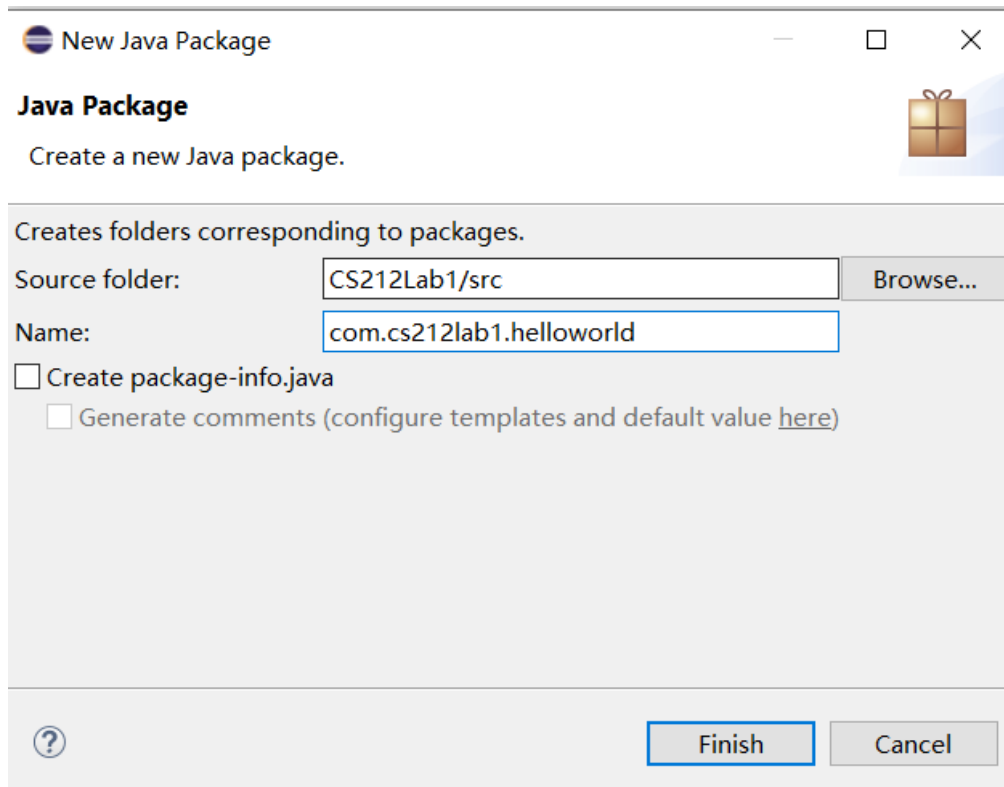
3. **Create Java class**

Right-click on your package and select New > Class to create a Java class.
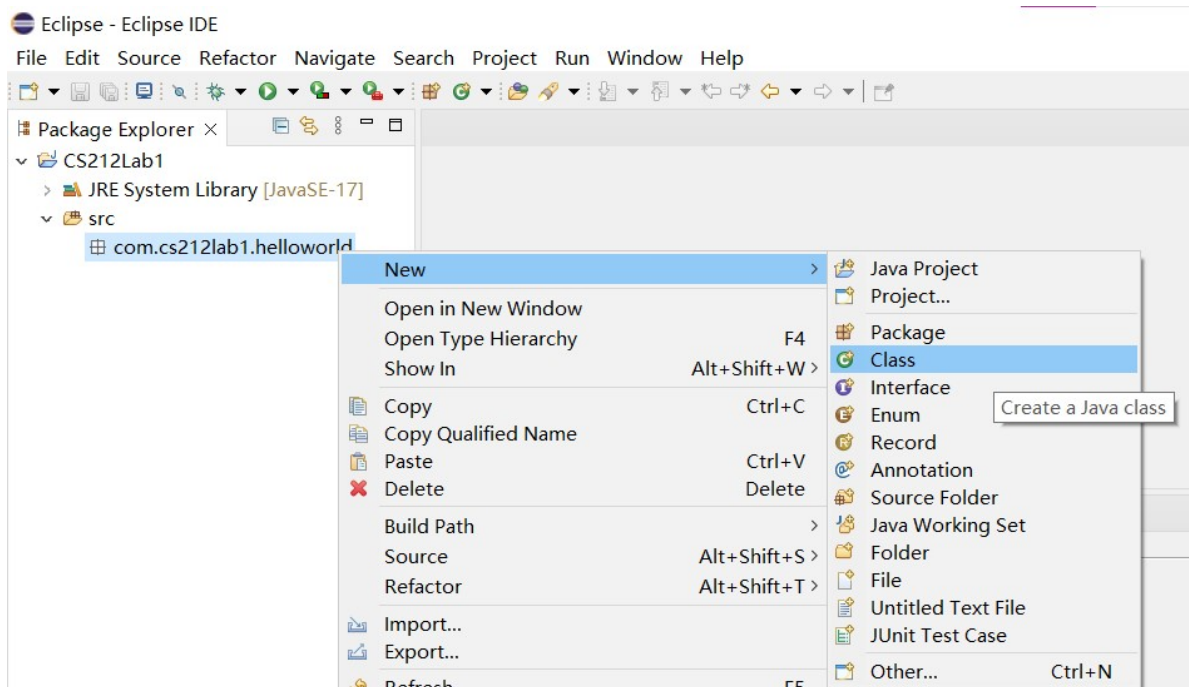

```
Be aware of the Naming Conventions!

*Class names should be nouns, in mixed case with the first letter of each
internal word capitalized. Try to keep your class names simple and descriptive.
Use whole words-avoid acronyms and abbreviations (unless the abbreviation is much
more widely used than the long form, such as URL or HTML).
```

This creates a new file and opens the Java editor. Change the class based on the following Hello World code:

4. **Run your application code from the IDE**

Save your code before you run it.

File   Edit   Source   Refactor   Navigate   Search   Project   Run   Window   Help

Package Explorer ×   HelloWorld.java ×

∨ 📁 CS212Lab1   1 **package** com.cs212lab1.helloworld;
  > 📚 JRE System Library [JavaSE-17]   2
  ∨ 📂 src   3 **public class** HelloWorld {
    ∨ 🏷 com.cs212lab1.helloworld   4
      > 📄 HelloW___   5⊖   **public static void** main(String[] args) {
                                                    rintln("Hello World");

New		>
Open	F3	
Open With	>	
Open Type Hierarchy	F4	
Show In	Alt+Shift+W >	
Copy	Ctrl+C	
Copy Qualified Name		
Paste	Ctrl+V	eclaration 🖥 Console ×
Delete	Delete	ime.
Build Path	>	
Source	Alt+Shift+S >	
Refactor	Alt+Shift+T >	
Import...		
Export...		
References	>	
Declarations	>	
Refresh	F5	
Assign Working Sets...		
Coverage As	>	
Run As	>	1 Java Application Alt+Shift+X, J
Debug As	>	Run Configurations...
Restore from Local History...		
Team	>	

Eclipse will run your Java program. You should see the output in the *Console* view if your code is compiled.

Problems @ Javadoc Declaration 🖥 Console ×

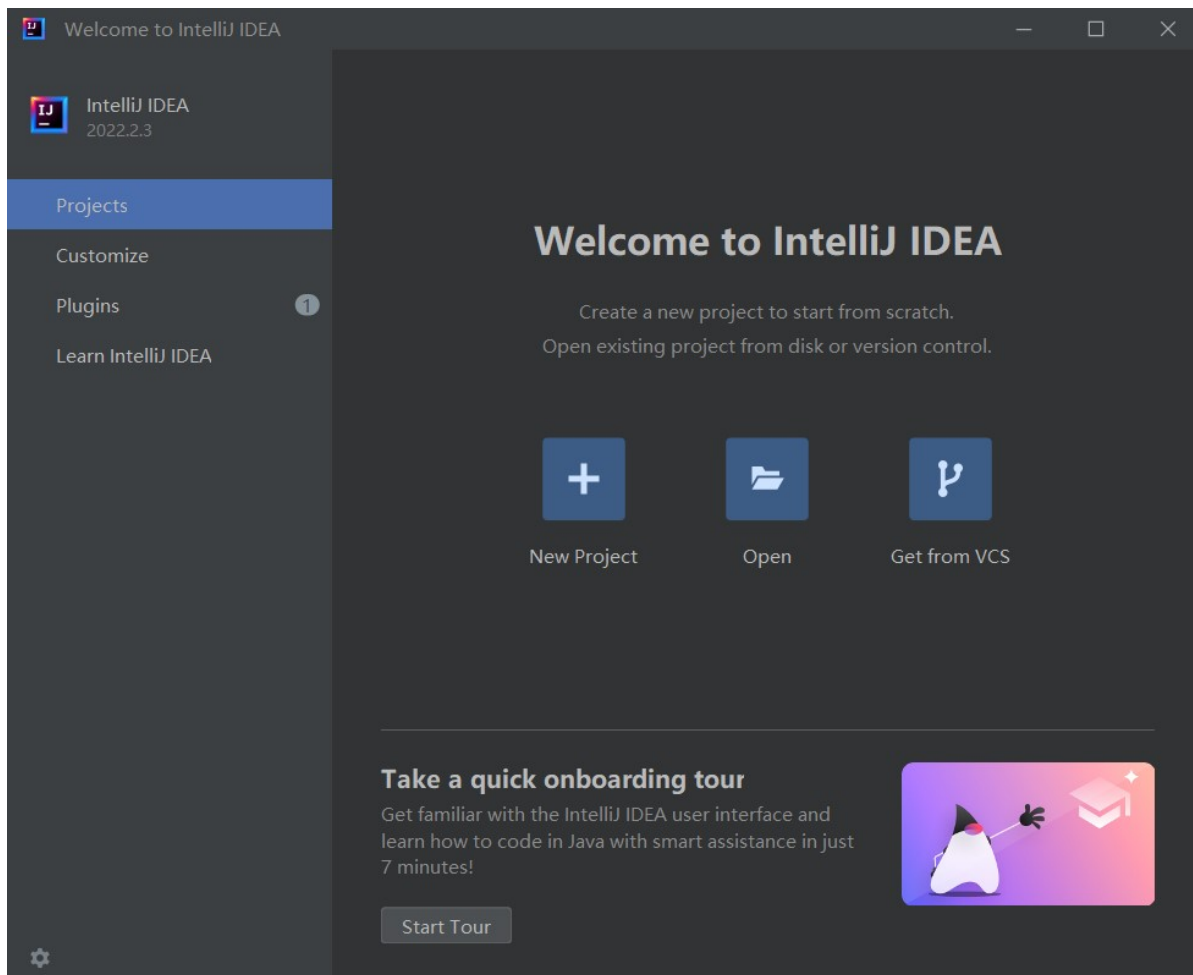<terminated> HelloWorld (1) [Java Application] C:\Users\

Hello World!
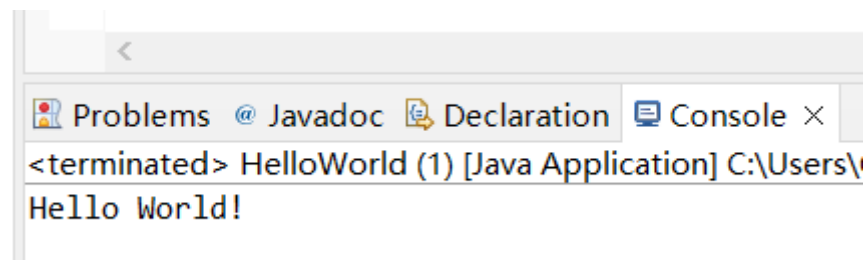
B. Tutorial for creating the package and class and running your first Java project on **IntelliJ IDEA**:
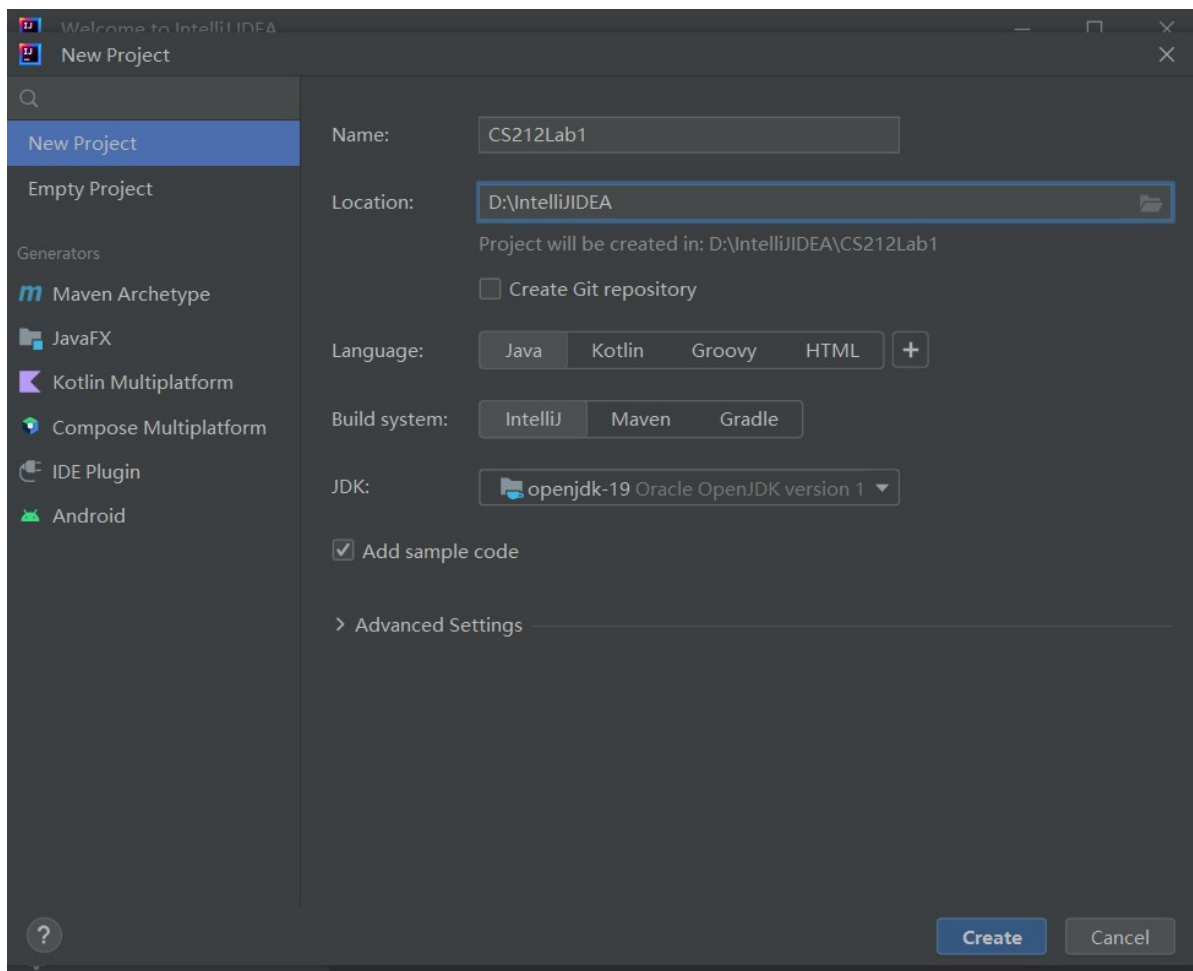
```
*Use the latest IntelliJ IDEA Community Edition
```

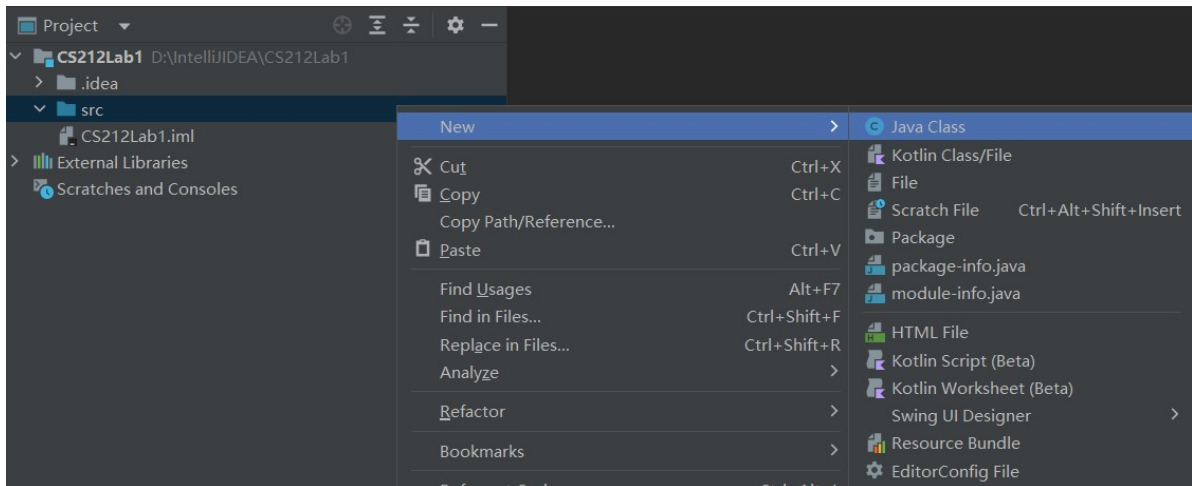1. **Create project**

   Click on new project

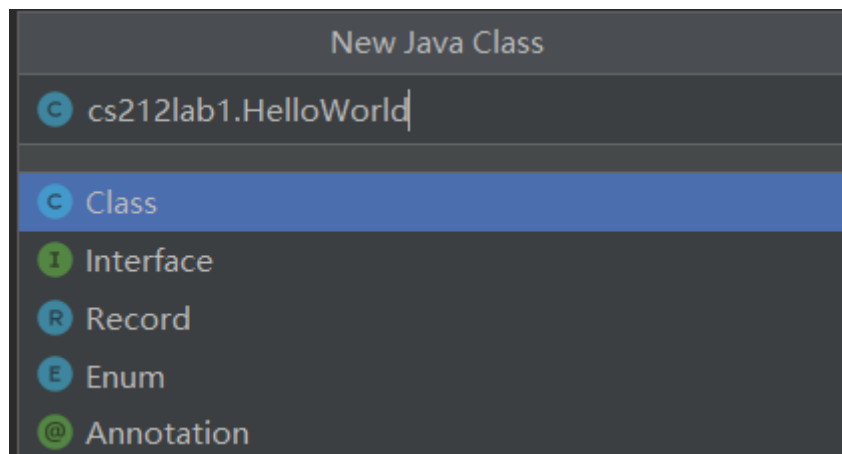Enter project name and choose project location, press Create button.

2. Create package and class

Select the src folder, right-click on it and select New > Java Class.

In the Name field, type `PackageName.ClassName` and click OK.

In the example, IntelliJ IDEA will create the `cs212lab1` package and the `HelloWorld` class.

3. Run your application code

You can compile and run classes with the `main()` method right from the editor using the green arrow icon ▶ in the gutter.