CSE 215L: Programming language II Lab
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Sec: 02
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Objective:
- Intro to Java, JDK, JVM, and JRE
- Setting up the environment with JDK and Eclipse IDE
- To familiarize with different settings of Eclipse IDE
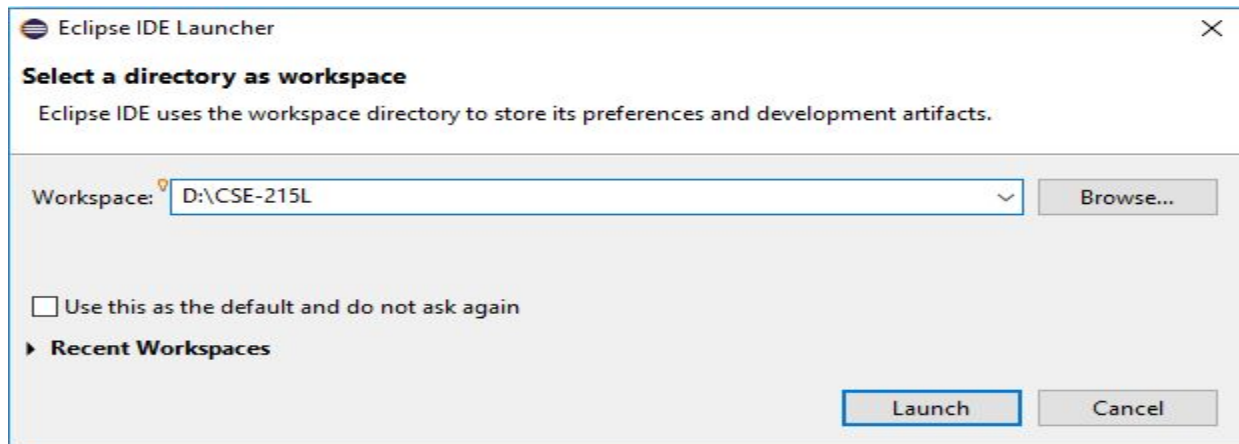- Elementary naming conventions

To execute a Java program, you need the JDK (Java Development Kit) to be installed on your computer. When you install JDK - JRE comes as bundled. Eclipse will use JDK to compile and execute our code. So first, we will install JDK. Also, you can use any text editor like Notepad++ or Sublime Text to write Java code. However, in that case, you will need to compile the code from the command prompt and execute it from there. That's where IDE (Integrated Development Environment) comes in handy. Using an IDE you can write code, compile and execute it. For this course, we will be using Eclipse IDE.

Instructions:
- Go to this URL:
  https://www.oracle.com/java/technologies/javase-jdk15-downloads.html
- Accept the license agreement and download the appropriate JDK version.
- Once downloaded, run it to begin the installation procedure. The process may take a while depending on your system specification.
- Now go to this URL:
  https://www.eclipse.org/downloads/download.php?file=/oomph/epp/2020-12/R/eclipse-inst-jre-win64.exe
- Use the Eclipse Installer to install the ECLIPSE IDE for Java Developers.

Step-1: Creating a Java Project
First of all, you have to select a directory as a Workspace. Let's say, D drive is chosen and under that, a file named CSE-215L is specified as Workspace meaning that all our java programs will now be stored in that folder under that specified drive.

Before you write Java programs, you need to first create a project. A project is like a folder that contains our Java programs and all supporting files. You need to create a project only once. Here are the steps to create a Java project in Eclipse:

1. Choose *File → New → Java Project* to display the New Java Project wizard, as shown in Figure 1.
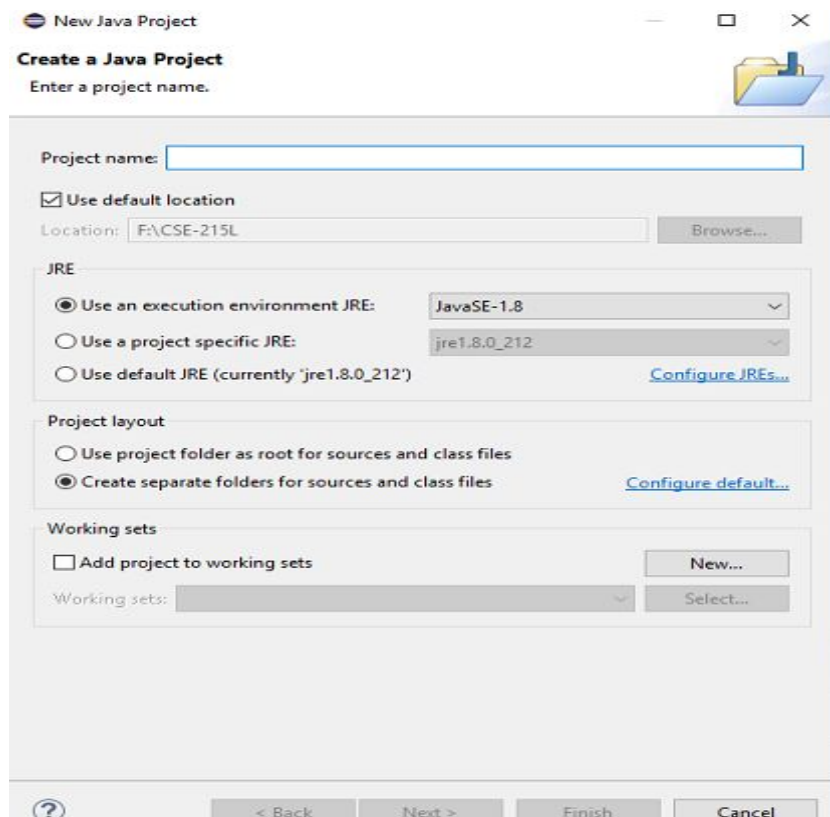
Figure 1: The New Java Project dialog is for specifying a project name and properties

2. Type **Demo** in the Project name field. As you type, the Location field is automatically set by default. You may customize the location for your project.
3. Make sure that you selected the option ***Create separate folders for sources and class files*** so that the .java and .class files are in two different folders.
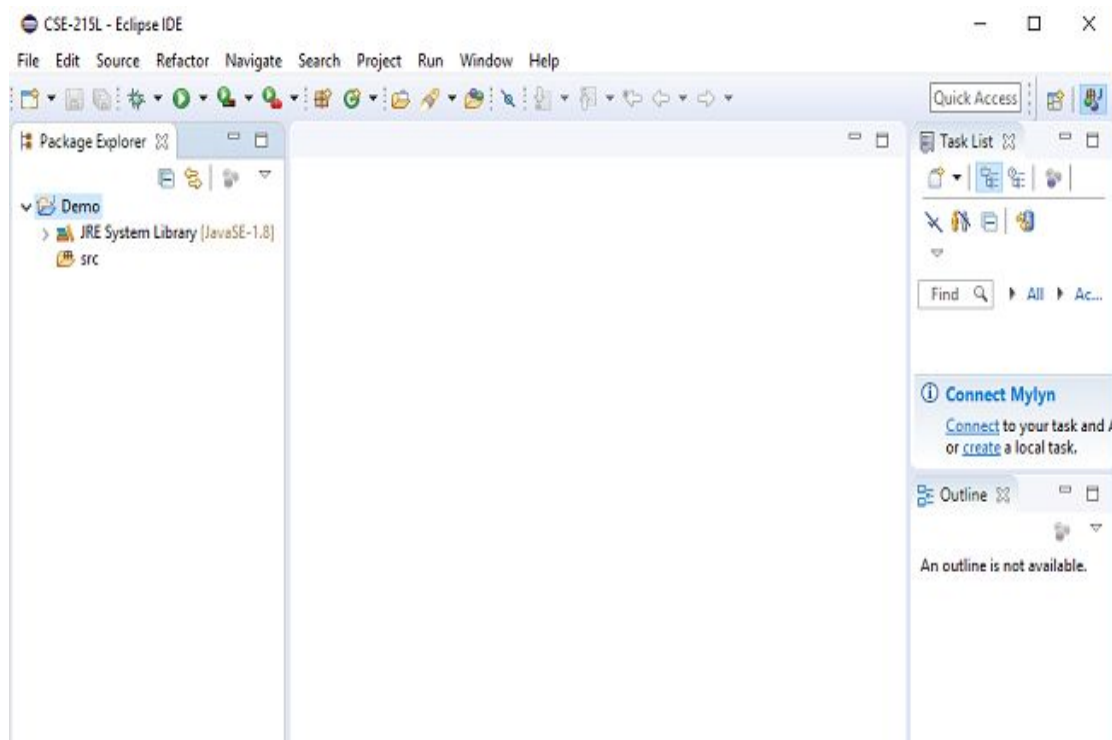4. Click *Finish* to create the project, as shown in Figure 2.

Figure 2: A New Java project named Demo is created.

Step- 2: Creating a Java Class

After a project is created, you can create Java programs in the project using the following steps:

5. Choose File → New → Class to display the New Java Class wizard.
6. Type **Welcome** in the Name field.
7. Check the option *public static void main(String[] args)*.
8. Click *Finish* to generate the template for the source code Welcome.java, as shown in Figure 3.
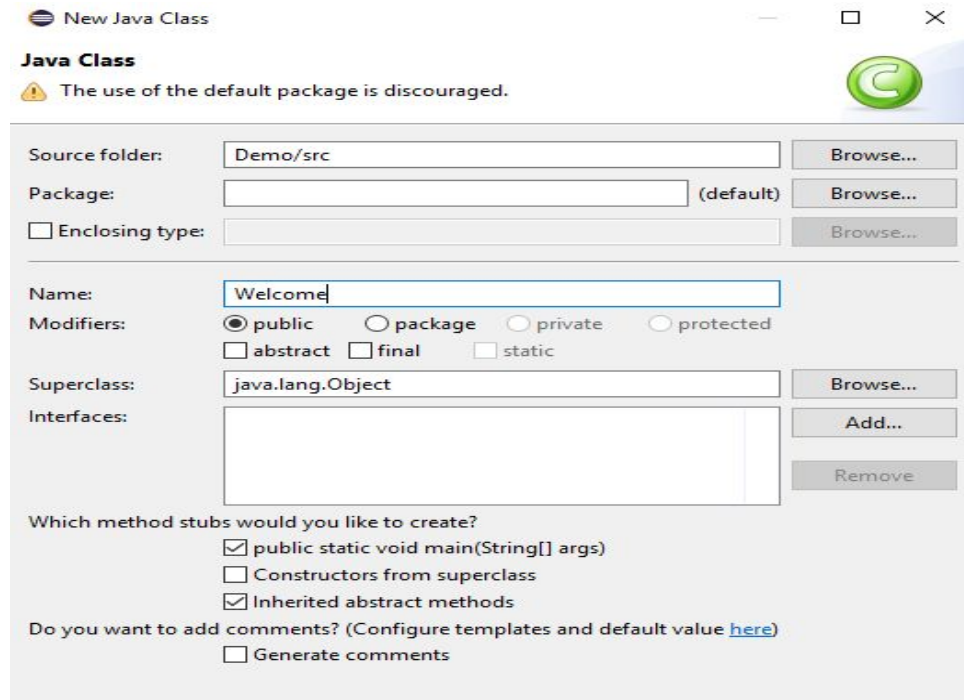
Figure 3: The New Java Class dialog box is used to create a new Java class

Step- 3: Compiling and Running a Class

To run the program, right-click the class in the project to display a context menu. Choose *Run, Java Application* in the context menu to run the class. The output is displayed in the Console pane, as shown in Figure 4.
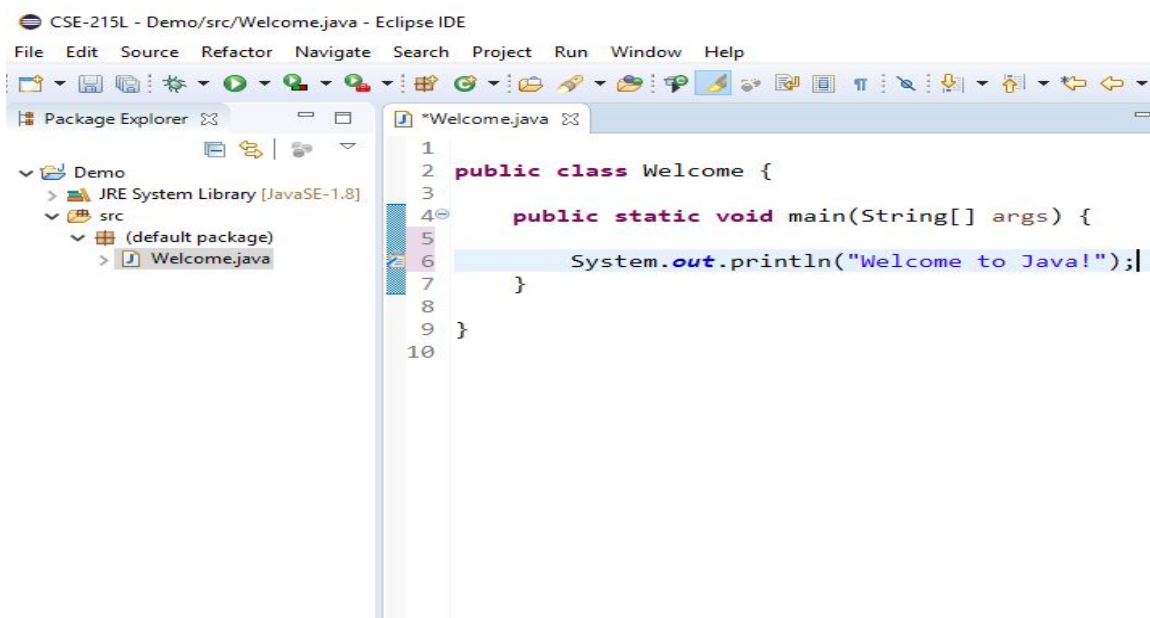
Tasks:

1. Write a program that prints your name, age, and department in the console.
2. Write a program that prints from 1 to 10.
3. Write a program that determines if an integer is odd or even.

Sample Input	Sample Output
Enter N: 23	23 is Odd
Enter N: 56	56 is Even