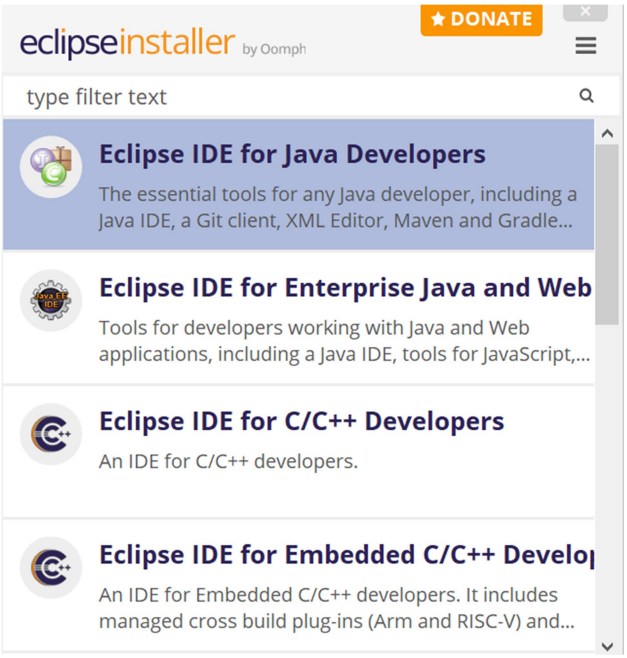
# Lab 1: Setting Development Environment

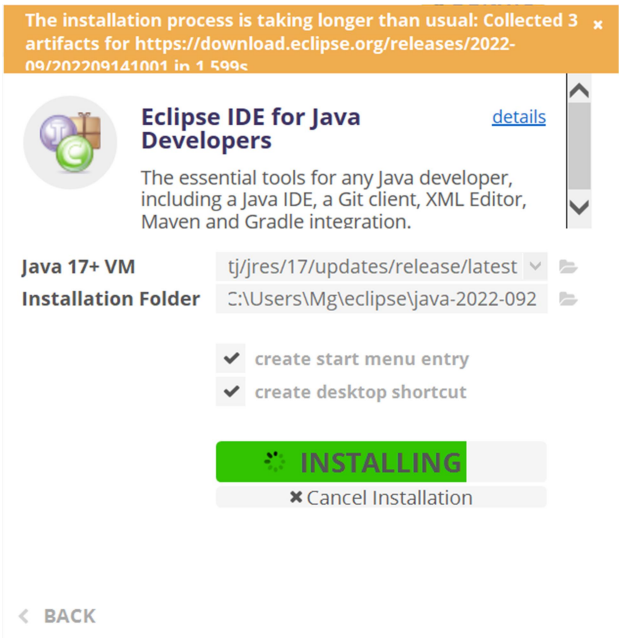
**CLO: 1, 2**

Follow the below mentioned steps to set up development environment.

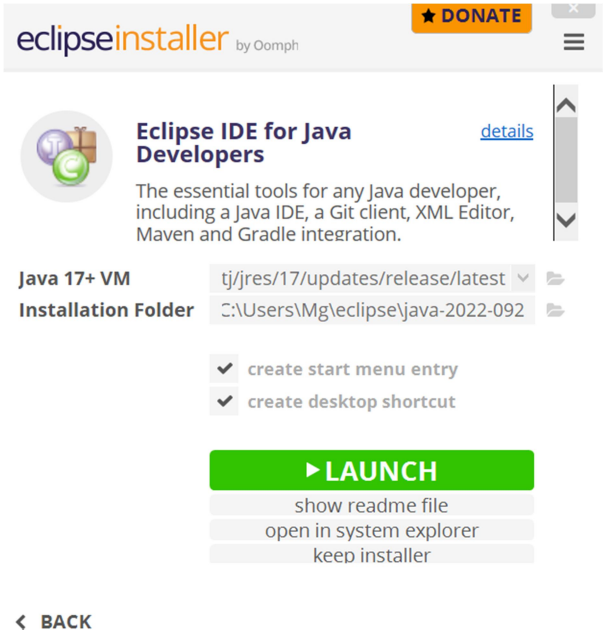
1) Download the recommended IDE: Eclipse IDE for Java Developers
   a) Download Link: (https://www.eclipse.org/downloads/)
2) Run the eclipse installer and select the highlighted option



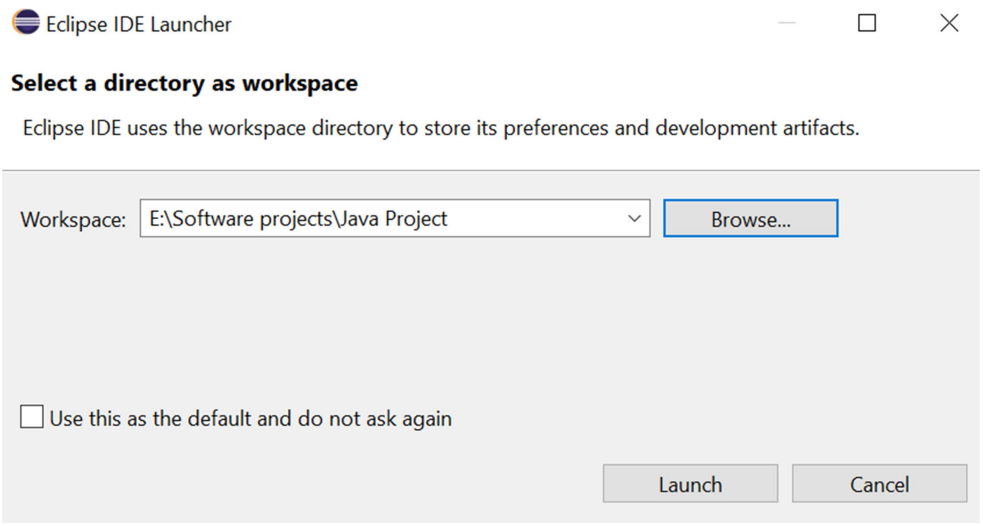

3) Select installation folder and install the package



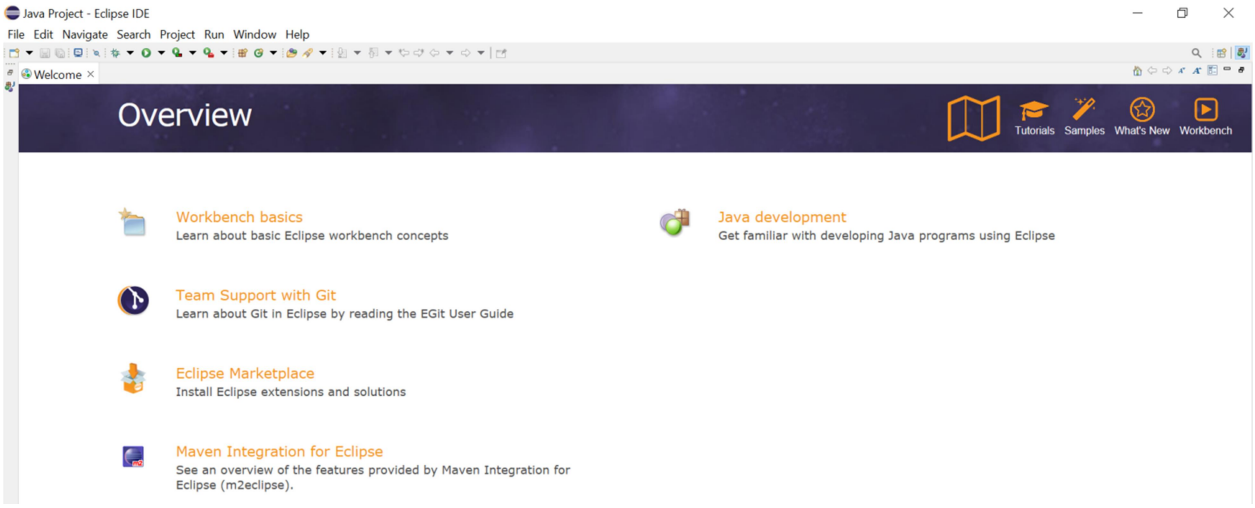
4) Launch



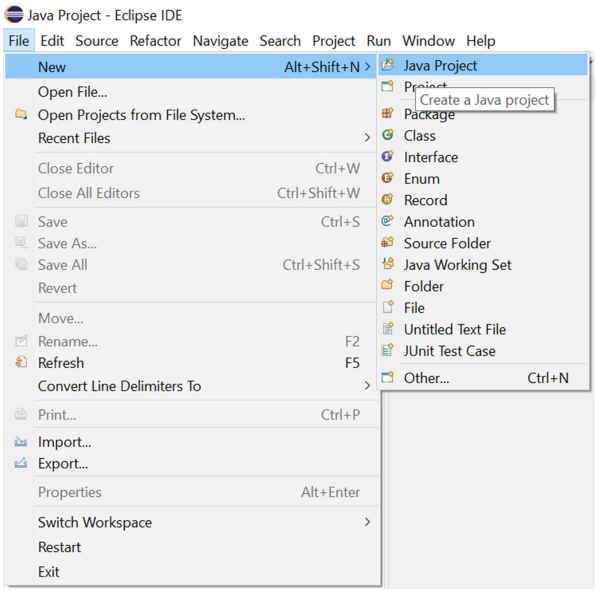

5) Select directory as a workspace and launch the workspace



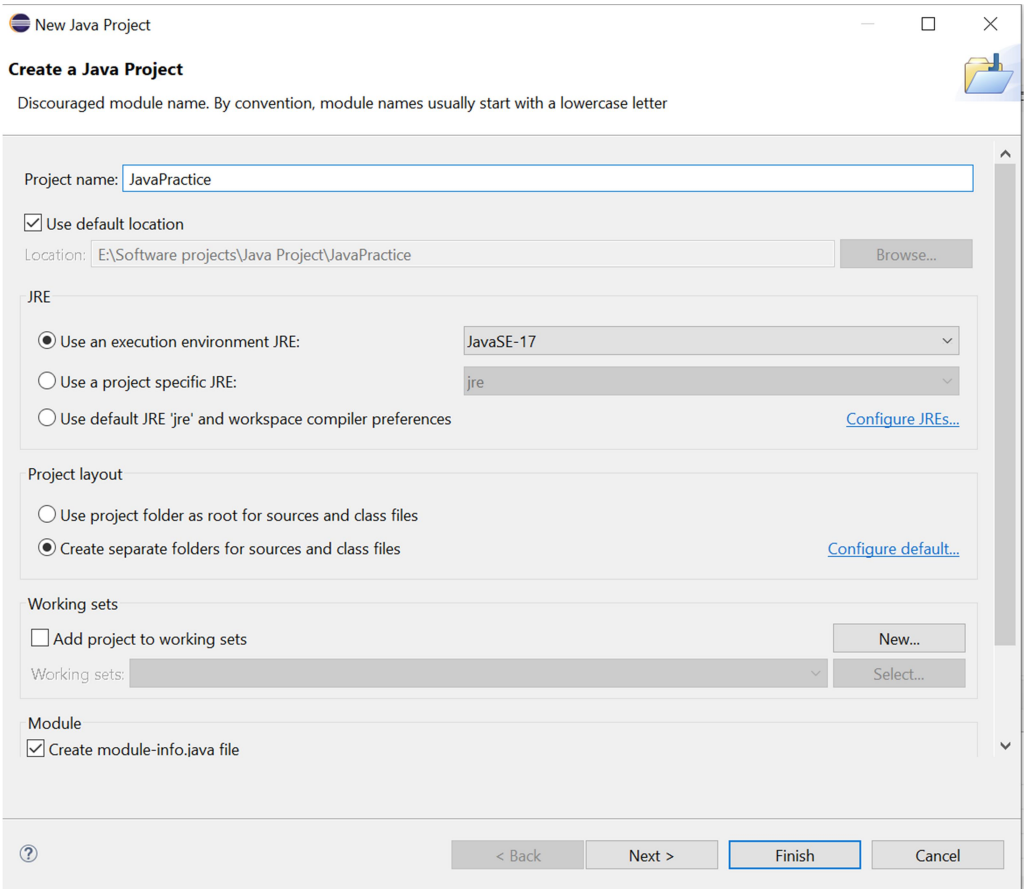

6) This is the welcome window, you can explore different options.



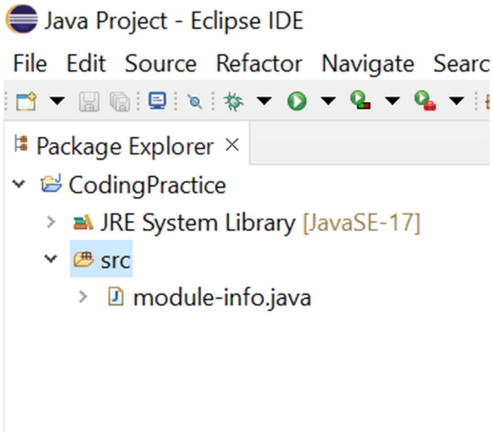

7) Navigate to File -> New -> Java Project



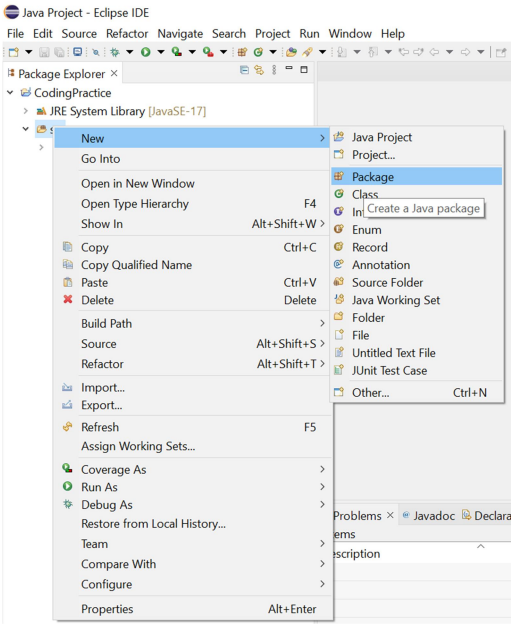

8) Name the project and keep other options selected by default. Select Next button in case you want to change some settings or Finish Button to create the project.



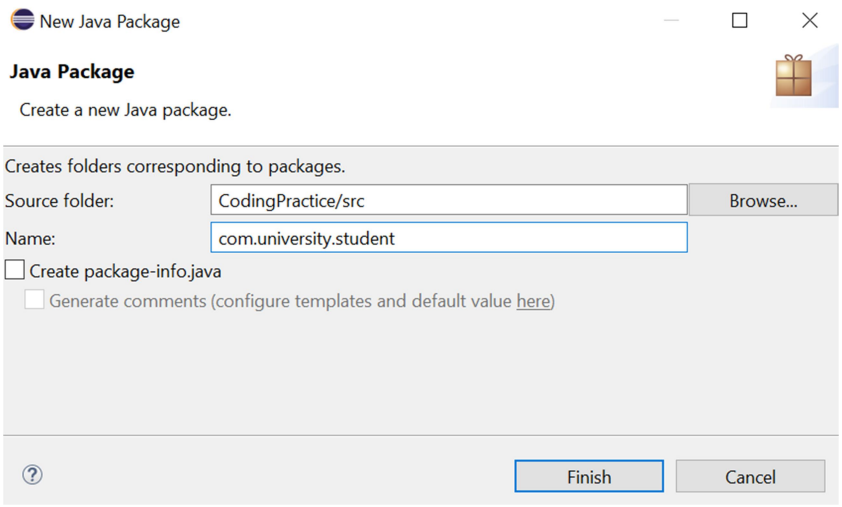

9) On the left hand side, there is Package Explorer Window.



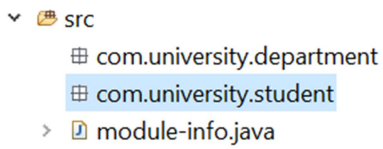

10) Create new package as pictured. Creating packages is a standard development practice. A package in Java is used to group related classes. We use packages to avoid name conflicts, and to write a better maintainable code. It is helpful in implementing data encapsulation. There are two types of packages "Built-in" and "user-defined" packages.



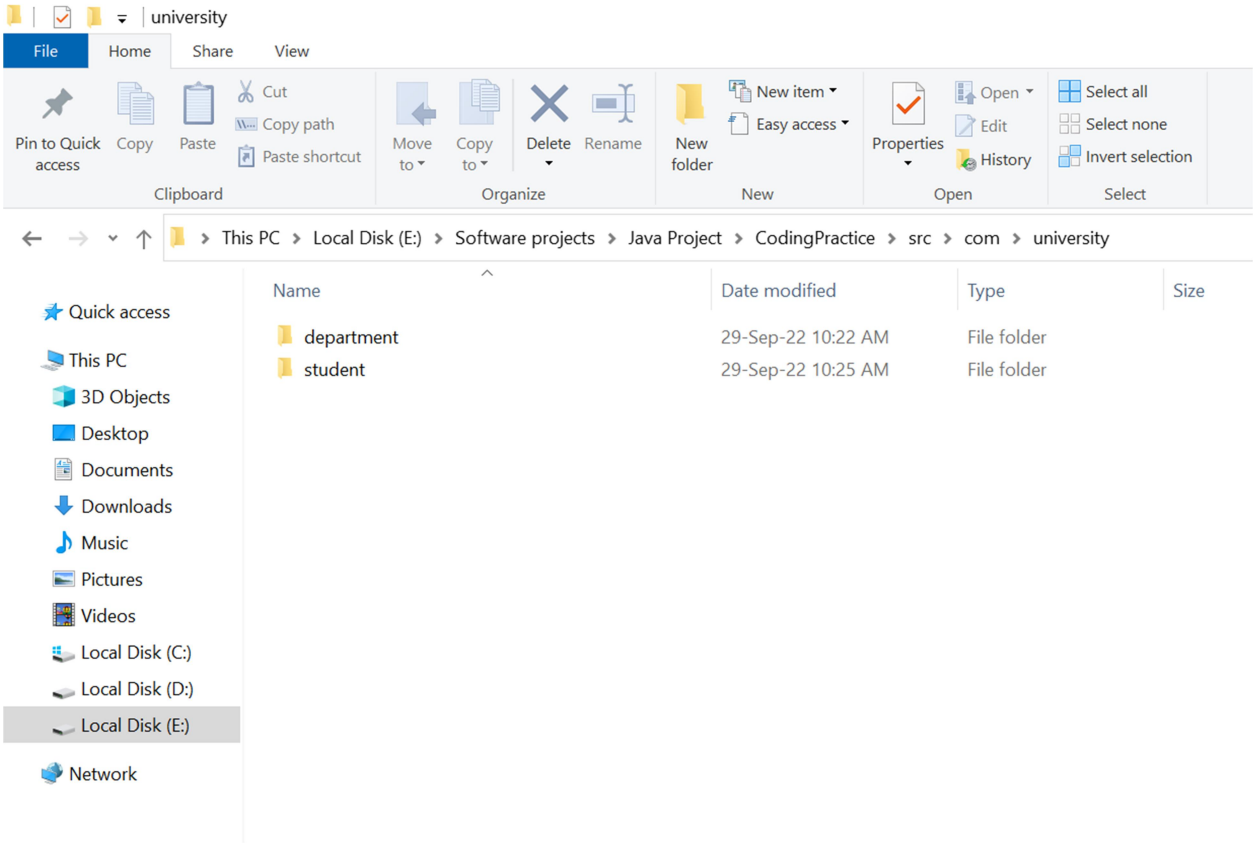

11) Name the package



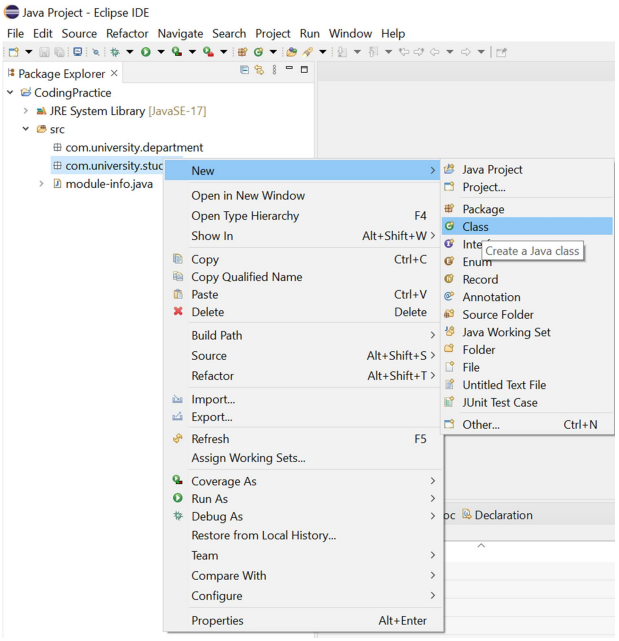

12) Have a look at the package explorer window



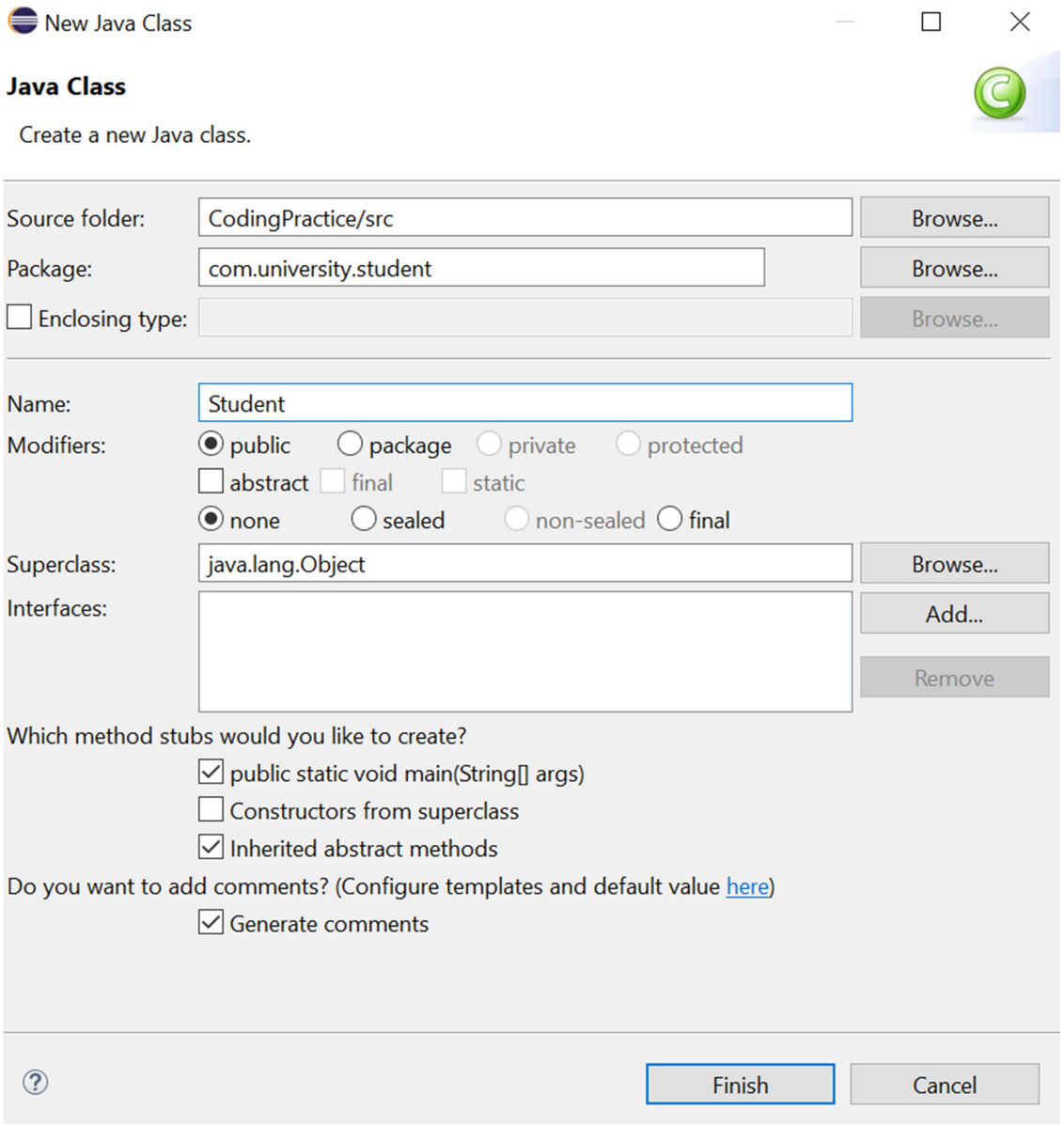
13) Navigate the project location. You will see the packages defined as a directory created for saving the similar code.



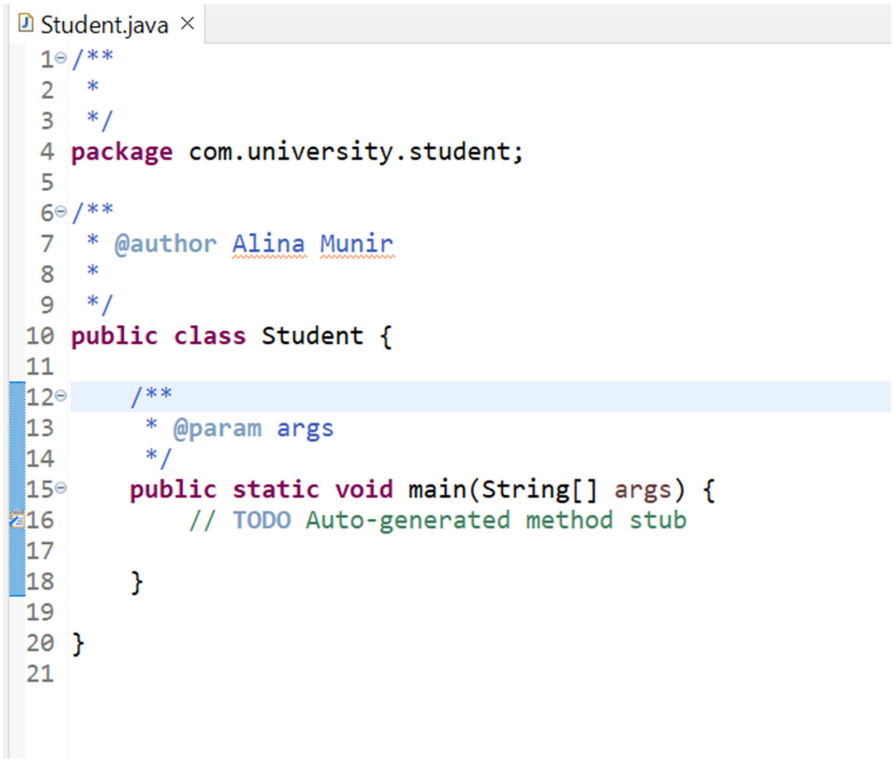

14) Now, create a class to start practice.



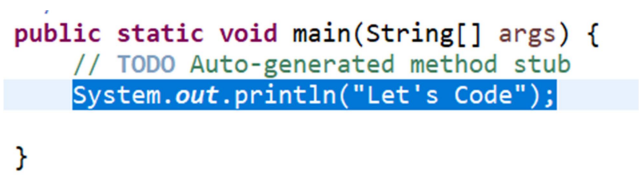
15) Carefully select the options according to coding requirement. The below sample serves as an example for beginners.



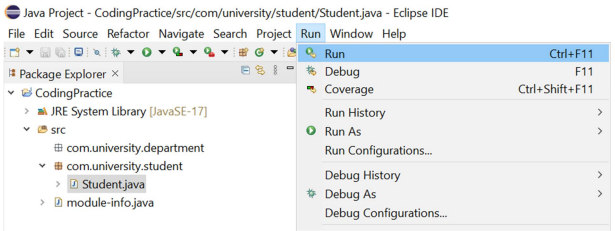
16) Here is the generated class.



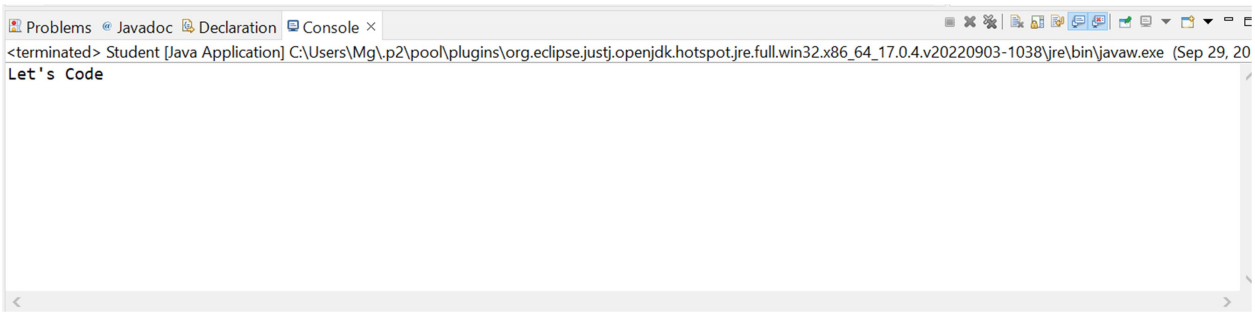

17) Let's output a statement




18) Run the Code




19) The output is in Console window.




You are ready to practice programming fundamentals and OOP concepts using JAVA programming language.

# Task

1. Practice creating multiple projects, classes to get hands on. Explore multiple options as well.
2. Submit Semester Project Description. See the sample description

At the beginning of each term, students may request a course catalogue containing a list of course offerings needed for the term. Information about each course, such as instructor, department, and prerequisites are included to help students make informed decisions.

The new system will allow students to select four course offerings for the coming term. In addition, each student will indicate two alternative choices in case a course offering becomes filled or is canceled. No course offering will have more than forty students or fewer than ten students. A course offering with fewer than ten students will be canceled. Once the registration process is completed for a student, the registration system sends information to the billing system so the student can be billed for the term.

Instructors must be able to access the online system to indicate which courses they will be teaching, and to see which students signed up for their course offerings.

For each term, there is a period of time that students can change their schedule. Students must be able to access the system during this time to add or drop courses.