Lab11: Object Oriented Design

So far… You become more and more experienced programmer. In this lab, you will learn to be a system designer as well. As a designer, you have to analyze a user's requirement and come-up with your own design on how to implement the software. Here is the user's requirement for a system

ICT Enrollment System is a course enrollment system specially designed for ICT students. The system will allow students to enroll for courses and make a payment. Information of students must be stored including student ID, section, and full name. Students can check their payment status and total enrollment fee in each semester. The faculty will be able to deal with the course's information such as viewing and updating course's code, name, credits, description, prerequisite, credit fee, and maximum number of seats allowed to enroll in this course. The total fee of each course can be calculated from the credit fee and the course credits. Also, each course must have an information about the semester, academic year, and offering status. The course will be offered if and only if the number of enrolled students is more than or equals to 50% of the maximum number of seats. Students can enroll in any courses as long as they already enrolled for the prerequisite course and number of seats is still available. The system will allow the faculty to keep track on the number of enrolled students, number of available seats, total fee and payment, and course offering status of each course.

Write down your design here including classes' name, attributes, and methods. You may use UML diagram to explain about your design in this part.

Finally, as a programmer (again), you have to implement your design using Java. Create a **EnrollmentTester** class and add a few test cases to test your program.

Challenge Bonus (Optional): Adding a new requirement.

A user has an additional request as follow:

The system should also keep an information about the lecturer including staff ID, full name, and list of courses he/she will teach in each semester.

Peer Bonus (Optional):