HO CHI MINH UNIVERSITY OF SCIENCE
FACULTY OF INFORMATION TECHNOLOGY
SOFTWARE ENGINEERING DEPARTMENT
ADVANCED PROGRAM IN COMPUTER SCIENCE
COURSE: **PROGRAMMING SYSTEMS**
LECTURER: Dr. ĐINH BÁ TIẾN

WEEK 01

CLASS IMPLEMENTATION

- MSc. TRƯƠNG PHƯỚC LỘC
- MSc. HỒ TUẤN THANH

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1 Class Diagram

Read the introduction about class diagram in the following link:
http://en.wikipedia.org/wiki/Class_diagram

1. Introduction
2. Members
3. Relationships::Link:: Aggregation

2 Exercises

For each exercise below, draw a class diagram and implement it in C++.

1. Write a console application to input 2 fractions from keyboard and output the sum of them. The output fraction must be reduced.
2. Write a console application to load 2 fractions from a text file. Compare them and output the result to screen.
3. Write a console application to input 2 points (plane Oxy) from keyboard. Calculate the distance between them and output the result to screen.
4. Write a console application to load 3 points from file. Check whether we can build a triangle from them. If yes, save the following info to a CVS file (you own define the file format).
   a. 3 vertices of triangle
   b. Type of triangle
   c. Perimeter
   d. Area
5. Write a console application to input info of 2 students (id, full name, gender, address, mark) from keyboard. Find the student whose mark is greater and save the following info of his/her to a XML file (id, first name, last name, class (2 first numbers of id), address, mark, gpa (A-F)).
6. Write a console application to input a date from keyboard. Calculate the distance from this date to current date.

3 Assignments

1, 2, 3

4 Homeworks

1 – 6