CSE 110: Object Oriented Programming
Course Instructor: Dr. Mohammad Rezwanul Huq

CSE110: Project Description

Objectives

Objectives of the term project are as follows:

a. Students would practice the programming constructs which were taught and demonstrated in the lab to develop a Java-based application.
b. Students would explore new technology and programming constructs in Java which would be learned by themselves and could successfully apply to develop an application.
c. Students are expected to work in a team environment.
d. Students would deliver the design of the system using class diagrams as such they were in a real software developing firm.
e. Students would prepare a professionally-written report on term project.

Scopes of the Project

Students may choose to develop a Java-based application as their term project from different topics. A few of them has been listed below:

1. *Information System Implementation*
    a. Student Information System
    b. Result Processing System
    c. University Information System
    d. Library Management System
    e. Hotel Management System
    f. Hospital Management System
    g. Vehicle Pool Management System
    h. Payroll Management System
    i. Railway/Bus Reservation System
    j. Inventory Management System
    k. Salary Management System
    l. Car Sales System
    m. Departmental Store Management System and so on

    * It would be highly appreciated and encouraged that students would use an underlying Database to build these systems using Java Database Connectivity (JDBC).

2. *2D Game Development*
    a. Image Puzzle
    b. Snake
    c. Breakout
    d. Tetris
    e. Minesweeper and so on

3. Tools Development
    a. Development of a simple Chat Engine
    b. Development of a simple Word Processor
    c. Development of a simple Paint Application
    d. Development of a simple Media Player and so on

What to do next?

a. *Team Formation*: A team will be formed by maximum three students (two students in only one group). There would be exactly one student in a team from each of the pot as given below:

Pot A	Mobasshir, Meharaj, Mahfuza, Bayzid, Saif, Rakibul, Samir
Pot B	Shakib, Ahsan, Shamsuzzaman, Farhana, Simonta, Sazeebul, Mehrab
Pot C	Farhan, Shahtab, Mursalin, Ikramul, Bijoy, Azizul, Momdu

b. *Submission of Concept Note*: After forming teams, each team must submit a concept note that contains a one-page high-level summary about their project along with the name of the team members. **Hardcopy must be submitted by 20 March 2019.**

c. *Submission of Initial Class Diagram*: Each team must submit a preliminary class diagram, representing all the classes and their interaction within the application. This class diagram can be changed later as required. **Hardcopy must be submitted by 27 March 2019.**

d. *Preliminary Demonstration of the Application:* Each team must demonstrate the preliminary version (beta version) of their application during the lab on **03 April 2019.**

e. *Final Demonstration and Report Submission:* Complete code and report must be submitted. **Demonstration and Report submission date will be announced later.**

Marking Rubrics:

Marking Criteria	*Points*
1. Appropriate use of Classes and Objects	2
2. Use of concepts such as Association, Inheritance, Abstract class and Interface	2
3. Use of Files	1
4. Use of Graphics such as JavaFX, Swing etc.	1
5. Use of Advanced Concepts such as Generics, Multi-threading, JDBC etc.	1
6. Ability to work in a team	1
7. Report Writing	3
Total	**11**