

**Department of Computer Science**

**COMP232/242/2321 (First Semester – Fall 2016/2017)**

*Project#1 Due Date: To be announced later (along with Project#2)*

This project is based on what you have learnt in the lecture room about Linked List. In this project, you will implement a system to accept new students at a university based on an **admission mark** that is computed based on the Tawjihi, High-School, and Placement Test grades.

Your program should assign new registered students to their majors based on their **admission marks**. Each input student should be assigned to one major only. The student may not be assigned to any major if (s)he didn’t pass achieve the required **admission marks** of majors for all faculties. Each major has a unique non-overlapping range of averages. For example, Medicine [97-99], Engineering [90-96], Science [85-89], and so on.

Your program should read two input files. The containing the Name of students, Tawjihi, High-school, and Placement test grade.

The second file should contain the acceptance criteria by the university that is:

* the Tawjihi grade’s rate in the **admission mark**
* school grade’s rate in the **admission mark**
* Placement test grade’s in the **admission mark**
* Number of faculties
* A list of faculties and the range of their averages

Your application should have the options of: 1. Read the files; 2. Accept new students; 3. Print (on the screen) all accepted students based on their faculties; 4. Print (on the screen) rejected students; 5. Write accepted and not accepted students to files; and 6. Quit

Your test files should contain at least 5 faculties and at least 30 students.

**Grading policy and general notes on the projects:**

1. Your application should have all functionalities working properly. Twenty marks will be graded for the functionality of the project;
2. The following notes will make up the remaining 10 marks of the grade:
   1. There has to be adequate documentation and comments in the code (i.e., functions, loops, etc.);
   2. Your code should follow the code convention (i.e., spaces, indentations, etc.); and
   3. Your application should contain a menu to allow the user to select which option (s)he would like to run.

Good luck!