**Group Project**

* This project is to be completed in groups. **Individual work or work in pairs will not be accepted**.
* **Due date & time: As per CP**
* Deliverables & submission method:
  + Program (50%)
  + PowerPoint presentation (25%)
  + Record of presentation for the group presenting their work (25%)

**Introduction:**

You are asked to create a Python program for the admission department of Humber College. The system should store information about the newly admitted students and assign them to schools according to their GPA. The system must prompt the user to enter the name of each student, and the grades of the courses they completed in the high school. Then, the system should calculate the GPA and use it to assign students the schools.

**System Requirement:**

The system must do the following:

1. When the program starts, a welcoming message will appear “Welcome in Humber College”
2. Allow the user to login using a password. The password must satisfy the following rules:

* Should not be less than 10 characters.
* Should contain at least one upper case letter.
* Should contain two or three numbers.
* Should contain one special character.

If the password is incorrect, the system must ask the user to enter new password. The system must allow the user only three attempts.

If the password is correct, the system will continue

1. After password checking, the system must ask the user to enter the number of students, the number must be between 1-50. If the user enters any other number, the system must inform the user to enter a correct number (i.e., between 1-50). The system must allow the user only three attempts otherwise the program will stop.
2. After the above step (i.e., after entering a valid number), the system must ask the user to enter the names of students. The names of the students will be stored in a one-dimensional list.
3. Then, the system must prompt the user to enter the grades of the courses of each student in a two-dimensional, if the credit hours for each course as follows:
4. Math Credit hours = 4
5. Science Credit hours = 5
6. Language Credit hours = 4
7. Drama Credit hours = 3
8. Music Credit hours = 2
9. Biology Credit hours = 4
10. You may use the GUI to input all the values described above.
11. The system must calculate the GPA of each student based on the grades that were entered in the previous step according to the following function:

GPA= ∑ (Mark \* Credit hours)/total credit hours

1. The system must assign students to schools based on the following matrix:

School of Engineering: 90 >= GPA <=100

School of Business: 80>= GPA <90

Law School: 70 >= GPA <80

Not accepted: GPA <70

1. The system must be able to print the following:
2. Report 1: Student Name, School Name
3. Report 2: Number of accepted students in Humber college showing students distribution per each school.
4. Report 3: Number of students that not accepted.
5. Report 4: As a program, think of another report that you can add to your list.

**Note: Your minimum no of students to be presented in this project is 30 students.**

**Evaluation criteria:**

1. **The system:**
2. You need to make your main program as short as possible and rely on the functions and OOP.
3. You have multiple ways to make your program, you can choose the one you think it is the best
4. This system can be programmed with and without object-oriented technique, so depending on the timelines you can choose your strategy
5. I will review each program, if any type of copying from each other this will be considered as a plagiarism.
6. **The presentation:**
   * 1. Your approach for the solution in terms of teamwork
     2. IPO methodology
     3. Snap shoots of the result as part of testing step and the test cases that you have used.
7. **The recording:**
8. Each person will present the part that was assigned to him/her
9. You should record a video and present, anybody will not participate in a video presentation will not granted the mark dedicated for this portion.

Submission package should include:

* + - Your program files
    - Your PP presentation
    - Your video recording.