**The University of the West Indies, St. Augustine**
**COMP 3607 Object Oriented Programming II**
**2020/2021 Semester 1**
**Assignment 1**

**Objectives:**

The following degree options, offered by the DCIT, are within the application scope:

- BSc General: Major in Computer Science
- BSc General: Minor in Computer Science
- BSc General: Major in Information Technology
- BSc General: Minor in Information Technology
- BSc Computer Science (Special)
- BSc Information Technology (Special)
- BSc Computer Science with Management (Special)
- BSc Information Technology with Management (Special)

The goal of Academic Advising is to recommend a focused list of 3-5 courses for a student to register for in a particular semester considering the following criteria for the given student:

- Degree programme (determines which courses are core or elective as well as number of required credits)
- New or continuing (new students have a fixed set of courses whereas continuing have more options)
- Current GPA (values can restrict the number of courses that a student can register for)
- Courses completed (courses have zero or more prerequisites)
- Courses offered by the DCIT for a given semester (semester 1 or 2)

This project requires you to work in a team with 2 other students to design, develop and present a fully object oriented solution implement in Java for Academic Advising at the Dept. Computing and IT (DCIT). The solution must feature at least two design patterns (Singleton is not allowed), conform to SOLID design principles and be evaluated using a test suite of classes.

**Activity 1: Team Formation, Scope Selection (1%) - Due Oct. 27, 2020 @10:00pm**

Students are required to form teams of exactly 3 members and select one of the following project scope areas on myElearning:

**Area 1: New Students - all degree programmes**

**Area 2: Returning Students - Major IT or CS**

**Area 3: Returning Students - Minor IT or CS**

**Area 4: Returning Students - IT or CS Special**

**Area 5: Returning Students - IT or CS with Management**

These areas define the project boundaries for which your solution should work. The scope of a full working solution for all degree programmes is too large for the development time available in the semester.

**Activity 2: Code Development (15%) - Due Nov 26, 2020 @ 10:00pm**

Teams are required to design and develop a working solution for the selected project scope.
Essential features include:

- Accepts input data from a user via a GUI
- Presents recommendation results via the GUI
- Recommendations are based on the data available from a student's transcript, the FST Science and Technology booklet, the DCIT website (courses offered). Refer to https://sta.uwi.edu/fst/dcit/ for links to these resources.
- Test suite for evaluation of system performance
- Code storage on a GitHub repository

Sound software engineering and design principles should be applied at all time.

**Activity 3: Code Documentation and Demo Video (10%) - Due Nov 30, 2020 @10:00pm**

Teams are required to produce documentation for their codebase using techniques of their choice on their GitHub project's wiki. Internal peer review should be conducted and feedback forms submitted on myElearning by the deadline.

Groups are required to produce a video summarising how the application's functionality was evaluated and how it is meant to be used. The following criteria should be met by the video:

- Identifies the scope area, and project team
- Illustrates how the test suite was used to test correct functionality
- Demonstrates with at least three use cases how the application produces recommendations for three different kinds of students
- Clear narration or explanations in the video, no fuzzy shots
- Uploaded to YouTube with a link submitted on myElearning as indicated

**Activity 4: Team Video (5%) - Due Nov 30, 2020 @10:00pm**

Groups are required to produce a video summarising each member's experiences while working on the project. The following criteria should be met by the video:

- Identifies the scope area, and project team
- Within 2-3 minutes in length
- Each member must be visible at some point in the video and speak for 45-60 seconds.
- Members are required to talk, identify and discuss features of the project that was (a) most challenging (b) most gratifying and (c) most impactful for him/her.
- Clear audio, no shaking
- Uploaded to YouTube with a link submitted on myElearning as indicated

**Activity 5: Peer Review Forms and In-class Activity (4%) - Due Dec 04, 2020 (in lab session)**

Students are required to submit peer review assessments of their members' contributions using the supplied individual feedback forms.

Peer review exercises will be conducted of groups' work during lab session in Week 12. All members must be present.

**Video Suggestions**

Use a camera on a smart phone to record your video. Mount on a tripod or a secure surface and record in an area with good lighting and low background noise. There are many free video editing software options online or you may use Windows Movie Maker in the lab machines. Practice before recording.

**Submission Instructions**

Refer to myElearning for the instructions on how to submit the various parts of the project.