



## Operating Systems

### Project

Your project is to write a Multi-threaded TCP Server Application which allows multiple users to be registers and bug reports to be added or updates.

1. Register with the system (Note Employee ID and Email must be unique)
  - Name
  - Employee ID
  - Email
  - Department
2. Log-in to the bug tracker system from the client application to the server application.
3. Add a bug record with the following details (Note when adding a bug report the server should assign a unique bug ID).
  - Application Name
  - Date and Time Stamp
  - Platform (e.g. Window, Unix or Mac)
  - Problem Description
  - Status (Can be Open, Assigned or Closed)
4. Assign the bug record to a registered user using a bug ID.
5. View the all the bug record **not assigned to any developer.**
6. View the all the bugs report in the system.

7. Update any of the following bug records details

- Status
- Append to the Problem Description
- Change Assigned Engineer.

### **Server Application Rules**

1. The server application should not provide of options 3-8 to a client application that can complete the authentication.
2. The server should hold a list of valid users of the service and a list of all the bugs previously registered with the systems.
3. All of client applications should be able to see all the users and bug added by all the client applications.

### **Project Submission**

Each student should submit the code developed to support both the server and client sides of the application (**Note: The code must be written in Java**). In addition to the code each student should submit a document explaining the various design decisions that were made during the project and how their code works. Finally, a screencast should be included in the submission demonstrating the **complete** functionality of the solution.

### **Submission Deadline**

Project Submissions to be submitted to martin.hynes@gmit.ie by 11.59pm on the 6<sup>th</sup> January 2019.

### **Points to Note**

- Comments expected.
- Good programming practice is expected
- Ensure that any files that are needed to run the program are included in your submission.
- Your code has to run. Serious deduction of marks will occur for code that is not running correctly.

- Plagiarism is not acceptable.
- You may be asked to present your code/application.