**BCS 3106 Software Engineering**

**Semester Project**

**Local health centre**

More than 3000 patients are registered with a local health centre. The centre employs a number of general practitioners (i.e. doctors) and a few receptionists. Patients are officially registered with one doctor but can arrange appointments with any available one. These appointments may subsequently be cancelled. Some appointments result in one or more prescriptions.

New patients are registered by a receptionist. When a patient is registered, they provide their details such as name, date of birth, address, etc. and receive a unique patient number. To book an appointment, a patient should contact a receptionist. The patient provides their number (or date of birth) and the receptionist provides a list of available time slots for appointments. The appointment is booked with the patient’s doctor or if the patient’s doctor is not available, with any available doctor. The date and time of the booked appointment are given to the patient as a confirmation.

Patients can cancel booked appointments either by contacting a receptionist who will cancel appointments on their behalf, or they can do it directly by using the Health Centre’s website. A patient who attends an appointment should check in first using a special terminal located in the waiting area of the Health Centre. The patient inputs their unique patient number (or date of birth). The system checks the details and confirms that the patient has been checked in.

Doctors record appointment outcomes and details of prescriptions (if any) during the appointments i.e. all prescriptions issued by doctors are recorded on the patient’s record. Patients who leave the area where the Health Centre is located are de-registered by receptionists.

**Requirements**

**Phase 1**

Submit a planning report for the above scenario to include:

1. Introduction
2. Project proposal
   1. To include use case for emergency surgery and specialized treatment such as High Dependency Unit (HDU) and maternity service
3. Requirements Analysis (based on previous class activity)
4. Project plan
   1. Using a Project Management tool using [Trello](https://www.simplilearn.com/tutorials/project-management-tutorial/what-is-trello) to prepare you project plan in a GANTT chart and familiarize you with use of boards.
5. Software Architecture & Pattern
   1. Discuss your chosen architecture for the proposed development activity and how using Python will achieve this.

**Phase 2**

Submit a report for the Group’s health center solution containing:

1. Project definition
   1. Link to the Project repository created in Github (this will show the project version history)
2. Software Design considerations
   1. UI design (include wireframe)
   2. This includes design patterns for this project and whether reusing designs, through patterns, results in faster and better software maintenance
3. Software Implementation
   1. Pseudocode for the overall proposed system
4. Software Test Plan
   1. An outline of how the group conducted the different levels of testing