**CS 360: Software Engineering**

# Homework/Assignment-2

(50 points)

Due: 10:00 PM, 25th Oct 2020

**Case Study:**

Hospital management system helps in registering information about patients and handles patient's query. A unique ID is generated for each patient after registration. This helps in implementing customer relationship management and maintains medical history of patient. This system also monitors the doctor appointments, when the ID is generated the patient receives the appointment time and number from the receptionist and accordingly visit the doctor. This system also deals with testing appointments as and when ID is generated the patient receives the appointment time and number and accordingly undergoes the test. This system also deals with patients privacy and security regarding they information shared with hospital management system.

It also deals with bed allotments to various patients by checking their ID. It also undergoes various operations by diagnosing the patients. The system identifies whether the person is a doctor or staff and handles various activities such as draw salary and give salary, also it adds doctor/staff information into database. This system is responsible for handling various other activities like deleting, editing doctor/staff information into the database. As per doctor diagnoses the patient, gives treatment and gives suggestions to patients and prescribe laboratory tests and medicines. This system also takes care of medical equipment, doctor visit, vitals recording, patient case sheet, diet ordering, blood requisition, transfer information and discharge information, also it generates patient's discharge summary which includes patient's health at the time of discharge, medical history, various diagnosis and drug prescriptions, history of patients illness and course in hospital. Patient can pay bill through credit card, cash or cheque whose information is maintained by this system. The hospital management wants to make sure the systems can be used for different users, different systems (laptop, desktop, mobiles), and different hardware and softwares to attract and serve more people in the community.

I. UML Context/Architecture Model(diagrams) [10 Points]

a. Identify different component/sub system in the project

b. Use simple box and line graphs to show the interactions between those components

II. UML Class Model [20 Points]

a. Identify attributes and methods associated to a class

b. Identify different relationship between classes and show them in UML representation [any classes]

III. UML State Models (From patient view point) [10 points]

a. Identify different states for the above case study

b. Draw a state model for the above case study

IV. UML Sequence Model [10 points]

a. Draw a sequence diagram for patient registration

Submission:  **Brighspace** (online)
Assignment/Homework Type: **Individual** (not group/team work)
Submission Type:  **PDF document** (all questions in one file)
Due Date:  10:00 PM,  25th Oct 2020
Topics:  Design & UML Models(diagrams)