

## **CSE 2102: Introduction to Software Engineering**

### **Project Assignment #1**

**Assigned: March 22, 2022, Due: March 29, 2022**

The purpose of this assignment is to introduce you to the process of specification analysis using UML. In this assignment, you will develop a UML Use Case diagram for the MIS.

A use case diagram is intended to provide a generic description of the services that a user may request from the system. Keep in mind that some users may have similar uses for the system, and thus, these use cases may be shared among these users. Your use case diagram must follow these guidelines for the sake of consistency and uniformity.

1. It must include the following four users – Doctor, Nurse, Patient, Administrative Personnel.
2. It must include 3 other external systems that MIS needs to interface with.
3. It must include at least 3 use cases per user, and of these three use cases, at least one use case per user must be unique (a use case that pertains to that user only, and is not relevant to any other user).
4. There should be at least one <<include>> and one <<extends>> relationship on the diagram.

Along with the diagram, please write a short description of each case. The description should include the rationale behind why (if any) an external system is involved, why (if) the use case is shared, and why (if any) the use case incorporates include/extend relationships. For example, a short description for the “Check Copay” use case may be:

#### **Use Case: Check Copay**

*Shared\_– Patient, Administrative personnel*

*Explanation -- Both roles may be interested in checking the copay for an insurance plan. The patient may want to figure out how much they will pay for a service, and the administrative personnel may want to determine how much to charge the patient at the time of check in.*

*External System -- To check the copay, the system will need to interface with the insurance database.*

*Include – To check the copay, the system may first need to check the subscription of the patient.*

#### **Deliverables**

The diagram may be constructed with pen and paper, or may be designed using a diagramming tool such as Microsoft Visio (No extra points will be awarded for using Visio or any other tool). The use case diagram and the writeup should be submitted to HuskyCT by midnight March 29, 2022. Only one submission per team is needed. Late submissions will incur a penalty of 10% per day. Please note, the above use case cannot be included on your diagram.