CSE 360 Homework #2 Submission Template

1. [15 Pts] List all the actors you have identified and describe them here.

   Receptionist: Who put the new patient's information and make a reservation of CT scan.

   Patient: The patient interacts with the system to view their CT scan results and access health risk assessments. They enter their unique Patient ID to retrieve data, helping them stay informed about their heart health. This enables them to better understand their condition and make informed decisions about their medical care.

   Technician: A healthcare worker who is responsible for collecting and entering CT scan data into the system. The technician ensures that accurate and complete information is recorded, including the Total Agatston CAC Score and specific details about different arteries (LM, LAD, LCX, RCA, PDA). This data is crucial for further analysis by doctors and review by patients

   Doctor: A medical professional who reviews the data entered by the technician to evaluate the patient's heart health. Using the system, the doctor can assess the level of plaque in the patient's coronary arteries and determine the potential risk of heart disease. The doctor provides detailed evaluations and recommendations, helping patients manage their health effectively.

2. [25 Pts] List all the use-cases you have identified and describe them here.

   Patient registration & Intake: This use-case involves the technician collecting essential information about the patient, such as their name, contact details, health history, and insurance information. Once this data is inputted, the system generates a unique Patient ID for the patient. This ID allows the patient to interact with the system later on to view their health information, and ensures that all necessary records are systematically organized.

   Patient view: This case, the patient can view all of the report from the CT, doctor's analyzation, receptionist's reservation records.

   CT scanning data entry: In this scenario, the technician uses the system to input specific CT scan results for each patient. These results include key metrics such as the Total Agatston CAC Score and scores for various coronary arteries (e.g., LM, LAD, LCX, RCA, PDA). This data entry ensures that the patient's records are kept up-to-date and ready for analysis by medical professionals or review by the patient.

   Patient data review: Patients use this feature to view the results of their CT scans. They enter their Patient ID, and the system displays detailed information, including the Total Agatston CAC Score and the scores for individual arteries. This information helps the

patient understand their cardiovascular health status, enabling them to take a proactive approach in managing their health and seeking appropriate care.

Doctor analyzation and risk assessment: The doctor accesses the system by entering the Patient ID to review the CT scan results. Based on the Total Agatston CAC Score, the system helps the doctor determine the patient's risk level for heart disease, providing different levels of risk based on the plaque amount detected. The doctor can then provide guidance and recommend lifestyle changes or treatments to reduce the patient's risk, allowing for more personalized care.

Follow up reservation: After the doctor reservation, maybe user can make another reservation from receptionist.

3. [25 Pts] Draw the use-case diagram using Astah and copy and paste the use-case diagram here.