CSE 360: Introduction to Software Engineering
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Class Project Idea

Note: During this semester, all the teams will be designing and implementing the following project

Office Automation System for Pediatric Doctor's Office

This project will involve system analysis, design, implementation, and testing of an Office Automation System for a Pediatric Doctor's Office. This system will be used by doctors, nurses, and patients (or parents/guardians). The main objective of this software system is to reduce the paperwork and also to increase the accessibility of patient records. Ideally, this system should be accessible through the web as well as through a mobile app. However, for this CSE 360 class project, you will be developing a GUI based desktop application using Java UI (that you have learned in CSE 205) and javaFX. The following section explains the system operation and expected functionality.

System Operation:

When a patient comes to visit the doctor, the first meet and greet is the office staff nurse. The nurse will take vitals such as weight, height, body temperature, and blood pressure, if the patient is over 12, and enter the vitals into the system associated with the visit. Then the patient will be escorted into the examination room where he/she will be examined by the doctor. Before the doctor's arrival, the nurse will ask specific questions related to the health of the patient such as known allergies, any health concerns and enter them in to the system. At this time, the nurse will be able to see the patient's history including previous health issues, previously prescribed medications, and history of immunization. Note that a patient can have multiple visits.

Once the patient is ready to be examined by the doctor, the doctor will do a physical test and enter any findings into the system. If any medication needs to be prescribed, the prescription will be entered into the system and sent to the pharmacy listed in the patient's records. The doctor will be able to see the patient's history including previous health issues, previously prescribed medications, and history of immunization, and any other recommendations will be made.

The patient portal of the system allows the user to create an account in the system. Each patient is uniquely identified in the system using a combination of the patient's first name, last name, and birthday. The patient will be able to see and change their contact information. Patients can see the summary of each visit, and send messages to the doctor/nurse with specific health related questions. When the nurse or the doctor sees a message sent by a patient, they can reply through

the patient portal messaging system where the patient can see the message when he/she logs in to the system . If urgent, they will make a phone call to the patient.

In addition to health-related information, this office automation system stores patient's contact information, insurance information, and pharmacy information.