Project Proposal for CSCD 350 Summer 2024

HealthConnect - Hospital Management System

VERSION 1

Team 1: Dev Oops

Submitted By

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This is our first step toward the software requirements specification document (SRS).

User Stories

As a doctor, I want access to the health history of clients so that I can provide a correct diagnosis.

As a doctor, I want indirect access to the health history of their family members so that I can provide information on any increased risk of health issues.

As a nurse, I need to access patient records so that I can diagnose patients

As a nurse, I need to have editorial privileges of a patient's records so that I can record a patient's visit and update their medical record.

As a patient, I need to be able to access information from my doctor visits and provide personal information so that I can receive the proper care I need.

As a hospital administrator, I need to manage patient accounts so that I can properly keep track of patient records for doctors to use.

As a hospital administrator, I need to manage the staff schedule so hospital staff know when to show up for work on time.

Use Case Diagrams

Create appropriate Use Case Diagrams to model the user stories.
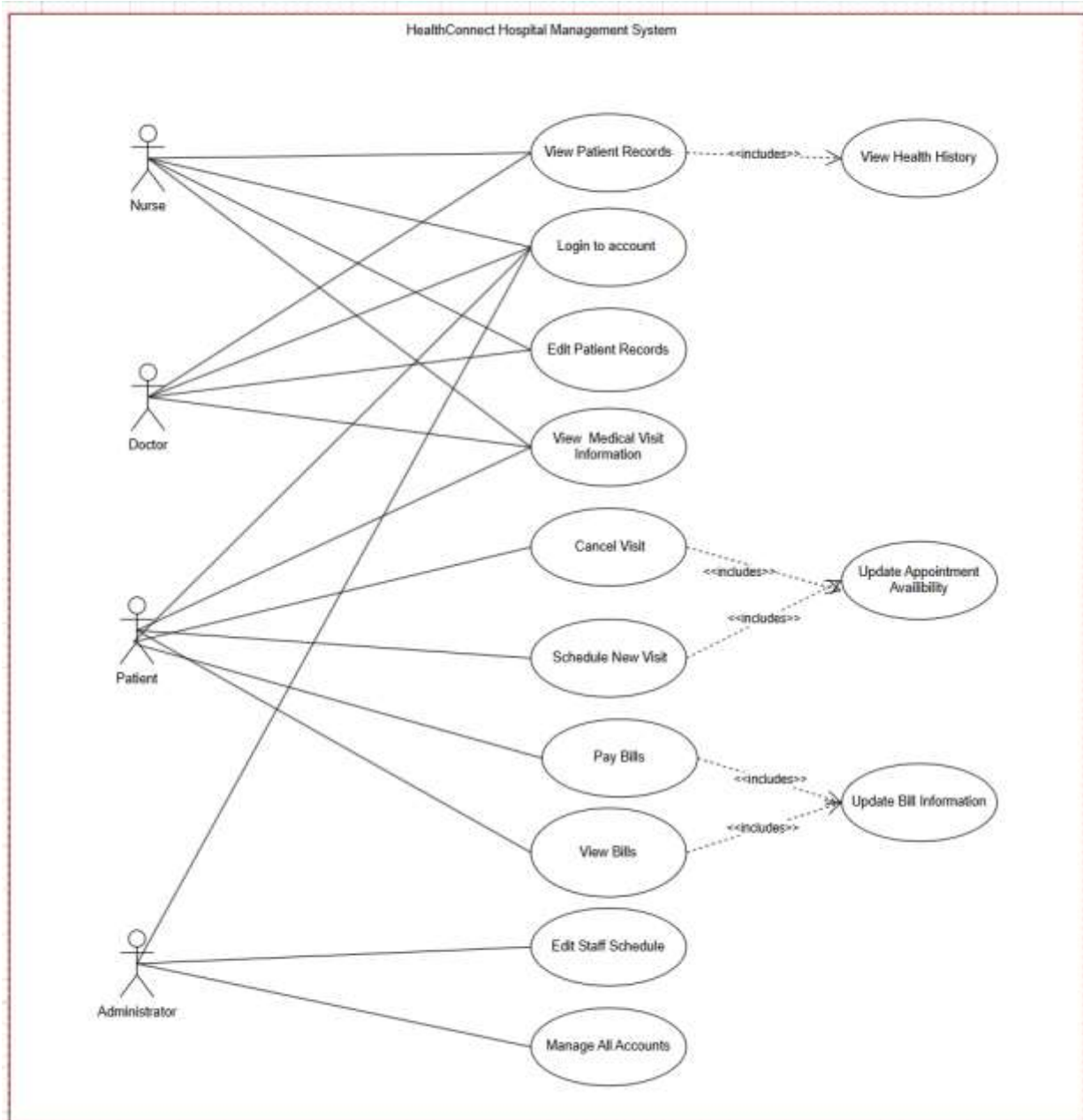
Requirements and Specifications

1.
Requirement: There will be a feature that will allow everyone to login to their respective accounts.
Specification: the account login will require individuals to provide an email address and a password to access their account.

2.
Requirement: If the user does not have an account, the user will be asked to make an account.
Specification: if creating an account, the user will be asked to input their email, create a secure password, and then re-enter the password to verify it is the correct password.

3.
Requirement: there will be a feature that allows patients to schedule/cancel a visit.
Specification: for scheduling, there will be time slots shown and allow users to select what time they would like to have their appointment. For canceling, there will be a feature for patients to cancel an already scheduled appointment.

4.
Requirement: there will be a feature in which the hospital admin can choose at what times to schedule hospital staff.
Specification: for scheduling, the hospital admin will be able to schedule nurses and doctors in 8 hour shifts from 12am-8am, 8am-4pm, or 4pm to 12am.

5.
Requirement: there will be a feature which allows doctors and nurses to edit/view the patient record of the patient they are seeing.
Specification: for this, doctors and nurses will be able to access a database of patient health and see their current ailments, what medication they are on and any other family health history on top of being able to edit this history.

6.
Requirement: there will be an editorial feature that allows the hospital admin to manage user accounts. (could be doctor, nurse or patient)
Specification: for this, the hospital admin will be able to see which patients are assigned to which doctor and be able to schedule them with that doctor, or change their doctor if needed.

7.
Requirement: there will be a feature that allows the patient/ doctor and nurse to view a patient's medical visit info.
Specification: for this, the doctor, nurse and patient will be able to see the results from the patient's most recent medical visit to be able to prescribe medication, offer treatment options and learn of a diagnosis.

8.
Requirement: there will be a feature that allows a patient to view their bill total, and be able to pay their bill.
Specification: for this, patients will be able to view the total bill for their visit and be able to pay the amount allotted to them in a lump sum, or be able to make monthly payments.

Glossary

Glossary:

Login

- Definition: A feature that allows a user to access their user account in the system by providing a username and password.

Appointment Scheduling

- Definition: A feature that allows patients to schedule or cancel visits with their doctor by selecting available time slots.

Doctor

- Definition: A medical professional who diagnoses and treats patients. From a software context, doctors will have access to patient health histories and can update medical records.

Editorial Privileges

- Definition: Permissions granted to healthcare providers, such as doctors and nurses, to edit and update patient records within the system.

Family Health History

- Definition: Medical information about a patient's family members, which can be relevant for assessing genetic or hereditary health risks.

Health History

- Definition: A record of a patient's past and current medical conditions, treatments, medications, and other relevant health information.

Hospital Administrator

- Definition: A user responsible for managing patient accounts, staff schedules, and overseeing the administrative aspects of the hospital's operations.

Medical Record

- Definition: A document containing a patient's medical history, including diagnoses, treatments, medications, and other relevant health information.

Nurse

- Definition: A healthcare professional who provides patient care, assists doctors, and has access to patient records to diagnose and update medical histories.

Patient

- Definition: An individual who receives medical care and has access to their own health information and records within the system.

Patient Database

- Definition: A centralized database that stores all patient health records and medical information, accessible to authorized healthcare providers.

Staff Schedule

- Definition: A timetable managed by hospital administrators that outlines the working hours and shifts for hospital doctors and nurses.

User Account

- Definition: A personal account in the system that allows users to access specific features based on their role such as doctor, nurse, patient, or hospital administrator.

Assumptions:

Security

- Assumption: The system will implement secure authentication and encrypted storage mechanisms to protect user data and privacy.

Usability

- Assumption: The user interface will be intuitive and user-friendly for all users.

Data Integrity

- Assumption: The system will ensure the accuracy and integrity of all records and information.

Availability

- Assumption: The system will be highly available and reliable, with minimal downtime to ensure continuous access to medical records and scheduling features.

Scalability

- Assumption: The software will be able to be scaled to accommodate an increasing number of users and growing amounts of medical data.

Compatibility

- Assumption: The system will be able to integrate with other systems and databases for seamless data exchange.