CSCD 350 Summer 2024

User Stories, Use Case Diagrams, and Requirements

VERSION 1

Wildfire Warriors

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User Stories

#1

As a **Doctor** I need access to a patient's complete medical History. Therefore I can make informed decisions about their treatment

1. Doctors require access to accurate and comprehensive medical records.
2. Medical history includes previous treatments, allergies, medications, and diagnoses.

#2

As a **Patient** I need to schedule and manage my appointments online. Therefore I can choose convenient times and avoid long waiting periods.

1. Patients should be able to view available time slots and find a time that best fits their schedule.
2. Appointments confirmations and reminds will be sent to the patient’s email or phone.

#3

As a **Nurse** I need to update patient records with new observations and treatment details. Therefore the medical team has the most current information for ongoing care.

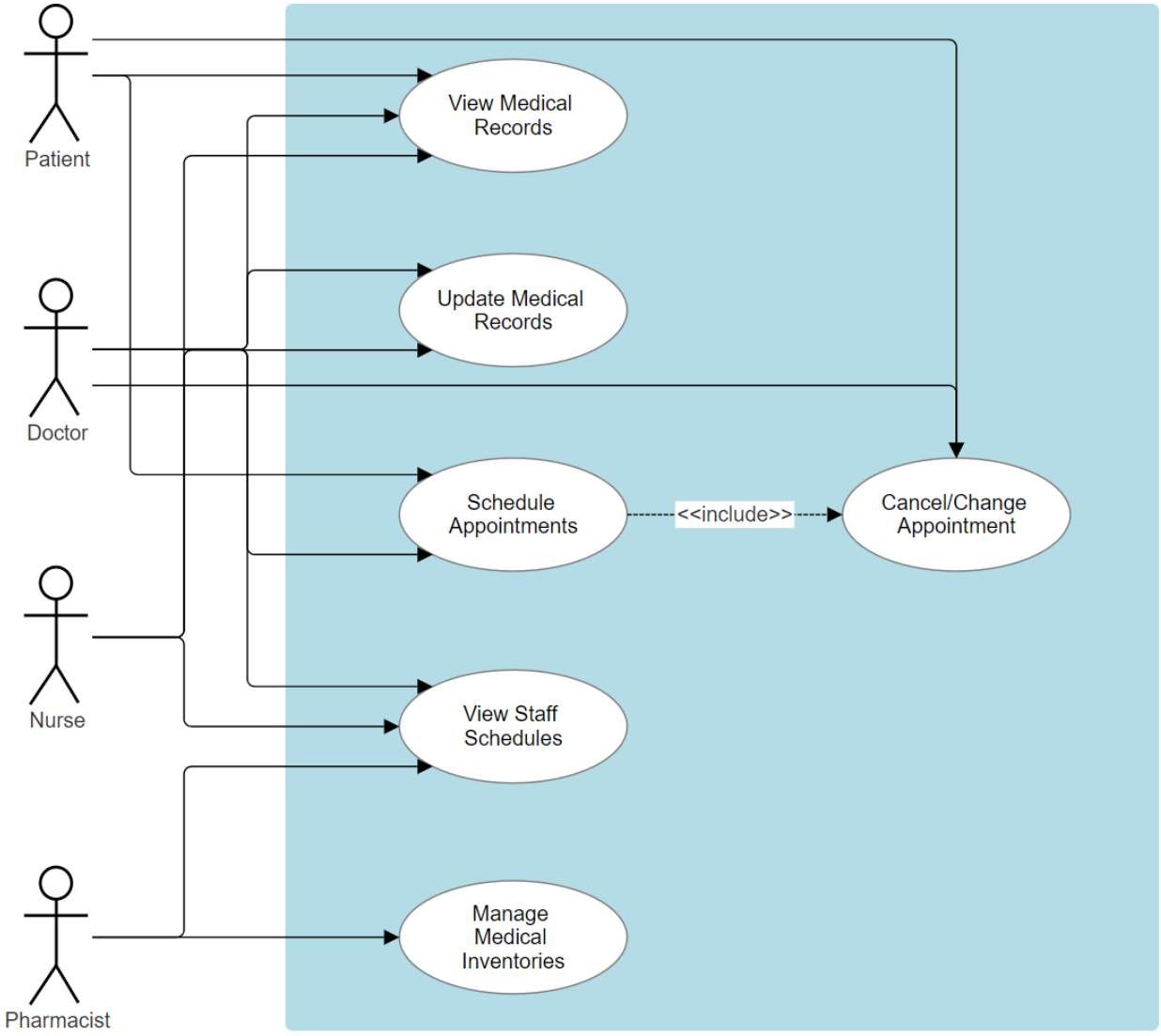
1. Nurses need permission to edit and update patient records.
2. Updates include new symptoms, administered medications, and treatment progress.

#4

As a **Pharmacist** I need to track and manage inventories. Therefore I can ensure the availability of necessary medications and supplies.

1. Pharmacists should be able to view current inventory levels and update them as needed.
2. Alerts for low stock level should be generated automatically.

Use Case Diagram



Requirements and Specifications

Functional

1. Patient Record Management
Requirement: There should be a feature for patient record management.
Specification: The feature should allow nurses and doctors to view and update patient records.

2. Appointment Scheduling
Requirement: There should be a feature for scheduling appointments.
Specification: The scheduling feature should allow doctors and patients to manage appointment times.

3. Role Based Access Control
Requirement: There should be a role based access control.
Specification: The feature allows admins to assign and manage roles.

4. View Medical Records
Requirement: There should be a feature that allows patients to view their medical records.
Specification: The feature will allow for patients to view diagnosis, treatments and prescriptions.

5. Medication Management
Requirement: There should be a feature for pharmacists to manage prescriptions.
Specification: The feature should allow pharmacists to view, validate, and dispense prescriptions.

Non-Functional

6. Performance
Requirement: The system shall handle up to 1,000 concurrent users.

Specification: The system's response time should not exceed 2 seconds under normal load conditions.

7. Security
Requirement: Data should be encrypted both in transit and at rest.

Specification: The system should use AES-256 encryption for data storage and TLS 1.2 or higher for data transmission

Glossary

Terms:

Pharmacist: Only has access to the inventory database. Notified when stock is low.

Patient Records: A database containing patients, their name, date of birth, symptoms, medications, upcoming appointments

Appointment schedule: An appointments database will store information of appointment time, and doctor. It should automatically avoid overlaps. The patient will also have this appointment saved in the patient records database.

Staff schedule: Staff schedule similar to appointment schedule. No other database will need to share the staff schedule data, however the staff schedule database will need to have access to the database which contains all employees

Medical inventory management: Database will contain the items in inventory along with the amount left, it should also specify at what point to issue an “inventory low” warning for each item

Assumptions:

Workers DB: Assume there's a database that defines all staff working at the hospital along with their login information

Login: All staff (doctors, nurses, etc) will login according to the username/password defined in the workers database

Patients will create their own login that will be stored as a part of the “patient records” database (option to change)

Inventory: Assume supplies are instantly available when added to inventory database