

1. Actor List

Type	Actor	Goal Description
Primary	Patient	The patient has the ability to access personal medical records, schedules appointments, and communicates with healthcare providers.
Primary	Doctor	The doctor has the ability to review patient data, updates medical records, prescribes medication, and provides medical consultations.
Primary	Nurse	The nurse has the ability to manage patient care, update patient records, and monitor patient health.
Supporting	Pharmacist	The pharmacist access prescription information, dispense medication, and provide medication-related guidance.
Supporting	Billing Department	The billing department processes patient co-payments, manages billing information, and ensures accurate and timely invoicing.
Offstage	System Administrator	That System Administrator maintains system security, manage user access, and ensure system uptime and performance.
Offstage	Healthcare Data Analyst	Healthcare Data Analyst analyzes patient data for trends, validate report formats, and contribute to research.
Offstage	Compliance Officer	The Compliance Officer ensures that the healthcare system adheres to all relevant medical data laws (e.g. HIPPA), regulations, and standards.

2. Use Case Names

Type	Actor(s) Involved
Schedule Appointment	Patient (Primary)
Update Medical Record	Doctor / Nurse (Primary)
Dispense Medication	Patient (Primary); Pharmacist (Supporting)
Process Patient Co-Payment	Patient (Primary); Billing Department (Supporting)
Generate Healthcare Reports	Patient / Doctor / Nurse (Primary)

3 Documented Use Cases

3.1

Use Case Section	Comment
Use Case Name	Schedule Appointment
Scope	Health system under design.
Level	User-goal
Primary Actor	Patient
Stakeholders and Interests	Patient: Wants to schedule an appointment with a doctor Billing Department: Needs to verify insurance and process co-payment
Preconditions	- Patient has a valid account - Patient has valid insurance stored in the system
Success Guarantee	Appointment is scheduled, co-payment is processed and confirmation is sent to the patient.
Main Success Scenario	1. Patient logs into the system. 2. Patient selects the option to schedule an appointment. 3. System displays available time slots for the patient's doctor. 4. Patient selects available time slot. 5. System confirms the appointment/updates the schedule. 6. Billing Department verifies the patient's insurance. 7. System processes co-payment 8. System sends a confirmation to the patient.
Extensions	5a. If patient selects a time slot not available, the system prompts patient to pick another time slot. 6a. If insurance is not valid, the system prompts the patient for another form of payment.
Special Requirements	System must conform to HIPPA requirements and protect payment information.

3.2

Use Case Section	Comment
Use Case Name	Update Medical Records
Scope	Healthcare system under design.
Level	Subfunction

Primary Actor	Doctor, Nurse
Stakeholders and Interests	Doctor/Nurse: Needs to update patient's record with new information. System Administrator: Ensures data is secured per HIPPA requirements.
Preconditions	- Doctor/Nurse has a valid account. - Patient's medical record is in the system.
Success Guarantee	Medical record is updated with the correct data and secure.
Main Success Scenario	1. Doctor/Nurse logs into the system. 2. Doctor/Nurse selects patient's medical record. 3. System displays patient's medical record. 4. Doctor/Nurse updates patient's data. 5. System validates the data. 6. System updates the patient's medical record. 7. System Administrator ensures medical data is secured per HIPPA requirements.
Extensions	5a. If data isn't valid, the system prompts the primary actor for correct data. 6a. If the system is unable to update the patient's medical record is prompts the primary actor to try and save the record again.
Special Requirements	System must comply with HIPPA regulations.

3.3

Use Case Section	Comment
Use Case Name	Dispense Medication
Scope	Healthcare system under design
Level	User-goal
Primary Actor	Patient/Doctor
Stakeholders and Interests	Patient: Wants to receive the prescribed medication. Pharmacist: Needs to verify he prescription and dispense the correct medication.
Preconditions	- Patient has a valid prescription in the system. - Patient has a valid account. - Pharm has a valid account.
Success Guarantee	Medication is dispensed and the transaction is annotated in the system.

Main Success Scenario	<ol style="list-style-type: none"> 1. Doctor enters the prescription in the system. 2. System sends prescription to the pharmacist. 3. Patient logs into the system to check prescription status. 4. Pharmacist reviews/approves the request. 5. Pharmacist dispenses the medication. 6. System sends a notification to the patient that the prescription is ready. 7. System updates the transaction.
Extensions	4a. If the pharmacist rejects the prescription, the system notifies the doctor and patient.
Special Requirements	System must ensure correct data in processing prescriptions.

3.4

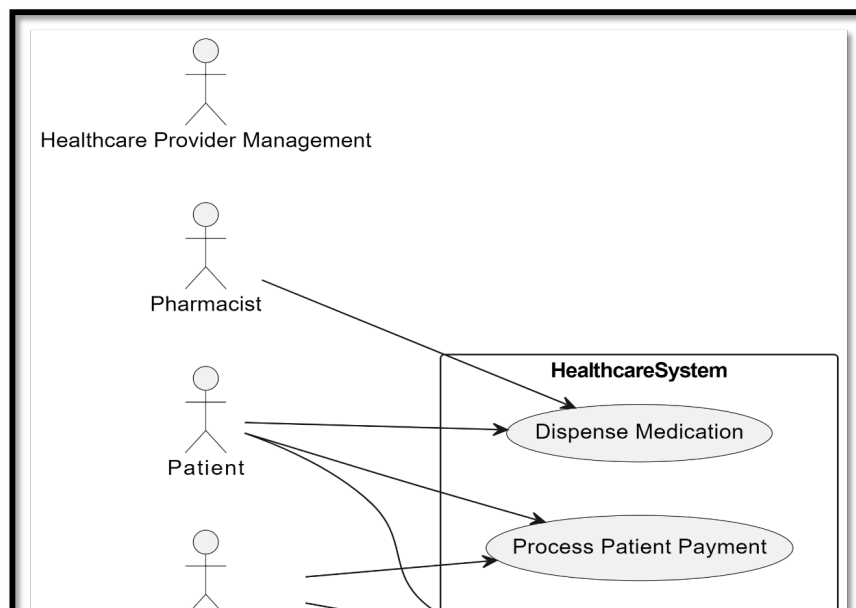
Use Case Section	Comment
Use Case Name	Process Patient Co-Payment
Scope	Healthcare system under design.
Level	User-goal
Primary Actor	Patient
Stakeholders and Interests	Patient: Wants to pay co-payment for medical services. Billing Department: Needs to process co-payments and update patient's billing records.
Preconditions	- Patient has a valid account.
Success Guarantee	Co-payment is processed, patient's record is updated, and a receipt is sent to the patient.
Main Success Scenario	<ol style="list-style-type: none"> 1. Patient logs into the system. 2. Patient selects the option to pay their co-payment. 3. Systems displays the balance due and payment methods. 4. Patient enters payment information. 5. System processes the payment. 6. Billing Department updates billing records. 7. System sends a receipt to the patient.
Extensions	4a. If payment information isn't valid, the system prompts the patient for another form of payment.
Special Requirements	System must ensure payment information is secure.

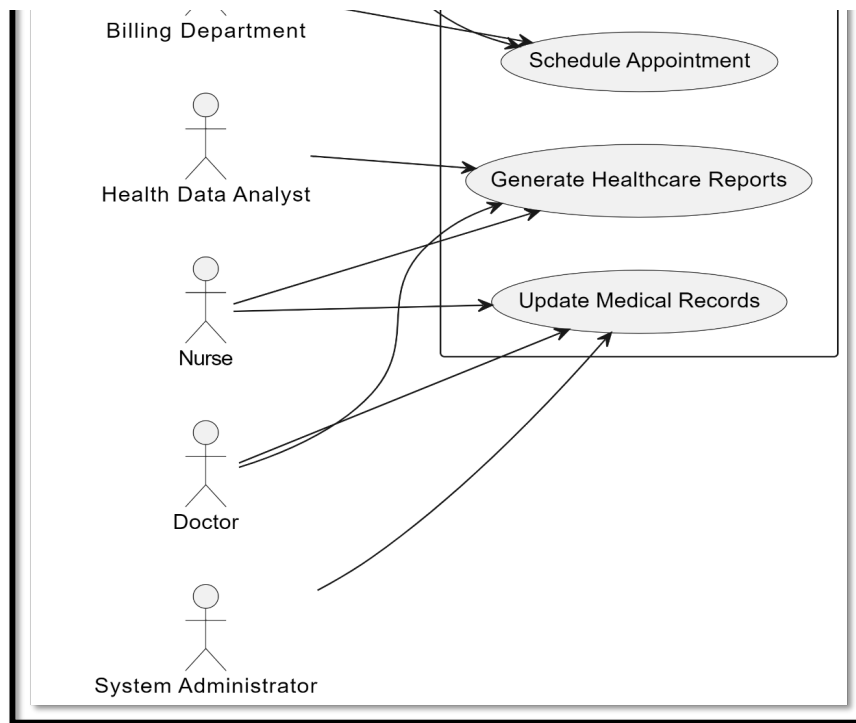
3.5

Use Case Section	Comment
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Use Case Name	Generate Healthcare Reports
Scope	Healthcare system under design.
Level	Subfunction
Primary Actor	Patient / Doctor / Nurse
Stakeholders and Interests	Patient / Doctor / Nurse: Needs accurate, real-time patient healthcare reports. Healthcare Data Analyst: Needs to analyze data and generate reports.
Preconditions	Patient / Doctor / Nurse have a valid account.
Success Guarantee	Healthcare report is generated, accurate, and delivered.
Main Success Scenario	<ol style="list-style-type: none"> 1. Patient / Doctor / Nurse logs into the system. 2. Patient / Doctor / Nurse chooses the option to generate the report. 3. System prompts for report criteria/filters. 4. Patient / Doctor / Nurse enter criteria/filters. 5. System generates the report. 6. System sends the report to the Patient / Doctor / Nurse
Extensions	5a. If the report generation fails based on the criteria entered, the system prompts the Patient / Doctor / Nurse to adjust the criteria.
Special Requirements	System must ensure the accuracy of the data and the Healthcare Data Analyst must ensure the reports comply with the healthcare reporting standards.

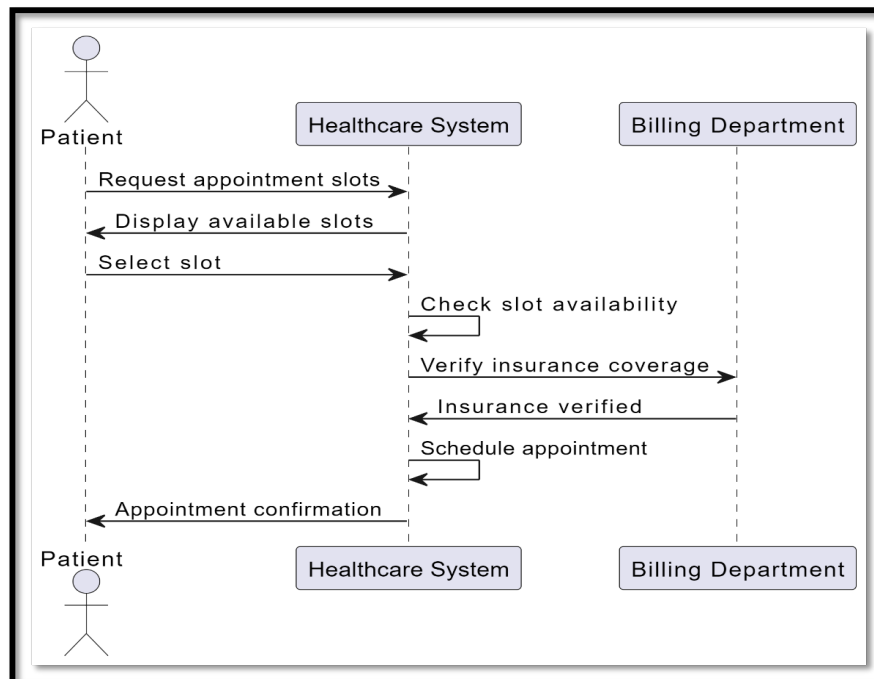
4. Use Case Diagram



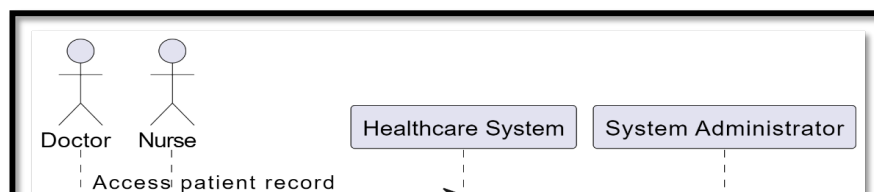


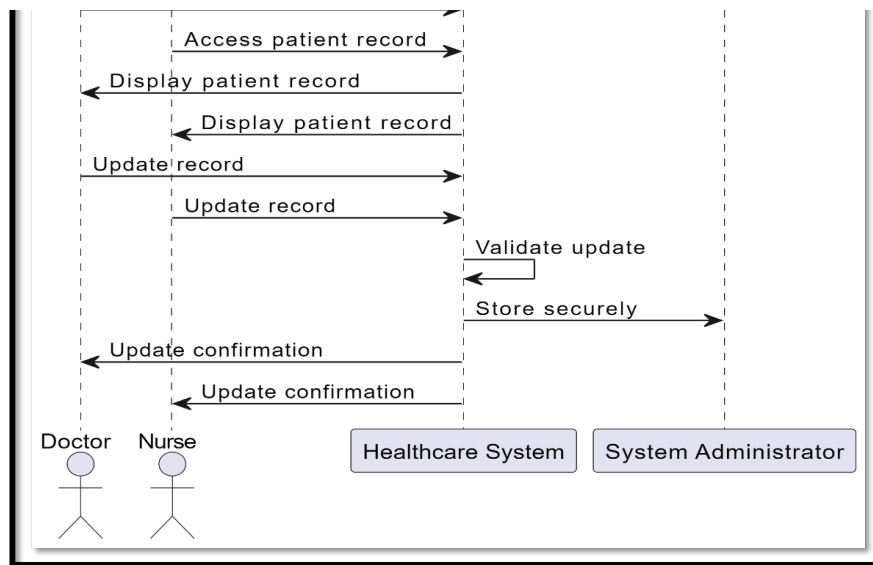
5. SSDs

5.1 Schedule Appointment

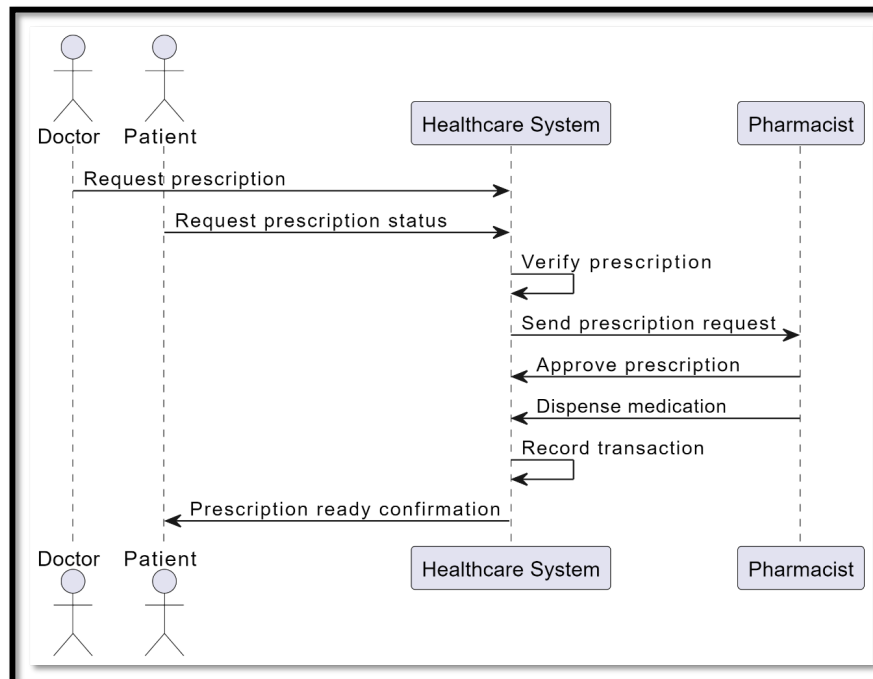


5.2 Update Medical Records

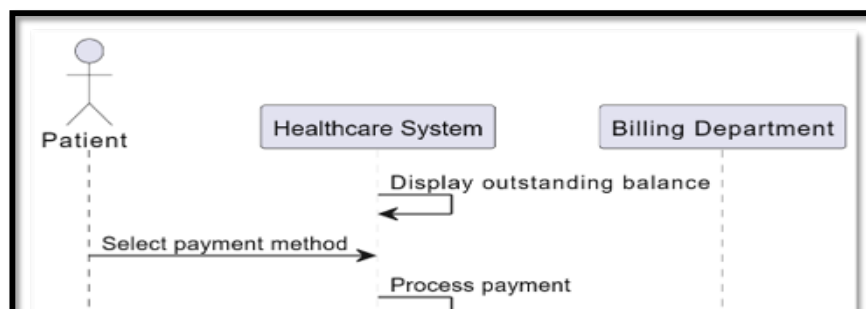


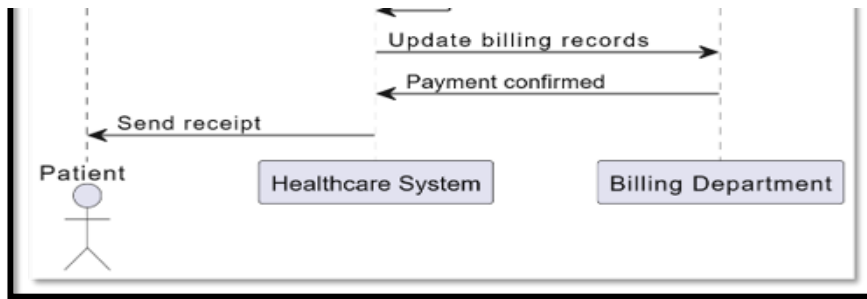


5.3 Dispense Medication



5.4 Process Patient Co-Payment





5.5 Generate Healthcare Reports

