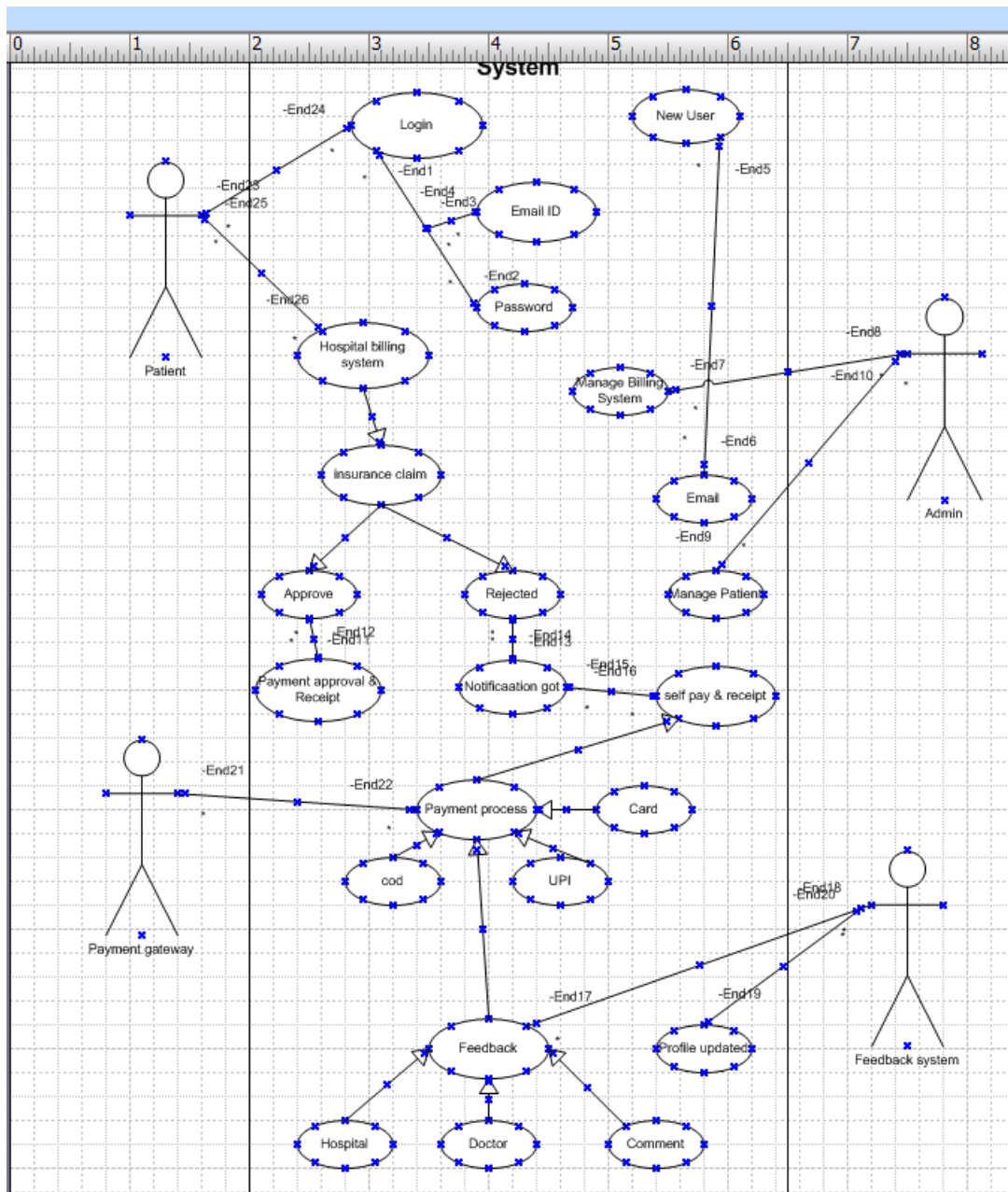
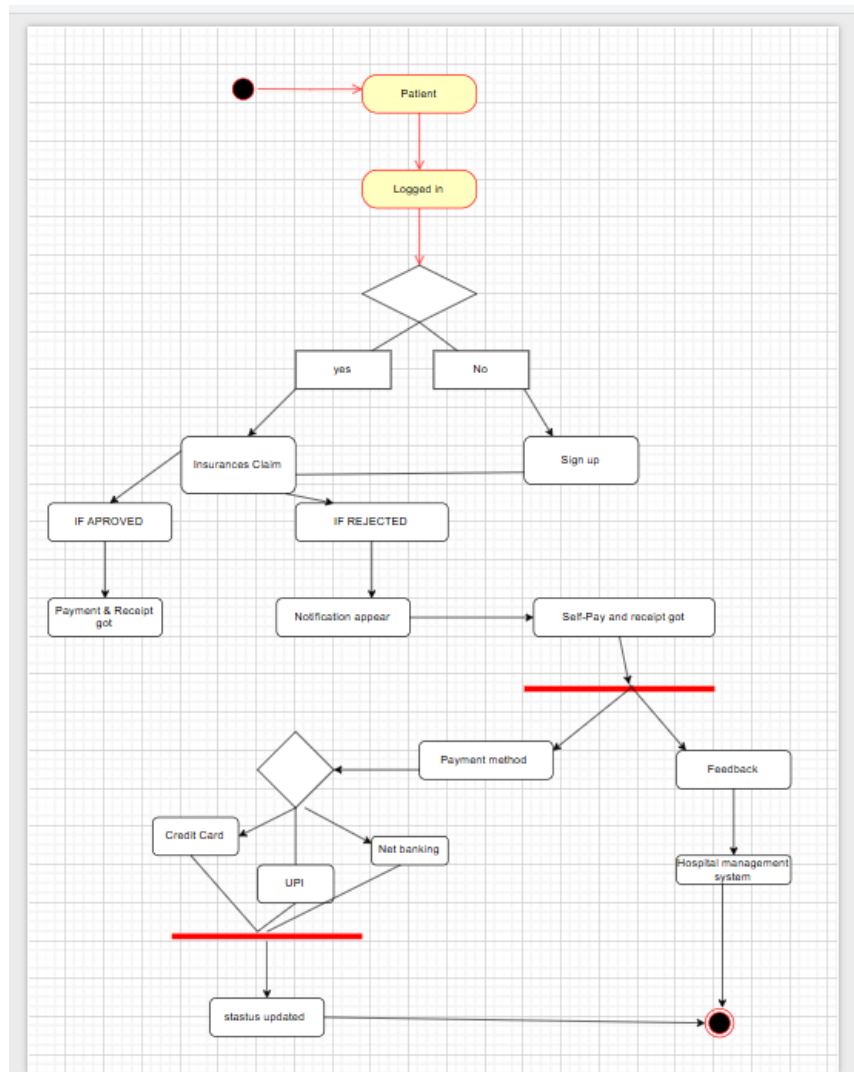


Document 6- Please prepare a use case diagram, activity diagram and a use case specification document.

Use case Diagram For (HBS)



Activity Diagram for HBS



USE CASE SPECIFICATION

1. Patient Registration Use Case specification

Field	Details
Use Case Name	Patient Registration
Use Case Description	Allows new Patient to create an account on HBS
Actors	Primary: Patients Secondary: System (automated email service)
Basic Flow	1. patient clicks on "Sign Up". 2. Patient enters required details (name, email, password, etc.). 3. System validates inputs and creates an account. 4. System sends an email verification link. 5. patient verifies email and account is activated.
Alternate Flow	If the Patient does not verify their email, the account remains inactive.
Exceptional Flow	If the email is already registered, an error message is displayed.
Pre-Conditions	Patient must have a valid email and internet access.
Post-Conditions	Account is created, and the patient can log in.
Assumptions	Patient provide correct information.
Constraints	Password must meet security guidelines.
Dependencies	Email verification service.
Inputs and Outputs	Input: patient details Output: Account confirmation email
Business Rules	Duplicate emails are not allowed.
Miscellaneous Information	None

2. Patient login Use Case specification

Use Case Name	Patient Login
Use Case Description	Allows registered Patient to log in.
Actors	Primary: Patients Secondary: System (to verify credentials and manage sessions)
Basic Flow	1. Patient enters email and password. 2. System validates credentials. 3. Patient is redirected to the home page.
Alternate Flow	If the Patient forgets their password, they can reset it.
Exceptional Flow	If credentials are incorrect, an error message is shown.
Pre-Conditions	Patient must be registered.
Post-Conditions	Patient is logged in successfully.
Assumptions	Patient remember their credentials.
Constraints	Password retry limit: 3 attempts.
Dependencies	Authentication system.
Inputs and Outputs	Input: Login credentials Output: User authentication status
Business Rules	Locked out after 3 failed attempts.
Miscellaneous Information	All login attempts (both successful and failed) must be logged with a timestamp and IP address for security auditing purpose.

3.INSURANCES CLAIM USE CASE SPECIFICATION

Element	Description
Use Case Name	Process Insurance Claim
Primary Actor	Billing Clerk / Insurance Coordinator
Secondary Actors	Patient, Insurance Provider, Hospital Admin System
Goal	To submit and process insurance claims for patient billing
Preconditions	- Patient has valid insurance details - Medical services are documented
Postconditions	- Claim submitted to insurer> - Claim status updated (Approved/Rejected)
Main Flow	1. Clerk selects patient record 2. System retrieves billable services 3. Insurance details verified 4. Claim form auto-filled 5. Claim submitted electronically 6. Confirmation received 7. Status updated in system
Alternative Flows	- Insurance expired → Notify patient - Manual submission required → Print form - Missing documents → Request from departments
Exceptions	- Network failure during submission - Invalid insurance policy number - Claim rejected due to coverage limits
Business Rules	- Only verified treatments are claimable - Claims must be submitted within insurer's time window - Co-pay amounts must be calculated
Assumptions	- Insurance provider systems are integrated - Staff trained in claim protocols

4. Use Case Specification: Insurance Claim Reconciliation

Element	Description
Use Case Name	Reconcile Insurance Claim
Primary Actor	Billing Clerk / Finance Officer
Secondary Actors	Insurance Provider, Hospital Admin System
Goal	To verify and reconcile payments received from insurance providers
Preconditions	- Insurance claim has been submitted - Payment advice received from insurer
Postconditions	- Payment matched with claim - Patient account updated - Discrepancies flagged
Main Flow	1. Clerk accesses claim status dashboard 2. System retrieves insurer payment details 3. Payment matched against submitted claim 4. Any shortfall or excess is identified 5. Adjustments made in patient account 6. Reconciliation report generated
Alternative Flows	- Partial payment received → Notify patient for balance - Overpayment → Refund initiated - Payment not received → Follow-up with insurer
Exceptions	- Mismatch in claim and payment data - Payment advice missing - System error during reconciliation
Business Rules	- Reconciliation must be completed within 7 days of payment receipt - All discrepancies must be documented - Refunds require admin approval
Assumptions	- Insurer sends electronic payment advice - System supports automated matching logic

5. Use Case Specification: Insurance Claim Appeal

Element	Description
Use Case Name	Appeal Rejected Insurance Claim
Primary Actor	Insurance Coordinator / Billing Clerk
Secondary Actors	Patient, Insurance Provider
Goal	To appeal a rejected insurance claim and seek reconsideration
Preconditions	- Claim has been rejected - Rejection reason is documented
Postconditions	- Appeal submitted - Claim status updated (Pending/Approved/Final Rejection)
Main Flow	1. Clerk reviews rejection reason 2. Gathers supporting documents 3. Fills appeal for 4. Submits appeal to insurer 5. Tracks appeal status 6. Updates patient billing accordingly
Alternative Flows	- Appeal denied → Patient billed directly - Appeal approved → Claim processed - Additional documents requested by insurer
Exceptions	- Appeal deadline missed - Incomplete documentation - System error during submission
Business Rules	- Appeals must be submitted within insurer's appeal window - Only one appeal per claim allowed - All communications must be logged
Assumptions	- Insurer provides appeal portal or contact - Hospital maintains complete treatment records

6.Checkout and Payment Case specification

Field	Details
Use Case Name	Patient Checkout and Payment
Use Case Description	Patient complete visit and system calculating the amount /due
Actors	Primary: Front desk staff Secondary: Patient
Basic Flow	1. Patient proceeds to checkout. 2. Enters Payment details. 3. Selects payment method. 4. Completes payment.
Alternate Flow	If the payment fails, user can retry.
Exceptional Flow	If internet disconnects, transaction is canceled.
Pre-Conditions	User must have valid payment details.
Post-Conditions	The appointment status is updated to complete
Assumptions	Payment gateway is working.
Constraints	Payment processing time: < 10 seconds.
Dependencies	Payment service provider.
Inputs and Outputs	Input: Patient ID/ Appointment ID Output: Calculate amount due.
Business Rules	Secure payment required.
Miscellaneous Information	Credit card no. should not be stored in the system primary database.

Document 7- Screens and pages

HOME PAGE

WELCOME TO KIMAYA HOSPITAL

http://www.kimaya-hospital

Hospital billing system registration

Name

Age/sex/wt/ht

Appointment Date

[Register](#) [Cancel](#)

[About](#) [Contact](#) [Helps](#) [Terms](#)

LOGIN PAGE

WELCOME TO KIMAYA HOSPITAL

[LOGIN](#)

Patient ID

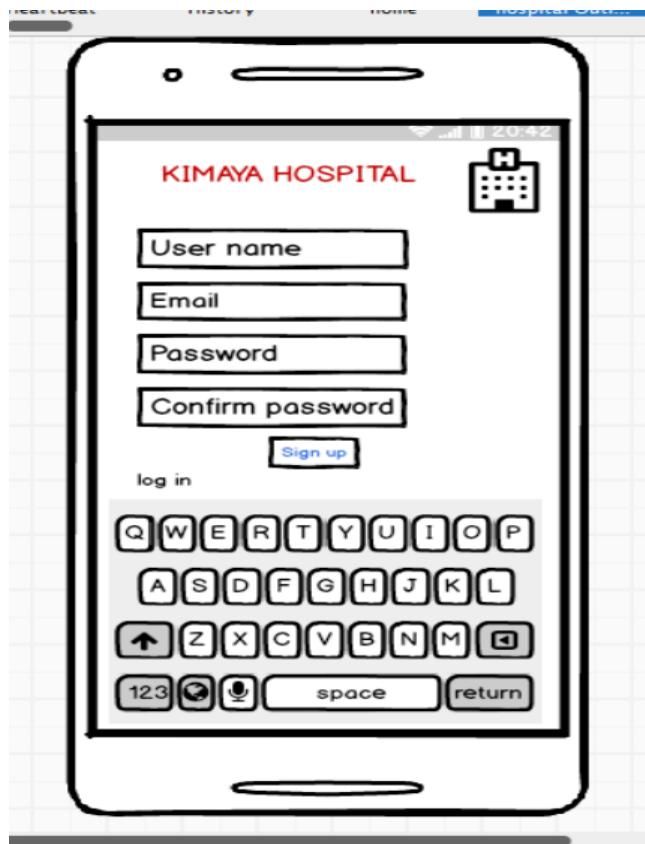
Mobile No/ Email

Password

[Forget pwd?](#)

[About](#) [Contact](#) [Help](#) [terms](#)

REGISTRATION PAGE



The registration page for KIMAYA HOSPITAL features a header with the hospital's name and a building icon. Below the header, there are four input fields for 'User name', 'Email', 'Password', and 'Confirm password'. A 'Sign up' button is positioned below the 'Confirm password' field. A 'log in' link is located below the 'Sign up' button. At the bottom of the page, there is a virtual keyboard with letters, numbers, and special characters.

KIMAYA HOSPITAL

User name

Email

Password

Confirm password

Sign up

log in

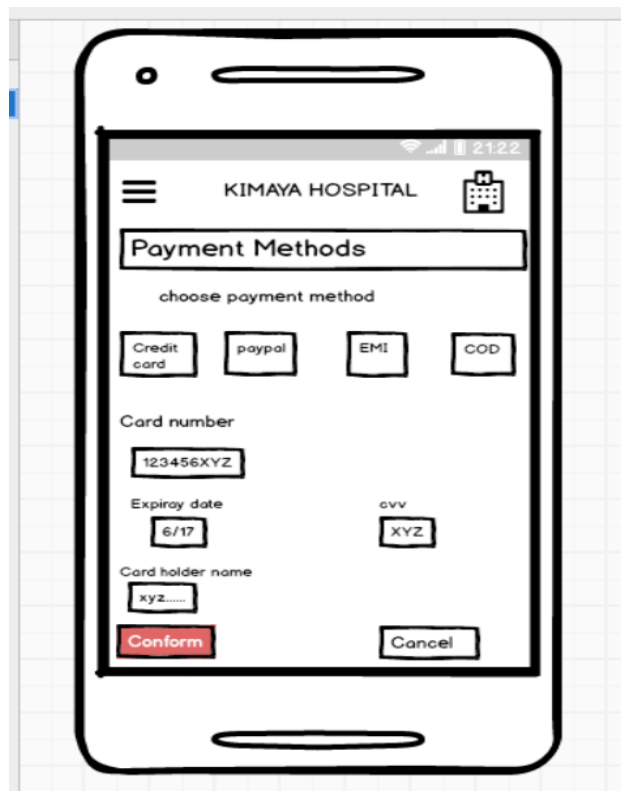
Q W E R T Y U I O P

A S D F G H J K L

↑ Z X C V B N M ↵

123 0 9 space return

PAYMENT PAGE



The payment page for KIMAYA HOSPITAL features a header with a menu icon, the hospital's name, and a building icon. Below the header, there is a 'Payment Methods' section with a 'choose payment method' label. Four payment methods are listed: 'Credit card', 'paypal', 'EMI', and 'COD'. Below these, there are input fields for 'Card number' (123456XYZ), 'Expiry date' (6/17), 'cvv' (XYZ), and 'Card holder name' (xyz.....). At the bottom, there are 'Conform' and 'Cancel' buttons.

KIMAYA HOSPITAL

Payment Methods

choose payment method

Credit card paypal EMI COD

Card number

123456XYZ

Expiry date

6/17

cvv

XYZ

Card holder name

xyz.....

Conform Cancel

INSURANCE CLAIM PAGE



Document 8- Tools-Visio and Axure

I used Visio and Axure for the project. Visio helped me draw diagrams and flowcharts. It was easy to put shapes and lines together to show how things work. Axure let me make prototypes of the app. I created screens and buttons that looked real. Both tools were simple to use and made my work easier.

When I am working on a project, tools like Visio and Axure help me a lot. They make it easy to share ideas and plans with others.

Document 9- BA experience

My experience as BA in following phases:

1. Requirement Gathering

1. Conducted stakeholder meetings using Moscow prioritization and FURPS validation.
2. Created the Business Requirement Document (BRD) and gathered inputs via prototyping.
3. Managed stakeholder unavailability by sourcing alternative contacts. Challenges:

Handled requirement conflicts through impact analysis.

2. Requirement Analysis

1. Created Use Case Diagrams, Activity Diagrams, and RTM to track requirements.
2. Finalized functional/non-functional requirements in the Functional Specification Document (FSD).
3. Conducted peer reviews to align with stakeholders. Challenges:

Managed mid-phase requirement changes via structured Change Requests (CRF).

3. Design

1. Collaborated with UI/UX designers using Axure to create wireframes & mockups.
2. Ensured easy navigation, accessibility, and responsive UI in the design phase.
3. Created test case scenarios from Use Case Diagrams. Challenges:

Balanced UI expectations vs. technical feasibility through discussions with designers & developers.

4. Development

1. Conducted JAD sessions to ensure alignment between business and tech teams.
2. Verified business rules implementation and assisted in payment gateway integration.
3. Regularly reviewed progress and provided feedback.

Challenges:

Addressed misinterpretation of requirements through daily standups.

5. Testing

1. Created test cases from use cases and ensured full functional coverage.
 2. Assisted QA team with testing and conducted UAT with stakeholders.
 3. Verified error handling & security measures before deployment. Challenges:
- Managed post-UAT defect fixes with a prioritized bug resolution approach.

6. Deployment

1. Coordinated training sessions & user manuals for smooth onboarding.
 2. Ensured compliance with GDPR & PCI DSS before launch.
 3. Planned post-deployment monitoring and resolved user adaptation challenges. Challenges:
- Addressed post-launch bugs via a structured tracking system.