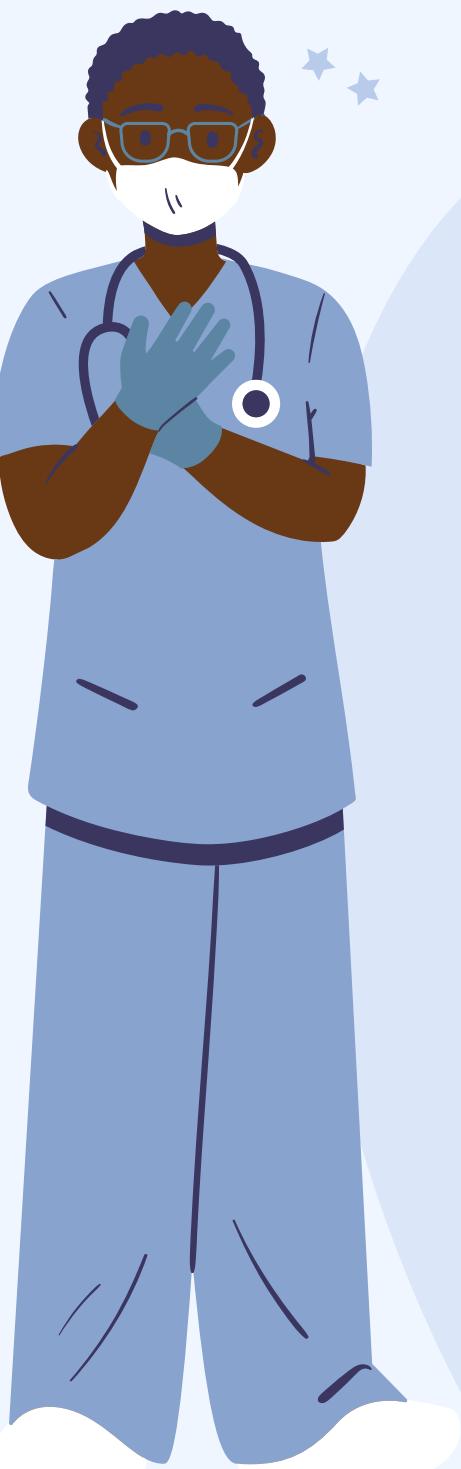


CMR System



Overview of the CMR System



Electronic Medical Records (EMRs) are digital versions of patient medical histories and treatment records. They store comprehensive data such as demographics, medical history, medications, and test results, enabling healthcare providers to access, update, and manage patient information efficiently. EMRs improve diagnosis and treatment by reducing paperwork, enhancing data accessibility, and minimizing errors. These systems integrate with other healthcare tools, fostering streamlined workflows and better decision-making.



Main Personas



GENERAL PRACTITIONER

BASIC INFORMATION

Name: Dr.Ahmed Kamel
Age: 45
Gender: Male
Job Title: general practitioner
Department: family medicine
Experience Level: 20+ years
Location : Qasr El Eyni Hospital

GOALS AND OBJECTIVES

- Primary Goals:**
 - Provide accurate diagnosis and effective treatment for patients.
 - Ensure quick and seamless access to patient records.
- Secondary Goals:**
 - Streamline workflows by minimizing paperwork.
 - Collaborate with other departments to ensure comprehensive care.

PAIN POINTS

- Challenges Faced:**
 - Difficulty accessing patient data quickly during emergencies.
 - Frustration with fixed templates that don't adapt to specific patient needs.
- Barriers to Success:**
 - Inefficient systems that require filling in unnecessary fields.
 - Limited training on new EMR systems for older staff.

MOTIVATION

- Why They Care About the System:**
 - Accurate documentation ensures better patient outcomes and safety.
- Personal/Professional Values:**
 - Commitment to patient-centered care, accuracy, and efficiency.

DAILY ACTIVITIES

- Key Tasks and Responsibilities:**
 - Search for patient records using their national ID.
 - Update patient information, prescribe medications, and order lab tests.
- Interaction with the System:**
 - Uses the system to check patient history, upload reports, and communicate with pharmacies and labs.



REGISTERED NURSE

BASIC INFORMATION

Name: Mona Mohamed
Age: 32
Gender: Female
Job Title: Registered Nurse
Department: internal medicine
Experience Level: mid level
Location :Qasr El Eyni Hospital

GOALS AND OBJECTIVES

- Primary Goals:**
 - Ensure smooth documentation of patient vitals and progress.
 - Support doctors by keeping patient data updated in real time.
- Secondary Goals:**
 - Enhance coordination between the nursing team and other departments.
 - Provide accurate data to facilitate timely treatment.

PAIN POINTS

- Challenges Faced:**
 - Tedious manual processes for data entry during busy shifts.
 - Limited system accessibility in high-stress situations.
- Barriers to Success:**
 - Complex user interfaces make navigating the system difficult.
 - Occasional delays or downtimes in the system.

MOTIVATION

- Why They Care About the System:**
 - Reduces administrative burden and improves focus on patient care.
- Personal/Professional Values:**
 - Dedication to ensuring patient safety and providing timely updates.

DAILY ACTIVITIES

- Key Tasks and Responsibilities:**
 - Record patient vitals (e.g., blood pressure, sugar levels).
 - Update patient charts and assist in medication administration.
- Interaction with the System:**
 - Inputs patient updates, views doctor's notes, and uploads test results.



LAB TECHNICIAN'S

BASIC INFORMATION

Name: Sarah Hassan
Age: 35
Gender: Female
Job Title: Lab Technician
Department: Laboratory Services
Experience Level: 10+ years
Location : Qasr El Eyni Hospital

GOALS AND OBJECTIVES

- Primary Goals:**
 - Ensure timely and accurate processing of lab tests.
 - Deliver clear and reliable test results to doctors for effective diagnosis.
- Secondary Goals:**
 - Minimize delays in reporting test results.
 - Collaborate with doctors and nurses to prioritize urgent tests.

PAIN POINTS

- Challenges Faced:**
 - Difficulty managing high volumes of test requests, especially during peak hours.
 - Occasional delays in retrieving patient details from the system due to slow response times.
- Barriers to Success:**
 - Lack of automation in test result logging, requiring manual input.
 - Inconsistent communication about test result priorities.

MOTIVATION

- Why They Care About the System:**
 - Efficient systems reduce turnaround time and improve patient care.
 - Accurate record-keeping ensures proper follow-up testing when needed.
- Personal/Professional Values:**
 - Commitment to precision, reliability, and timely service.

DAILY ACTIVITIES

- Key Tasks and Responsibilities:**
 - Receive test orders and label samples with patient identifiers.
 - Perform routine and specialized tests on collected samples.
 - Enter results into the system and notify doctors for urgent findings.
- Interaction with the System:**
 - Use the system to track test orders, log results, and access historical data.
 - Communicate with doctors about additional or repeated tests when required.



Main Personas



PATIENT

BASIC INFORMATION

Name: Saad
Age: 40
Gender: Male
Job Title: Marketing Manager
Department: Digital Marketing
Experience Level: High level
Location: Near City

GOALS AND OBJECTIVES

- Primary Goals:**
 - Access personal medical records securely
 - View test results and medical history
 - Download medical records for specialists
 - Access discharge summaries and instructions
- Secondary Goals:**
 - Download medical documentation
 - Review billing information
 - Share records with other providers

PAIN POINTS

- Challenges Faced:**
 - Problems accessing historical records
 - Trouble downloading medical documents
 - Issues with portal login
- Barriers to Success:**
 - Limited understanding of medical records
 - Complex record organization
 - Multiple login credentials

MOTIVATION

- Why They Care About the System:**
 - Needs easy access to medical history
 - Monitors chronic condition progress
 - Maintains family health records
- Personal/Professional Values:**
 - Health information ownership
 - Medical record accuracy
 - Personal health management
 - Healthcare coordination

DAILY ACTIVITIES

- Key Tasks and Responsibilities:**
 - Access medical test results
 - Download medical records
 - Review medication lists
- Interaction with the System:**
 - Accesses medical documents
 - Reviews lab results
 - Downloads health records



RECEPTIONIST

BASIC INFORMATION

Name: Hoda
Age: 28
Gender: Female
Job Title: Receptionist
Department: Front desk operation
Experience Level: Mid level
Location: Qasr El Eyni Hospital

GOALS AND OBJECTIVES

- Primary Goals:**
 - Use the EMR system to efficiently register new patients with minimal errors.
 - Serve as the first point of contact, ensuring a welcoming and smooth patient experience.
- Secondary Goals:**
 - Minimize patient waiting times by leveraging the EMR's streamlined workflows.
 - Maintain accurate and comprehensive patient records to support clinical outcomes.

PAIN POINTS

- Challenges Faced:**
 - Managing heavy foot traffic at the clinic while maintaining a high level of accuracy during registration.
 - Addressing patient frustrations when delays occur in the registration process.
- Barriers to Success:**
 - Technical issues such as system slowness or downtime during busy hours.
 - Limited familiarity with advanced features of the EMR system due to insufficient training.

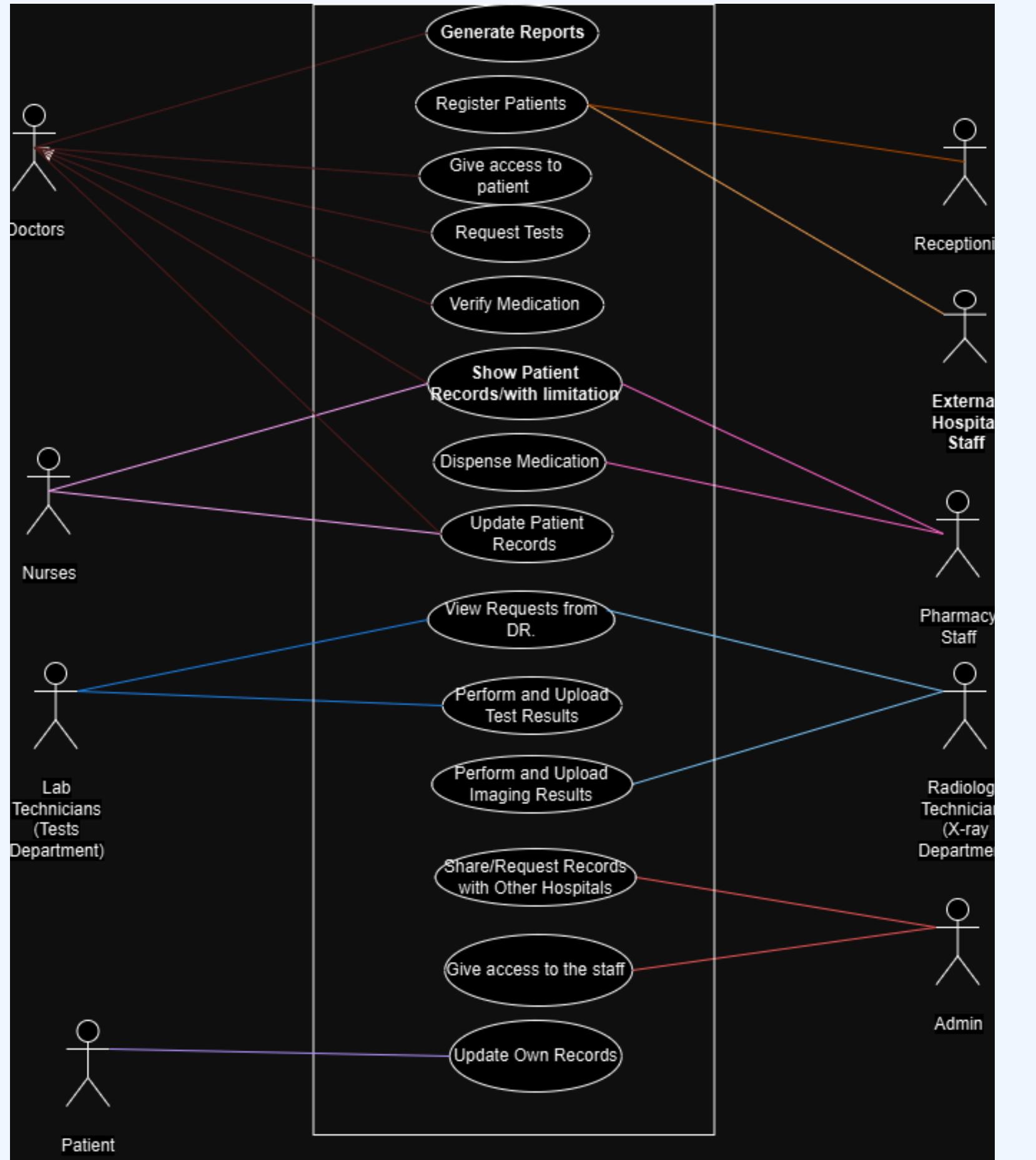
MOTIVATION

- Why They Care About the System:**
 - A robust EMR system allows for quick and error-free patient registration, enhancing efficiency and patient satisfaction.
- Personal/Professional Values:**
 - Commitment to patient care, efficiency, and attention to detail in all interactions.

DAILY ACTIVITIES

- Key Tasks and Responsibilities:**
 - Greeting patients and answering inquiries at the front desk.
 - Collecting patient identification, contact details, and medical history.
 - Entering patient information into the EMR system accurately and issuing patient IDs.
- Interaction with the System:**
 - Using the "Register New Patients" feature to log patient details and verify their accuracy.
 - Generating and sharing patient records with the system to ensure seamless integration with other departments.

Use Case Diagram



NFR

Scalability

In case some clinics want to join the system and work under the hospital (most hospitals in Cairo have an external clinics section) we need our system to be able to quickly scale.

- Allow scaling to support up to 5000 users as the system expands.
- Easy to integrate with: Enable data sharing between hospitals in standard formats (JSON, CSV, TSV)
- Easily accessible

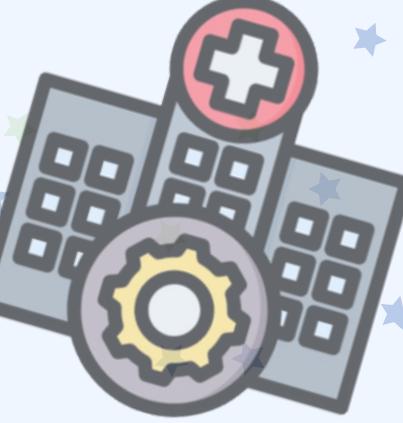
Reliability

- Perform daily backups and store them offsite.
- Implement a disaster recovery plan to prevent data loss and make sure the backup server is constantly up

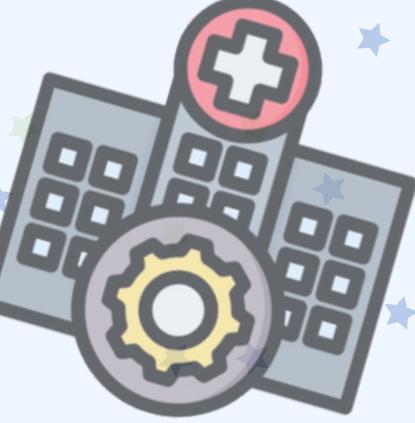
Performance

Taking into consideration the system will support a government hospital, the system must be performant however the expectations are limited due to the lower funding in Egypt. This can be expressed as requiring the following from our system:

- Support up to 1500 concurrent users without noticeable delays.
- Critical operations (e.g., updating records) must respond within 100-300 millisecond.
- Generate reports within 1-3 seconds.
- Handle up to 200 transactions per second using workers and threads.
- Stress tested to ensure it can function without noticeable slowdown at 2x-3x the normal load for up to 15 minutes.



NFR



Availability

- Ensure 99.5% uptime, with minimal maintenance downtime, basic redundancy should be used such as 2 nodes at least.
- Keep backup servers for critical functions, can be slower than main one.
- Keep constant backups

Security

- Encrypt all data using stored and transmitted.
- Use role-based access for restricting access for certain people in the hospital.
- Comply with Egyptian healthcare privacy laws.
- Should be tested against and resilient to OWASP top 10 vulnerabilities.

Usability

We expect our patient and staff to be familiar with smartphones to a certain extent, however we have no expectations from them in terms of computers as they are not as common in smaller cities.

- Hospital user interface should be intuitive, requiring no more than 10 hours of training.
- Learnability: Patients should be able to log health metrics (e.g., blood pressure) or view their data via a mobile app with no prior training, only a 10 minute guide.
- Prioritize accessibility for less tech-savvy users.

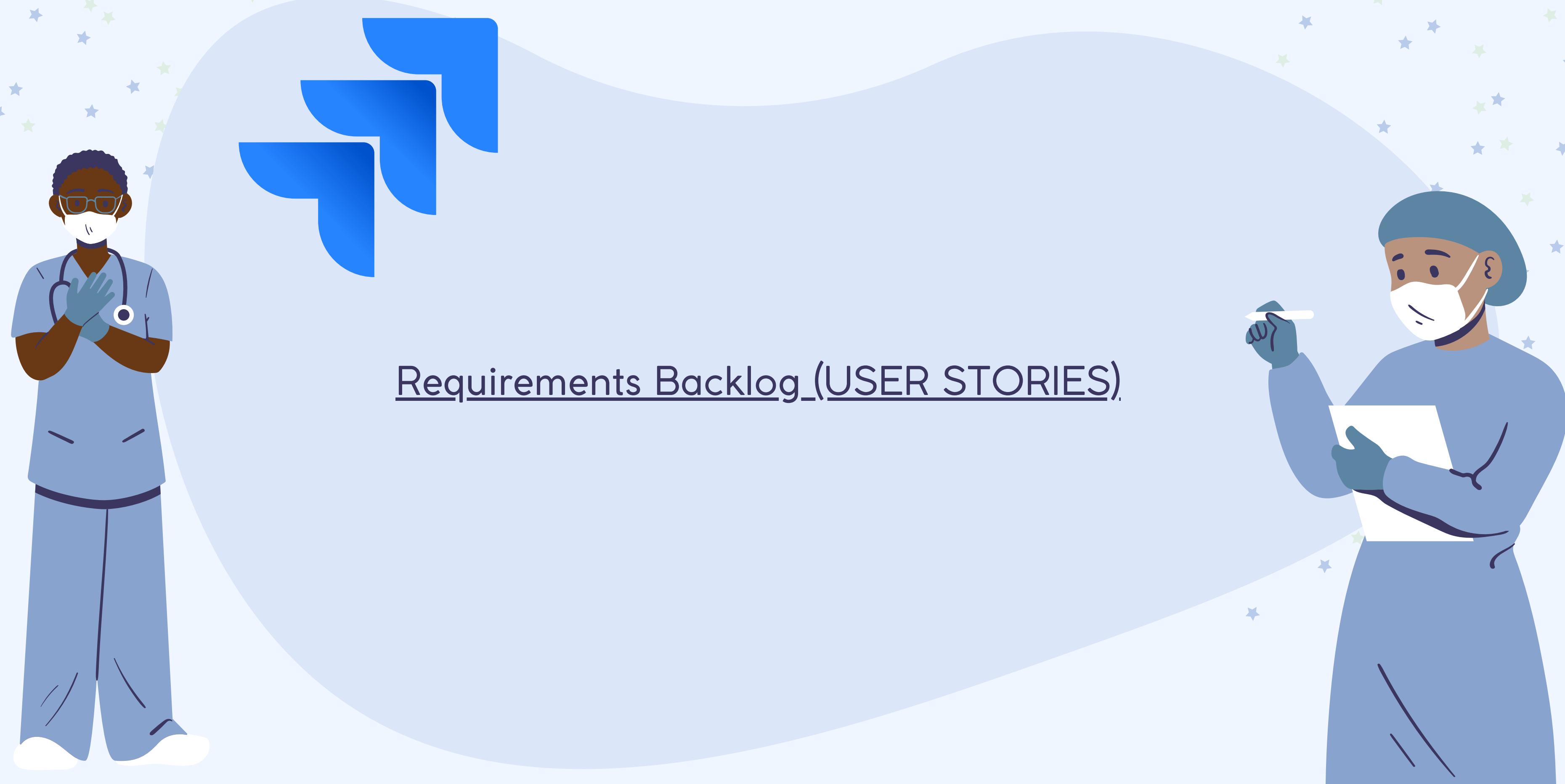


Project Management Board (Jira)

SCRUM-65 As a patient, I want to track my treatments and view lab ...	TO DO ▾	- ⚡
SCRUM-66 As a patient, I want notifications when new lab results ar...	TO DO ▾	- ⚡
SCRUM-67 As a doctor, I want patients to have access to their lab r...	TO DO ▾	- ⚡
SCRUM-68 As a patient, I want to access the patient portal via web ...	TO DO ▾	- ⚡
SCRUM-69 As a patient in Egypt, I want the portal to be available in...	TO DO ▾	- ⚡
SCRUM-70 As a healthcare administrator, I want the patient portal t...	TO DO ▾	- ⚡
SCRUM-71 As a hospital administrator, I want to generate reports ...	TO DO ▾	- ⚡
SCRUM-72 As a healthcare quality manager, I need reports on pati...	TO DO ▾	- ⚡
SCRUM-73 As a regulatory agency representative, I need access to ...	TO DO ▾	- ⚡
SCRUM-74 As an IT manager, I want the EMR system to integrate w...	TO DO ▾	- ⚡
SCRUM-75 As a doctor, I need access to external services like natio...	TO DO ▾	- ⚡
SCRUM-76 As an IT administrator, I want the EMR to support stand...	TO DO ▾	- ⚡
SCRUM-77 As a compliance officer, I want the system to maintain d...	TO DO ▾	- ⚡
SCRUM-78 As a security administrator, I need detailed logs of data ...	TO DO ▾	- ⚡
SCRUM-79 As a patient, I want assurance that my medical data is a...	TO DO ▾	- ⚡
SCRUM-80 As a system user, I want the EMR system to respond qui...	TO DO ▾	- ⚡
SCRUM-81 As a healthcare administrator, I want the system to be s...	TO DO ▾	- ⚡
SCRUM-82 As a hospital administrator, I want the system to have 9...	TO DO ▾	- ⚡
SCRUM-83 As an IT manager, I want regular offsite backups and re...	TO DO ▾	- ⚡

SCRUM-58 As a doctor, I want to create and manage electronic pre...	TO DO ▾	- ⚡
SCRUM-59 As a pharmacist, I need to receive electronic prescriptio...	TO DO ▾	- ⚡
SCRUM-60 As a patient, I want my prescriptions to be handled elect...	TO DO ▾	- ⚡
SCRUM-61 As a healthcare administrator, I want the system to supp...	TO DO ▾	- ⚡
SCRUM-62 As a patient, I want to access my medical records onlin...	TO DO ▾	- ⚡
SCRUM-63 As a patient, I want to review my diagnoses, treatments,...	TO DO ▾	- ⚡
SCRUM-64 As a doctor, I want patients to access their records onlin...	TO DO ▾	- ⚡
SCRUM-84 As a compliance officer, I need the system to comply w...	TO DO ▾	- ⚡
SCRUM-85 As a security officer, I want sensitive information to be e...	TO DO ▾	- ⚡
SCRUM-86 As an IT administrator, I want to implement role-based ...	TO DO ▾	- ⚡
SCRUM-87 As a nurse, I want the system to be user-friendly and in...	TO DO ▾	- ⚡
SCRUM-88 As a doctor in Egypt, I need the system to use local heal...	TO DO ▾	- ⚡
SCRUM-89 As a pharmacist, I want the EMR system to integrate wit...	TO DO ▾	- ⚡
SCRUM-90 As an IT manager, I want the system to interoperate wit...	TO DO ▾	- ⚡
SCRUM-91 As an IT manager, I want the system to have offsite bac...	TO DO ▾	- ⚡
SCRUM-92 As a healthcare administrator, I want assurance that pa...	TO DO ▾	- ⚡
SCRUM-93 As a healthcare administrator, I want the system to utiliz...	TO DO ▾	- ⚡

Requirements Backlog



Requirements Backlog_(USER STORIES)

Sprint Plan Across 3 Sprints

Sprint 1 - MVP Requirements

Goal: Implement the most critical functionalities to support the core actors (Doctor, Receptionist, and Pharmacy Staff).

Deliverables:

1. Receptionist

- Register New Patients

2. Doctor

- View Patient Records
- Prescribe Medication
- Request Tests/Imaging

3. Pharmacy Staff

- View Medication Requests
- Verify and Dispense Medication

Tasks:

- Design database schema for patient registration, records, prescriptions, and test/imaging requests.
- Develop user authentication for core actors.
- Build UI for patient registration, viewing records, and prescription management.
- Implement backend APIs for registering patients, handling prescriptions, and test/imaging requests.
- Test and deploy the MVP functionalities.



Sprint Plan Across 3 Sprints

Sprint 2 - Enhanced Functionalities

Goal: Expand system capabilities to include additional actors and functionalities while addressing alternative flows.

Deliverables:

1. Doctor

- Generate Patient Reports
- Manage Patient Access

2. Nurse

- Update Patient Records (limited data entry like BP, HR, etc.)
- View Patient Records

3. Lab Technician

- View Test Requests
- Upload Test Results

4. Radiology Technician

- View Imaging Requests
- Upload Imaging Results

Tasks:

- Extend the database schema for lab and imaging data.
- Build additional UI components for generating reports, managing patient access, and updating records.
- Implement APIs for viewing and uploading test and imaging results.
- Add notification systems for new test/imaging requests and results.



Sprint Plan Across 3 Sprints

Sprint 3 - Optimization & Change Management

Goal: Finalize system features, address non-functional requirements, and prepare for deployment.

Deliverables:

1. Administrator

- Manage User Roles and Permissions
- Share Patient Records
- Generate Hospital Reports

2. Patient

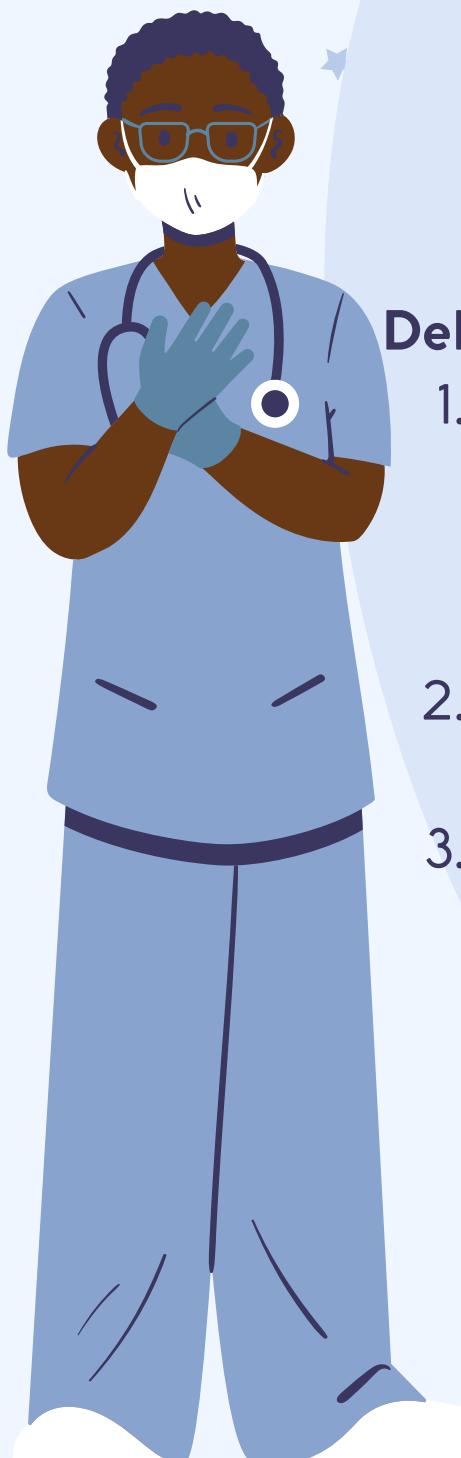
- Log Health Data

3. System Enhancements

- Role-based access control for data security.
- Encryption for data sharing between hospitals.
- Data validation for patient-entered health metrics.

Tasks:

- Implement role-based access control (RBAC)..
- Develop secure data-sharing protocols between hospitals.
- Refine UI/UX based on user feedback.
- Conduct load and stress testing to ensure scalability and performance.
- Finalize documentation for deployment.



Updates in Our System



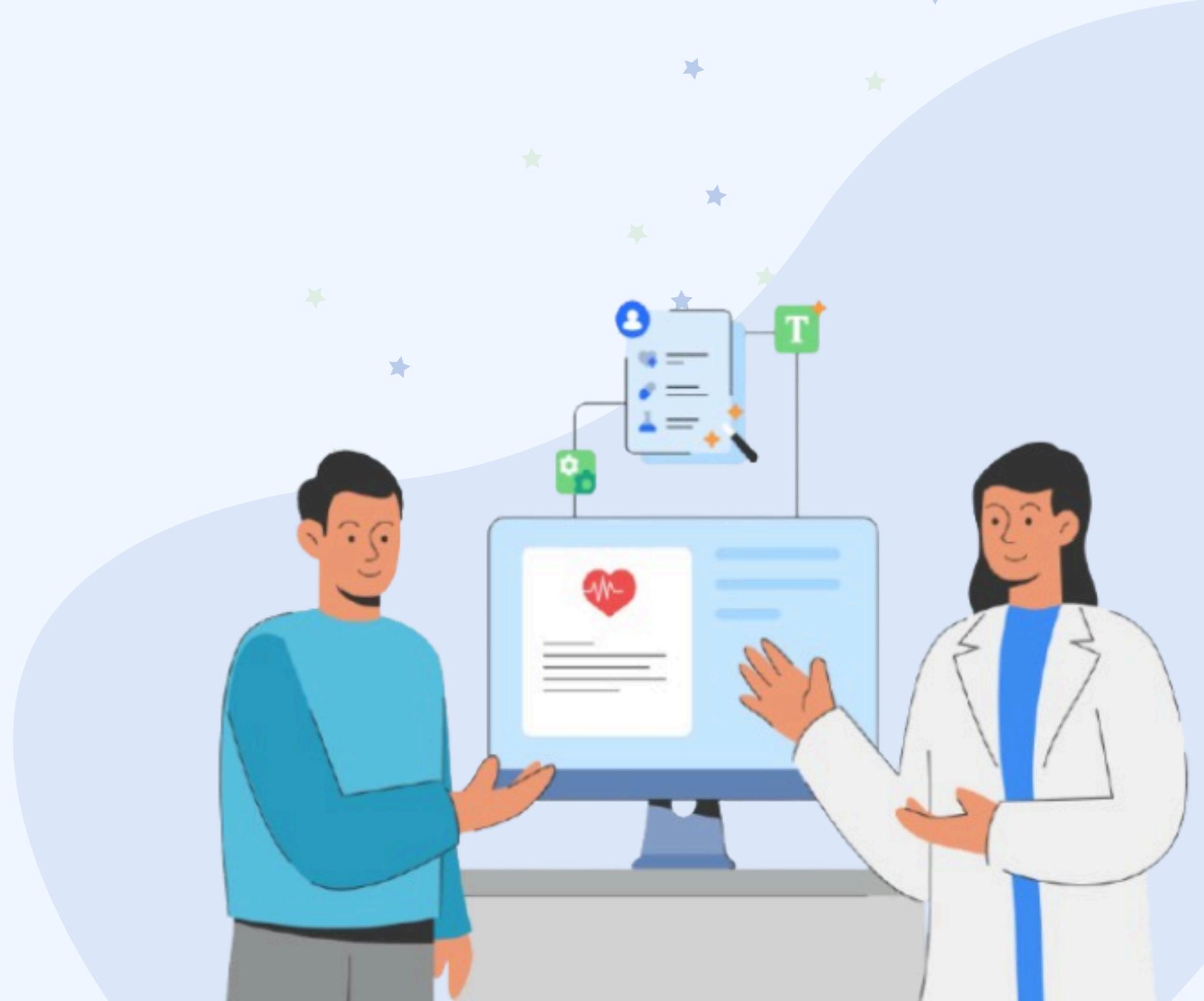
Reviewing the changes made after adding a new feature

Integration of your MIS with Hospital Financial System



Updates added to the RTM

FR-12	The system must generate comprehensive financial reports combining data from the MIS and the financial system.	Use Case 22	TC-12	Pending	High	None
FR-13	The system must notify relevant departments of outstanding payments to ensure timely follow-up actions.	Use Case 23	TC-13	Pending	Medium	None
FR-14	The system must automate the submission and tracking of medical insurance claims via integration with insurers.	Use Case 24	TC-14	Pending	High	None
FR-15	The system must allow pharmacists to place inventory orders, including selecting suppliers and specifying quantities.	Use Case 25	TC-15	Pending	Medium	None



Updates added to the NFR

Performance

Taking into consideration the system will support a government hospital, the system must be performant however the expectations are limited due to the lower funding in Egypt. This can be expressed as requiring the following from our system:

- Support up to 1500 concurrent users without noticeable delays.
- Critical operations (e.g., updating records) must respond within 100-300 milliseconds.
- Generate reports within 1-3 seconds.
- Handle up to **500 transactions per second** using workers and threads.
- Stress tested to ensure it can function without noticeable slowdown at 2x-3x the normal load for up to 15 minutes.
- **Enable real-time data synchronization** (e.g., payments, bills, and reimbursements) within 2 seconds of updates.

Legislative Requirements

- System should not lose any financial data or have any rounding errors
- Ensure all data exchanges adhere to security and compliance regulations, such as HIPAA or GDPR.

Scalability

In case some clinics want to join the system and work under the hospital (most hospitals in Cairo have an external clinics section) we need our system to be able to quickly scale.

- Allow scaling to **support up to 7000** users as the system expands.
- Easy to integrate with: Enable data sharing between hospitals in standard formats (JSON, CSV, TSV).
- Easily accessible and secure API for the data transfer.
- **Support standardized data formats** (e.g., HL7, FHIR, or APIs) for compatibility in the financial system integration.

Availability

- **Ensure 99.8% uptime**, with minimal maintenance downtime, basic redundancy should be used such as **4 nodes at least**.
- Keep backup servers for critical functions, can be slower than main one.
- Keep constant backups at multiple locations

Updates added to the Prioritization Matrix

Function Requirement (FR)	Value	Cost	Risk	Compliance	Dependency	Justification	Total Priority
Generate Financial Reports	4	3	3	4	4	Provides detailed financial insights combining MIS and financial system data. Moderate complexity; depends on integration quality and data synchronization.	18
Notify Departments of Outstanding Payments	3	2	2	3	3	Ensures timely notification of unpaid amounts to relevant departments. Low complexity and risk; automated and periodic operation.	13
Automate Medical Insurance Claims Processing	5	4	4	4	5	Streamlines claims submissions and tracking with insurers. High impact and complexity; depends on accurate data validation and insurer API compatibility.	22
Order Inventory for Pharmacy	3	3	3	4	3	Supports inventory management to avoid shortages. Moderate complexity; depends on supplier integration and inventory tracking accuracy.	16



Added Use cases

Use Case 25

Title: Order Inventory for Pharmacy

Actor: Pharmacist

Goal: Place inventory orders for the pharmaceuticals.

Preconditions:

- The pharmacy inventory is tracked in the system.
- The pharmacist has ordering permissions.
- Approved suppliers are registered in the system.

Main Flow:

1. The pharmacist navigates to the pharmaceuticals section.
2. The system displays current stock levels.
3. The pharmacist selects items to reorder.
4. The system suggests approved suppliers.
5. The pharmacist confirms the order and quantity.
6. The system sends the order to the selected supplier.

Alternative Flows:

- Supplier Not Available:

- The system notifies the pharmacist.
- The pharmacist manually selects an alternative supplier.

Postconditions:

- Inventory orders are placed with approved suppliers.
- The pharmacy inventory is updated with the new order details.

Use Case 24

Title: Automate Medical Insurance Claims Processing

Actor: Insurance Administrator

Goal: Automate the processing of medical insurance claims by integrating the MIS and the financial system.

Preconditions:

- Insurance claim records are available in the MIS.
- The financial system tracks insurance payouts and pending claims.
- The insurance administrator has access permissions.

Main Flow:

1. The insurance administrator accesses the claims automation module.
2. The system retrieves claim data from the MIS.
3. The system validates claim details against financial records.
4. The system prepares and submits claims to the insurance company.
5. The system logs claim submissions and monitors their status.
6. The insurance administrator reviews claim progress and updates a dashboard.
7. The insurance company confirms or denies the claim.

Alternative Flows:

- Claim Validation Error:

- The system flags invalid claims and notifies the administrator.
- The administrator corrects errors and resubmits the claims.

Postconditions:

- Insurance claims are processed efficiently.
- Claim status is updated in real-time.

Use Case 23

Title: Notify Departments of Outstanding Payments

Actor: System

Goal: Automatically notify relevant departments of outstanding payments to take timely action.

Preconditions:

- The MIS is integrated with the financial system.
- Outstanding payment data exists.
- Departments are registered in the system.

Main Flow:

1. The system queries the financial system for outstanding payments.
2. The system identifies relevant departments (e.g., Pharmacy, Radiology).
3. The system generates notifications for each department.
4. The system sends notifications via email or messaging alerts.
5. The system logs the notification status.

Alternative Flows:

- Notification Failure:

- The system retries sending notifications.
- If the issue persists, the system logs the failure.

Use Case 22

Title: Generate Financial Reports

Actor: Finance Manager

Goal: Generate comprehensive financial reports combining data from the MIS and financial system for performance tracking and decision-making.

Preconditions:

- The MIS and financial system are integrated.
- Financial data and patient billing records are synchronized.
- The finance manager has reporting permissions.

Main Flow:

1. The finance manager navigates to the reporting dashboard.
2. The finance manager selects a report type (e.g., Revenue Breakdown, Cost Analysis).
3. The system retrieves data from both the MIS and financial system.
4. The system merges and formats the data for consistency.
5. The system generates a detailed report with visualizations.
6. The system displays the report preview.
7. The finance manager exports or shares the report.

Alternative Flows:

- Data Retrieval Delay:

- The system notifies the user of a delay.
- The finance manager chooses to generate a partial report or retry later.

Postconditions:

- Financial reports are generated and available for analysis or sharing.
- Data from both systems is reflected in the report.
- The report generation is logged on the financial system.

Added User Journeys

Finance Manager's Journey:

Log In → Navigate to Reporting Dashboard → Select Report Type → Generate Financial Reports → Export or Share Report → Log Out

System's Journey:

Query Outstanding Payments → Identify Relevant Departments → Generate Notifications → Send Notifications → Log Notification Activity.



Insurance Administrator's Journey:

Log In → Access Claims Automation Module → Validate Claim Details → Submit Claims to Insurance Company → Monitor Claim Status → Log Out.

Pharmacist's Journey:

Log In → Navigate to Pharmacy Inventory Section → Select Items to Reorder → Confirm and Submit Order → Log Out.

Inventory Manager's Journey:

Log In → Access Inventory Cost Section → Review Inventory Costs → Confirm Accuracy or Resolve Discrepancies → Save Updates → Log Out.

Added Personas



BASIC INFORMATION



Name: Sarah
Age: 35
Gender: Female
Job Title: Finance Manager
Department: Finance and Accounts
Experience Level: High level
Location: Nasr City

MOTIVATION

- Why They Care About the System:**
 - Needs an integrated platform for consolidated financial reporting.
 - Ensures better decision-making through accurate data analysis.
 - Reduces manual effort and enhances operational efficiency.
- Personal/Professional Values:**
 - Data accuracy and reliability.
 - Financial transparency and accountability.
 - Efficient use of hospital resources.

DAILY ACTIVITIES

- Key tasks and responsibilities:**
 - Generate financial reports and share them with management.
 - Review revenue breakdowns and cost analyses.
 - Monitor outstanding payments and ups.
- Interaction with the System:**
 - Navigates the reporting dashboard for data analysis.
 - Downloads and shares financial reports.
 - Tracks payment status and reviews notifications.

FINANCE MANAGER



BASIC INFORMATION

Name: Aser
Age: 37
Gender: male
Job Title: Insurance Administrator
Department: Claims Processing
Experience Level: Moderate
Location: Nasr City

GOALS AND OBJECTIVES

- Primary Goals:**
 - Generate comprehensive financial reports.
 - Monitor hospital revenue and expenses.
 - Ensure financial transparency across departments.
- Secondary Goals:**
 - Track outstanding payments and insurance reimbursements.
 - Manage cost allocation for inventory and staff fees.
 - Oversee financial compliance and reporting accuracy.

PAIN POINTS

- Challenges Faced:**
 - Reconciliations between MIS and financial systems.
 - Difficulties in report customization and sharing.
 - Lack of real-time updates for financial metrics.
- Barriers to Success:**
 - Inefficient manual processes.
 - Insufficient integration between systems.
 - Data synchronization issues.

MOTIVATION

- Why They Care About the System:**
 - Needs a streamlined process for insurance claims.
 - Aims to reduce manual errors and processing times.
 - Ensures timely claim payouts for patient care.
- Personal/Professional Values:**
 - Efficiency in handling claims.
 - Accuracy in financial documentation.
 - Transparency in insurance operations.

DAILY ACTIVITIES

- Key tasks and responsibilities:**
 - Process insurance claims submitted by patients.
 - Validate claim details against financial records.
 - Monitor claim status and resolve flagged issues.
- Interaction with the System:**
 - Accesses the claims automation module.
 - Submits claims to insurance companies.
 - Reviews and updates claim statuses as needed.

INSURANCE ADMINISTRATOR



BASIC INFORMATION

Name: Wileam
Age: 47
Gender: male
Job Title: Inventory Manager
Department: Supply Chain Management
Experience Level: High
Location: Nasr City

GOALS AND OBJECTIVES

- Primary Goals:**
 - Automate medical insurance claim submissions.
 - Track and validate insurance payouts.
 - Reduce delays in claim processing.
- Secondary Goals:**
 - Resolve discrepancies in claim records.
 - Ensure accurate claim submissions.
 - Monitor claim status in real-time.

PAIN POINTS

- Challenges Faced:**
 - Lack of integration between MIS and financial systems.
 - Limited automation for repetitive tasks.
 - Complex claim verification processes.
- Barriers to Success:**
 - Inconsistent claim data.
 - Limited visibility into pending claims.
 - Time-consuming manual interventions.

MOTIVATION

- Why They Care About the System:**
 - Needs a streamlined process for insurance claims.
 - Aims to reduce manual errors and processing times.
 - Ensures timely claim payouts for patient care.
- Personal/Professional Values:**
 - Efficiency in handling claims.
 - Accuracy in financial documentation.
 - Transparency in insurance operations.

DAILY ACTIVITIES

- Key tasks and responsibilities:**
 - Process insurance claims submitted by patients.
 - Validate claim details against financial records.
 - Monitor claim status and resolve flagged issues.
- Interaction with the System:**
 - Accesses the claims automation module.
 - Submits claims to insurance companies.
 - Reviews and updates claim statuses as needed.

INVENTORY MANAGER



BASIC INFORMATION

Name: Abdelbaset
Age: 31
Gender: male
Job Title: Pharmacy Technician
Department: Pharmacy Operations
Experience Level: Mid level
Location: Qasr El Eyni Hospital

GOALS AND OBJECTIVES

- Primary Goals:**
 - Review and confirm inventory costs.
 - Ensure alignment of inventory records between systems.
 - Maintain cost efficiency in procurement.
- Secondary Goals:**
 - Resolve discrepancies in cost records.
 - Update inventory costs in real-time.
 - Monitor inventory performance metrics.

PAIN POINTS

- Challenges Faced:**
 - Ensuring accurate cost allocation for inventory.
 - Addressing mismatches in procurement data.
 - Tracking inventory performance across departments.
- Barriers to Success:**
 - Inefficient reconciliation processes.
 - Limited tools for cost analysis and tracking.
 - Dependence on manual data correction.

MOTIVATION

- Why They Care About the System:**
 - EMR integration saves time, reduces errors, and enhances their ability to deliver safe and effective patient care.
 - Access to accurate, real-time financial data supports their role in ensuring transparency and compliance with billing and inventory management.
- Personal/Professional Values:**
 - Dedication to patient safety, accuracy, and the efficiency of healthcare delivery.
 - Commitment to maintaining confidentiality and professionalism in pharmacy operations.
 - Values the integration of financial and inventory systems to maintain a smooth workflow and accurate records.

DAILY ACTIVITIES

- Key tasks and responsibilities:**
 - Review inventory records and costs.
 - Confirm and update inventory counts.
 - Address discrepancies in procurement records.
- Interaction with the System:**
 - Accesses inventory cost sections for reviews.
 - Resolves flagged discrepancies in cost data.
 - Saves and updates verified inventory cost records.

PHARMACY TECHNICIAN



BASIC INFORMATION

Name: Abdelbaset
Age: 31
Gender: male
Job Title: Pharmacy Technician
Department: Pharmacy Operations
Experience Level: Mid level
Location: Qasr El Eyni Hospital

GOALS AND OBJECTIVES

- Primary Goals:**
 - Utilize the Electronic Medical Records (EMR) system to process medication refill requests efficiently.
 - Ensure accurate medication dispensing through seamless integration of patient data and prescriptions.
 - Ensure the accuracy of pharmacy charges and inventory costs in the financial system.
- Secondary Goals:**
 - Minimize administrative workload and errors using EMR automation.
 - Maintain secure and compliant transaction records for patient safety and auditing purposes.
 - Access and review financial reports related to inventory costs and pharmacy charges, ensuring transparency and accuracy.

PAIN POINTS

- Challenges Faced:**
 - Managing high volumes of refill requests under time pressure.
 - Ensuring medication accuracy with limited time for manual verifications.
 - Addressing unexpected system downtimes or crashes during critical tasks.
 - Lack of visibility into real-time updates of pharmacy charges, payments, or insurance reimbursements that may affect dispensing operations.
- Barriers to Success:**
 - Insufficient training on advanced EMR features that could streamline workflow, particularly regarding financial integration.
 - Downtime or system crashes disrupting medication processing, dispensing, or financial transactions.

MOTIVATION

- Why They Care About the System:**
 - EMR integration saves time, reduces errors, and enhances their ability to deliver safe and effective patient care.
 - Access to accurate, real-time financial data supports their role in ensuring transparency and compliance with billing and inventory management.
- Personal/Professional Values:**
 - Dedication to patient safety, accuracy, and the efficiency of healthcare delivery.
 - Commitment to maintaining confidentiality and professionalism in pharmacy operations.
 - Values the integration of financial and inventory systems to maintain a smooth workflow and accurate records.

DAILY ACTIVITIES

- Key tasks and responsibilities:**
 - Reviewing refill requests and prescriptions via the EMR system.
 - Cross-referencing medication data with patient history stored in the EMR.
 - Dispensing accurate medications and providing instructions to patients.
 - Reviewing and verifying pharmacy charges and related financial data.
 - Updating inventory and financial records to ensure accuracy across systems.
- Interaction with the System:**
 - Accessing patient records, prescription details, and inventory through the EMR.
 - Using EMR analytics to track trends, manage stock levels, and ensure prescription compliance.
 - Monitoring real-time updates on payments and outstanding bills, especially in relation to pharmacy charges and insurance reimbursements.
 - Utilizing the system to review and confirm inventory costs and financial data for auditing and reporting purposes.

**Thank you for
your attention**



