

REQUIREMENT GATHERING

Date: 12-12-2025

1. Project Overview:

HealCare is an online hospital management system that unifies various operational clinical services into a single digital platform. It aims to streamline hospital workflows by providing integrated patient services, doctor functionalities, staff operations, laboratory management, pharmacy handling, billing, queue tracking, canteen ordering, and administrative controls. The objective of the system is to ensure faster processing, secure medical data handling, seamless communication, efficient diagnosis support, and improved service delivery across all hospital units.

2. System Scope:

HealCare is proposed as a **full-scale hospital management system** designed for practical implementation within small, medium, and large healthcare institutions. The system covers end-to-end hospital processes including OP/IP management, medical record preservation, lab test processing, pharmacy operations, staff workflow handling, and administrative reporting.

The system ensures centralized operations, high availability, and scalability for future enhancements.

3. Target Audience:

HealCare is intended for all the key stakeholders involved in hospital workflows are Patients, Doctors, Nurses, Reception Staff, Billing Staff, Lab Technicians, Pharmacists, Canteen Staff, Hospital Administrators. These users interact with the system based on their specific operational responsibilities and access levels.

4. Modules:

1. Patient–Doctor Interaction Module

Includes appointment booking, medical record access, e-prescriptions, diagnosis updates, tracking treatment history, viewing lab results, and submitting feedback. This module ensures real-time and smooth healthcare communication between patients and doctors.

2. Medical Workflow & Records Module

Handles internal hospital workflows such as laboratory sample processing, lab test assignments, result uploads, pharmacy inventory and dispensing, inpatient/outpatient management, queue monitoring, billing generation, canteen ordering, and ward allocation.

3. Administration & Hospital Support Module

Manages user roles and permissions, department configurations, data access control, financial statistics, operational reporting, and system policy settings. It supports complete system oversight and ensures secure workflow monitoring.

5. User Roles:

- **Patient:** Register, book appointments, view reports, access medical history, download prescriptions, place canteen orders, give feedback.
- **Doctor:** Access patient details, enter diagnosis, upload notes/attachments, generate e-prescriptions, request lab tests, review reports.
- **Reception Staff:** Handle patient assistance, queue regulation, appointment management.
- **Billing Staff:** Generate and manage patient bills.
- **Pharmacy Staff:** Handle prescriptions, manage stock, dispense medicines.
- **Lab Technician:** Collect samples, assign tests, process findings, upload lab reports.
- **Canteen Staff:** Manage and process patient food orders.
- **Administrator:** Manage user accounts, roles, departments, operational data, and generate reports.

6. System Ownership:

HealCare is owned by the developer who designs, builds, and operates the platform, retaining full rights over its architecture, workflows, and system design. Since the system includes sensitive medical data structures, interface layouts, and operational modules, ownership is crucial to ensure intellectual property protection and secure handling of all hospital-related content.

7. Industry/Domain:

The system belongs to the **Healthcare Information Systems (HIS)** domain, supporting digital transformation of hospital operations.

8. Data Collection Contacts:

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9. Questionnaire for Data Collection:

1. How do you currently manage patient registration and appointment scheduling?

Patient registration and appointment scheduling are done manually through physical forms or basic standalone systems, which often leads to delays, duplicate entries, and difficulty in tracking appointment availability.

2. What difficulties do you face in accessing or updating patient medical records?

Medical records are stored in files or scattered systems, making it difficult for doctors and staff to quickly access or update them. This causes delays in diagnosis, missing information, and inconsistent record keeping.

3. How are lab tests assigned, tracked, and reported in your hospital?

Lab tests are usually written manually on paper or communicated verbally. Tracking samples, updating test status, and delivering reports often leads to miscommunication, delays, or misplaced reports.

4. What issues arise during prescription handling and pharmacy dispensing?

Prescriptions may be handwritten and unclear, leading to errors in medication dispensing. Manual stock verification and delayed updates cause confusion about medicine availability.

5. How is queue regulation handled during peak hours?

Queues are managed manually by staff, leading to overcrowding, long waiting times, and patient dissatisfaction. There is no real-time system for patients to track their turn.

6. What information is needed in billing and payment generation?

Billing requires details such as patient registration data, consultation charges, lab test charges, pharmacy items, room/bed charges, and any additional service fees. Consolidating all this manually is time-consuming and error-prone.

7. How do different staff roles coordinate patient movement and departmental workflows?

Coordination is often done via phone calls or manual notes, causing delays in shifting patients between departments (lab, pharmacy, radiology, doctor consultation, billing). Lack of integration leads to communication gaps.

8. What types of reports are required for administrative review?

Administrators require reports like patient admission details, outpatient/inpatient statistics, bed occupancy, appointment volumes, discharge summaries, revenue reports, and feedback analysis.

9. What challenges exist in handling inpatient/outpatient records manually?

Manual records can be misplaced, incomplete, or illegible. Tracking patient history, ongoing treatments, and previous visits becomes difficult, affecting continuity of care.

10. How important is secure access control and role-based permissions in hospital systems?

Highly important. Different roles (doctor, nurse, lab staff, pharmacy, admin) need different access levels to protect patient data, ensure confidentiality, and prevent unauthorized modifications.

11. What improvements would a centralized digital system bring to patient care quality?

A centralized platform ensures faster access to complete patient information, reduces errors, improves treatment accuracy, shortens waiting time, and enhances overall patient experience.

12. What technology features would help your department? (Notifications, dashboards, analytics)

Real-time notifications for appointments, lab results, and prescription updates; dashboards for workload overview; analytics for patient trends, resource usage, and performance monitoring would significantly improve departmental efficiency.

GEOTAGGED PHOTOS

