

RIPHAH INTERNATIONAL UNIVERSITY



Programming Fundamental
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Hospital management system

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Project Team

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Introduction of the Project

Project Title: Hospital management system

Introduction: The Hospital Management System (HMS) is a digital platform designed to streamline hospital operations, improve data accuracy, and enhance patient care. By automating tasks such as patient management, doctor scheduling, and billing, it reduces administrative errors and improves service efficiency.

Problem Statement: Hospitals often face issues like inefficient patient management, misplaced records, and administrative errors due to outdated systems. These challenges can lead to delays, increased costs, and reduced patient satisfaction, highlighting the need for a more effective, automated solution.

Proposed Solution: The Hospital Management System (HMS) offers a centralized digital solution to automate and integrate hospital functions, including patient records, scheduling, and billing. This system minimizes errors, reduces paperwork, and provides real-time access to information, improving both operational efficiency and patient care.

Scope of the Project: The project covers key hospital functions, including patient management, doctor scheduling, appointment booking, pharmacy inventory, and billing. Designed for secure desktop and web access, it ensures hospital staff can efficiently manage data, streamline workflows, and deliver improved patient services.

Modules:

- ✓ Patient management
- ✓ Doctor management
- ✓ Appointment management
- ✓ Pharmacy management
- ✓ Billing management
- ✓ Laboratory management

Modules Description:

1. Patient Management

- Add Patient: Register new patient details, including personal and medical information.
- Edit Patient: Update existing patient records and treatment history.
- Delete Patient: Remove patient records if no longer needed or required by policy.
- Search Patient: Locate patient information using ID, name, or other identifiers.
- Update Patient Status: Track changes in patient status (e.g., admission, discharge).

2. Doctor Management

- Add Doctor: Register a new doctor's profile, specialization, and schedule.
- Edit Doctor: Update doctor information or shift assignments as needed.
- Delete Doctor: Remove doctor records upon resignation or other reasons.
- Search Doctor: Locate doctor details by name, department, or specialization.
- Update Schedule: Modify doctor shifts, availability, and assignments.

3. Appointment Management

- Add Appointment: Schedule new appointments for patients.
- Edit Appointment: Reschedule or adjust existing appointments.
- Cancel Appointment: Cancel appointments when necessary.
- Search Appointment: Find appointments by patient or doctor name, date, etc.
- Send Reminders: Automated alerts for upcoming appointments.

4. Pharmacy Management

- Add Medication: Add new medicines or supplies to the inventory.
- Edit Medication: Update details for existing medicines (e.g., dosage, stock).
- Delete Medication: Remove outdated or expired medicines from inventory.
- Search Medication: Find medicines by name or category.
- Track Inventory: Monitor stock levels and generate restocking alerts.

5. Billing and Payment

- Generate Invoice: Create billing invoices based on patient services.
- Edit Invoice: Update or correct billing details as required.
- Delete Invoice: Remove incorrect or duplicate invoices.
- Search Invoice: Find invoices by patient, date, or amount.
- Process Payments: Handle payments and insurance claims for patient services.

6. Laboratory Management

- Add Test: Register new lab tests with details and costs.
- Edit Test: Update information on existing tests as needed.
- Delete Test: Remove outdated or unused tests from the system.
- Search Test: Locate test details by type or patient request.
- Upload Test Results: Attach results to patient records for doctor access.

