

ABSTRACT – Hospital Management System (200 Words)

The Hospital Management System (HMS) is a web-based application designed to streamline and digitalize core hospital operations. The objective of this project is to create an efficient platform that manages patient information, doctor schedules, medical records, and billing processes with accuracy and speed. The system includes four major users: Admin, Doctor, Staff/Receptionist, and Patient. The Admin controls hospital operations by managing doctors, staff, and system settings. Doctors can access patient history, update diagnoses, and create digital prescriptions. Staff members handle patient registration, appointment scheduling, and invoice generation. Patients can view their medical reports, book appointments, and access prescriptions online.

The proposed system reduces manual paperwork, minimizes errors, and enables fast retrieval of patient data. Innovative features such as an AI-based symptom checker, QR-code patient identification, and automated medicine reminders enhance accessibility and patient experience. By integrating user-friendly interfaces with secure database management, the project ensures reliable storage and retrieval of health information. This Hospital Management System offers a modern, efficient, and scalable solution to support hospital administration and improve healthcare service delivery.

Users in Hospital Management System:

1. Admin

- Manage doctors
- Manage staff
- Manage patients
- View hospital statistics

2. Doctor

- View assigned patients
- Update diagnosis & prescriptions
- View appointments

3. Receptionist / Staff

- Register new patients
- Book appointments
- Manage billing
- Update patient reports

4. Patient

- Book appointments
 - View prescriptions
 - Download reports
 - Update profile
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4. Core Functionalities

Admin

- Add/update/delete doctors
- Add staff
- Generate reports (daily patients, revenue)

Doctor

- Write prescriptions
- Update diagnosis
- View patient history

Receptionist

- Patient registration
- Appointment scheduling
- Invoice generation

Patient

- Online appointment booking
- Access medical records

- Check lab report status

NEW INNOVATIONS:

1. AI Symptom Checker

Patients enter symptoms → system suggests the right doctor.

★ 2. QR Code Based Patient File

Scan QR → instantly load patient profile.

★ 3. Digital Prescription Auto-Alert

Reminds patient to take medicines on time.

. Facial Recognition-Based Patient Login

Patients can log in without password → uses face authentication.

2. Smart Bed Availability Tracking

System shows real-time availability of rooms, wards, ICU beds.

7. Emergency Ambulance Tracking System

Shows ambulance live location + estimated arrival time.

Online Blood Bank Finder

Shows available blood units (A+, B-, O+, etc.) in hospital.