

Hospital Management Application – Systematic Requirements

1. Overview

The objective is to build a cloud-based hospital/clinic management application focused on patient data entry, visit management, prescription writing, appointments, and invoicing. The system should support multi-language outputs, role-based access, and be scalable for future AI-based features.

2. User Roles & Permissions

2.1 User Roles

Doctor, Nurse/Assistant, Receptionist, Admin/Super Admin

2.2 Role-Based Permissions

Access control for patient data, prescription writing, appointment management, invoicing, reports, templates, and system settings.

3. Patient Management

3.1 Patient Registration

New patient registration includes personal details, contact information, preferred language, and additional medical information.

Existing patients can be searched using Patient ID, contact number, or name.

3.2 Family Linking

Family members can be linked from the existing patient database. Family details should be stored together and searchable as a group.

4. Patient History & Records

Maintain complete patient history including past visits, prescriptions, test reports, allergies, and family medical tendencies.

5. Visit Management Workflow

Patient selection → View history → Create new visit → Add visit details → Prescription writing → Advice/tests → Save visit → Print or share visit details.

6. Prescription Writing

Integrated medicine database with dose recommendations. Doctors can modify dosage, duration, and instructions. Multiple dosage timings and reminder data should be supported.

7. Advice, Tests & Pre-Operation Details

Advice and test recommendations can be entered via free text or templates. Pre-operation instructions should be structured and template-based.

8. Templates Management

Create, edit, and manage templates for advice and pre-operation instructions. Templates can be doctor-specific or global.

9. Output & Communication

Support printing prescriptions and visit summaries with selective information display. Visit details can be shared via WhatsApp in English, Marathi, or Hindi.

10. Appointment Management

Appointment booking system with daily appointment tracking and patient queue management.

11. Analytics & Reports

Daily patient count per doctor, visit statistics, and appointment analytics.

12. Invoicing & Billing

Generate invoices per visit, maintain billing history, and link invoices to patient and visit records.

13. System Architecture

Cloud-based, secure, scalable architecture with multi-device access and data backup.

14. Future Enhancements (Phase 2)

Audio-based consultation recording, AI transcription, summarization, and automated reminders.

15. Non-Functional Requirements

High availability, fast search, data security, patient privacy, backup and recovery, and compliance-ready design.