Software Requirements Specification
Hospital Management System (HMS)

1. Introduction

1.1 Purpose
The Hospital Management System (HMS) is designed to digitize and streamline hospital operations, from patient registration to discharge, including medical records management, billing, and inventory control.

1.2 Scope
The system will manage:
- Patient registration and EHR (Electronic Health Record)
- Nurse station operations
- Doctor consultations
- Laboratory management
- Pharmacy operations
- Billing and payments
- Admission and discharge processes

2. System Workflow and Functional Requirements

2.1 User Roles
1. Patients
2. Record Officers
3. Nurses
4. Doctors
5. Lab Technicians
6. Pharmacists
7. Administrators
8. Accounts Staff
9. Auditors

2.2 Module-wise Requirements

2.2.1 Record Department Module
- Patient registration with unique EHR number generation
- Collection of registration fees
- Patient demographic data management

- Queue management for nurse station

2.2.2 Nurse Station Module
- Vital signs recording
- Patient queue management
- Doctor assignment
- Admission form processing
- Nursing care documentation
- View doctor's instructions
- Monitor admitted patients
- Discharge clearance verification

2.2.3 Doctor Station Module
- Patient examination recording
- Test requisition management
- Prescription management
- Patient history viewing
- Admission requests
- Discharge planning

2.2.4 Pathology Station Module
- Test requests management
- Sample collection tracking
- Test results recording
- Report generation
- Billing integration

2.2.5 Pharmacy Module
- Prescription viewing
- Drug inventory management
- Billing generation
- Stock management
- Drug purchase tracking
- Out-of-stock notifications

2.2.6 Billing Module
- Registration fee collection
- Service charges calculation
- Laboratory test billing

- Pharmacy billing
- Admission charges
- Discharge clearance
- Payment tracking

3. Technical Specifications

3.1 Development Stack
- Backend: CodeIgniter 3 Framework
- Frontend: Bootstrap 5
- Database: MySQL
- Server: Apache

3.2 System Architecture
- MVC (Model-View-Controller) pattern
- Responsive web design
- Role-based access control

4. Database Requirements

4.1 Key Tables
1. Users
2. Patients
3. Appointments
4. Vital_Signs
5. Prescriptions
6. Lab_Tests
7. Inventory
8. Billing
9. Admissions
10. Medical_Records

5. Security Requirements
- Role-based authentication
- Encrypted data transmission
- Secure password storage
- Audit logging
- Session management