

# **Software Requirements Specification**

**for**

## **ONLINE HOSPITAL MANAGEMENT SYATEM**

**Version 1.0 approved**

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- 1 Introduction
  - 1.1 Purpose/Objective
  - 1.2 Document Conventions (Definition, Acronyms, Abbreviations)
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- 2 History/Background Study (Sources of Domain Knowledge)
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  - 2.3 Customer Surveys
  - 2.4 Expert Advice
  - 2.5 Current/Future requirements
- 3 Overall Description
  - 3.1 Product Functions
    - 3.1.1 Hardware Requirement
    - 3.1.2 Software Requirement
  - 3.2 Functional Requirements
    - 3.2.1 User Authentication and Authorization
      - Description: Allow users (doctors, nurses, admin, patients) to securely log in and manage access rights.
      - Input: Username, password
      - Output: User access to system functionalities based on roles.
      - Error: Invalid credentials, unauthorized access.
    - 3.2.2 Patient Registration
      - Description: Enables new patients to register and store personal, medical, and contact information.
      - Input: Patient details (name, age, gender, contact, medical history)
      - Output: Unique patient ID, confirmation of successful registration.
      - Error: Duplicate patient record, missing required fields.
    - 3.2.3 Appointment Scheduling
      - Description: Allow patients to schedule appointments with available doctors.
      - Input: Patient ID, doctor selection, date, time
      - Output: Appointment confirmation, scheduled time slot.
      - Error: Unavailable doctor or time slot, invalid input.
    - 3.2.4 Doctor's Schedule Management

- Description: Allow doctors to manage their availability and appointment schedules.
  - Input: Doctor ID, availability times, block time slots
  - Output: Updated schedule visible to patients and admin.
  - Error: Schedule conflict, invalid input format.
- 3.2.5 Medical Records Management
- Description: Maintain a secure and accessible record of patient medical history.
  - Input: Patient ID, medical notes, diagnoses, prescriptions, test results
  - Output: Display of patient's medical records.
  - Error: Record not found, incomplete data entry.
- 3.2.6 Billing and Payment Processing
- Description: Generate and manage patient bills for services, handle payments.
  - Input: Patient ID, service details, payment method (card, insurance, cash)
  - Output: Invoice generation, payment receipt.
  - Error: Payment failure, invalid billing information.
- 3.2.7 Inventory Management (Pharmacy)
- Description: Manage the stock levels of medicines and supplies.
  - Input: Medicine details (name, quantity, expiry date)
  - Output: Updated inventory list, alerts for low stock.
  - Error: Medicine not found, stock mismanagement.
- 3.2.8 Staff Management
- Description: Manage hospital staff details and their roles.
  - Input: Staff information (name, role, contact, shift timings)
  - Output: Staff list, shift schedule.
  - Error: Duplicate entries, missing required fields.
- 3.2.9 Room and Bed Management
- Description: Allocate rooms and beds to patients and track their availability.
  - Input: Patient ID, room selection, bed number
  - Output: Room allocation, availability status.
  - Error: No available beds, invalid room/bed number.
- 3.2.10 Laboratory Test Management
- Description: Manage laboratory test orders, results, and delivery to doctors/patients.

- Input: Patient ID, test type, test results
- Output: Lab test reports.
- Error: Invalid test type, missing test results.

#### 3.2.11 Reporting System

- Description: Generate reports on hospital operations like appointments, staff, financials.
- Input: Date range, report type (financial, appointment, patient)
- Output: Detailed report.
- Error: No data for the selected time frame, invalid report type.

#### 3.2.12 Emergency Management

- Description: Track emergency cases and prioritize treatments.
- Input: Emergency case details (patient ID, condition, priority level)
- Output: Emergency case allocation, alert to staff.
- Error: Incorrect priority level, missing details.

### 3.3 Non-Functional Requirements

#### 3.3.1 Correctness Requirement

#### 3.3.2 Portability requirement

#### 3.3.3 Efficiency Requirement

#### 3.3.4 Usability Requirement

#### 3.3.5 Reusability Requirement

#### 3.3.6 Reliability Requirement

#### 3.3.7 Maintainability Requirement

### 3.4 User Characteristics

### 3.5 Design & Implementation Constraints

### 3.6 Assumptions & Dependencies

## 4 Interface Requirements

### 4.1 User Interfaces

### 4.2 Hardware Interfaces

### 4.3 Software Interfaces

### 4.4 Communication Interfaces

## 5 Conclusion