Software Requirements Specification (SRS)

Hospital Management System

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Author: Amr Khalid Gad

1. Introduction

1.1 Purpose

The purpose of this document is to specify the requirements for a Hospital Management System (HMS) that will streamline administrative, clinical, and operational activities in a hospital.

1.2 Scope

The HMS will facilitate patient registration, appointment scheduling, billing, inventory, staff management, and reporting functionalities.

1.3 Definitions, Acronyms, and Abbreviations

- **HMS:** Hospital Management System
- **SRS:** Software Requirements Specification
- **EMR:** Electronic Medical Record

1.4 References

"Healthcare Information Systems," Journal of Health Informatics, 2022.

2. Overall Description

2.1 Product Perspective

The HMS will replace manual processes for managing hospital records and patient information.

2.2 Product Functions

- Patient Management
- Appointment Scheduling
- Billing Management
- Inventory Management
- Staff Management
- Report Generation

2.3 User Characteristics

Primary users include doctors, nurses, pharmacists, administrative staff, and hospital managers.

2.4 Operating Environment

Operating Systems: Windows, Linux, macOS. Platform: Web-based, accessible through modern browsers.

2.5 Design and Implementation Constraints

Scalability, Data Security, Reliability, Performance.

2.6 Assumptions and Dependencies

Users will have basic computer literacy. Reliable network infrastructure is required.

3. System Features

3.1 Patient Management

Allows registration and updating of patient records.

3.2 Appointment Management

Handles scheduling, modification, and cancellation of appointments.

3.3 Billing Management

Manages billing and payment processing, including insurance claims.

3.4 Inventory Management

Tracks hospital inventory including medications and equipment.

3.5 Staff Management

Manages staff schedules, attendance, and payroll.

3.6 Reporting and Analytics

Generates reports for various hospital operations.

4. External Interface Requirements

4.1 User Interface

Login Screen, Dashboard, Responsive Design.

4.2 Hardware Interfaces

Computer systems, barcode scanners, printers.

4.3 Software Interfaces

Database (e.g., MySQL), APIs for external integrations (e.g., SMS notifications).

5. Non-Functional Requirements

5.1 Performance Requirements

Handles up to 1,000 concurrent users without performance degradation.

5.2 Security Requirements

Encrypted storage of sensitive data, role-based access control, regular backups.

5.3 Reliability Requirements

System uptime should be at least 99.9%.

5.4 Maintainability Requirements

Modular design for easy updates.

5.5 Compliance Requirements

Adheres to HIPAA standards for patient data protection.

6. Other Requirements

6.1 Disaster Recovery

Regular backups and a disaster recovery plan are in place.

6.2 Documentation

Detailed user manuals and technical documentation.