Hospital Management System

Software Requirements Specification

Revision History

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Software Requirements Specification

1. Introduction:

The Hospital Management System (HMS) is a software solution designed to streamline the operations of a hospital or healthcare facility. The project Hospital Management System includes registration of patients, storing their details into the system, and also computerized billing in the pharmacy, and labs. The software has the facility to give a unique id for every patient and stores the details of every patient automatically.
The purpose of SRS of Hospital Management System includes registration of patients, storing their details into the system, and also computerized billing in the pharmacy, and labs. The software has the facility to give a unique id for every patient and stores the details of every patient automatically. The Hospital Management System can be accessed by different users using a username and password. It is accessible by an administrator, receptionist, doctor and a pharmacist. Only the admin can register users into the database. The data can be retrieved easily. The interface is very user-friendly. The data is well protected for personal use and makes the data processing very fast.

1.1 Purpose:

Purpose of this SRS document is to provide a detailed overview of our software product, its parameters and goals. This document describes the project's target audience and its user interface, software requirements. Nonetheless, it helps any designer and developer to assist in software development lifecycle (SDLC) processes.
Hospital Management System is designed for multi-purpose hospitals, to cover a wide range of hospital administration and management processes. It is an integrated end-to-end Hospital Management System that provides relevant information across the hospital to support effective decision making for patient care, hospital administration in a seamless flow. Hospital Management System enables you to develop your organization and improve its effectiveness and quality of work.

In short the purpose of this document is to specify the requirements for a Hospital

Management System that will allow patients to book appointments through a web page, and for doctors to approve those appointments.

1.2 Scope:

The HMS is a web-based application designed to automate and manage the appointment booking process for a healthcare facility.

The scope of our project is this software reduces the amount of manual data entry and gives greater efficiency. The User Interface of it is very friendly and can be easily used by anyone.

- It also decreases the amount of time taken to write details.
- Admin does not have to keep a manual track of the users. The system automatically calculates bill for patients.
- Patient data is auto generated by the system just by entering ID at the time of appointment.

1.3 Definitions, Acronyms, and Abbreviations:

HMS	Hospital Management System
EMS	Emergency Medical Services
WAN	Wide Area Network
LAN	Local Area Network

1.4 References:

EMS Application Model
Structural Model
Behavioral Model

1.5 Overview:

The remaining sections of this document provide a general description, including characteristics of the users of this project, and the functional and data requirements of the product. General description of the project is discussed in section 2 of this document. Section 3 gives the functional requirements, data requirements and constraints and assumptions made while designing the EMS. Section 3 also gives the specific requirements of the patients. Section 3 also discusses the external interface requirements and gives detailed description of functional requirements. Section 4 is for supporting information.

2 .Overall Description:

- This software reduces the amount of manual data entry and gives greater efficiency.
- The User Interface of it is very friendly and can be easily used by anyone. It also decreases the amount of time taken to write details .Well-tuned hospital management workflow involves lots of important decisions that should be made in the most efficient and quick way.
- Nowadays it is hard to implement it without the distinct hospital management system. In this app, we'll explore what is HMS software, what functions it performs and how it helps the healthcare industry be more effective.

3.Specific Requirement:

This subsection contains the requirements for the hospital management system. These requirements are organized by the features discussed in the vision document. Features from vision documents are then refined into use case diagrams and to sequence diagram to best capture the functional requirements of the system. All these functional requirements can be traced using tractability matrix.

3.1.1 Hospital Management System (HMS) functionality:

The main feature of this system is maintaining the hospital records in constructive manner and regenerating them as per our need by their ID. The user must be a registered by the admin before he uses this hospital management system. The receptionist can see the patient's bill report and treatment status. Doctor can view his list of patients and their diagnosis history. Pharmacists and Distributors can register themselves in the system and add medicines.

3.1.2 Hospital Management System (HMS) Technology Used:

- **Back End**

Frame Work	Spring Framework
ORM Tool	Hibernate
Data-Base	MySQL
Build Tool	Maven
Language	Java

- **Front End**

  HTML
  CSS
  JavaScript
  Boot-Strap
  JSP

3.1.3 Hospital Management System (HMS) User Classes:

- **Admin**

The super user, admin class represents complete authority over the system a admin can:

1. Admin can register Doctors, Pharmacists and Receptionists
2. View the number of users.
3. Admin can update his own profile.
4. Admin can update and delete the users.
5. Admin can view his dashboard which displays all the data entered and generated by the system.
6. Admin can see bill report for particular patient.

- **Doctor**

1. Can view his/her Patients and their appointments.
2. Can update Patient treatment status.
3. Can assign medicines to Patients based on their diagnosis
4. Adds the fee amount for that particular patient.

- **Pharmacist**

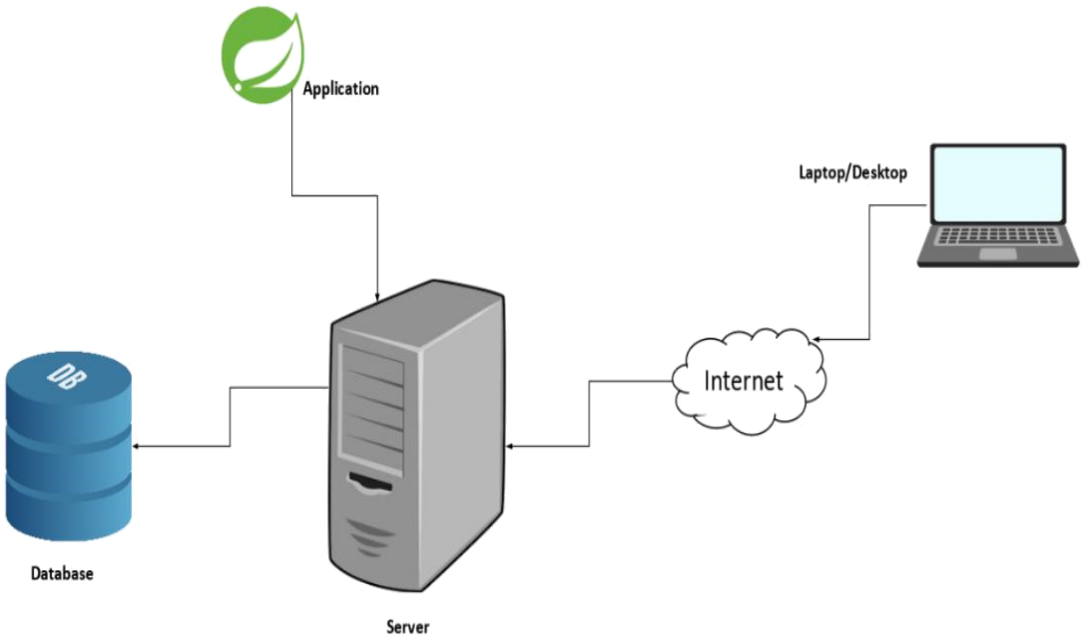
a. Can add Medicines.
b. Can add Distributors.
c. Can add Medicine Company.

- **Receptionist**

a. Can register Patients.
b. Can book appointments for patients.
c. Can view Appointment status and Treatment status for patients.
d. Can generate and download patient Bill.

3.2 Usability:

The "Hospital Management System" should run on all Internet Browser
And all processors which supports the Internet Browser.



3.2.1 Graphical User Interface:

User interface should be effective and interactive and appealing for maximum effect.
The system shall provide a uniform look and feel between all the web
pages. The system shall provide use of icons and toolbars.

3.2.2 Accessibility:

The system should be easier to access by the patients. It should not lag much.
So when the appointment is approved there should not be any delay.
There should not be any lengthy process for registration. It should not take lot of time to log in.

3.3 Reliability &Availability:

3.3.1 Back-end Internal Computers:

The system shall provide storage of all databases on redundant computers with automatic switchover.
The system shall provide for replication of databases to off-site storage locations.

3.2.2 Internet Service Provider:

The system shall provide a contractual agreement with an internet service provider for T3 access with 99.9999% availability.
The system shall provide a contractual agreement with an internet service provider who can provide 99.999% availability through their network facilities onto the intern

3.4 Performance:

The hospital management System shall take initial load time depending on internet connection strength which also depends on the media from which it is run.

3.5 Security:

3.5.1 Data Transfer:

The system shall automatically log out all patients after a period of inactivity.
The system shall not leave any cookies on the customer's computer containing any of the user's confidential information

3.5.2 Data Storage:

The hospital management system should not display a other patients personal information. It shall always be echoed with special characters representing typed characters.
The system's back-end servers shall only be accessible to authenticated administrators. The system's back-end databases shall be encrypted.

3.6 Supportability:

3.6.1 Configuration Management Tool:

The source code developed for this system shall be maintained in configuration management tool.

3.7 Design Constraints:

3.7.1 Standard Development Tools:

The system shall be built using a standard web page development tool that conforms to either IBM's CUA standards or Microsoft's GUI standards.

3.7.2 Web Based Product:

There are no memory requirements. The computers must be equipped with web browsers such as Internet explorer. The employee data must be stored in such a way that allows the board of directors to easily access to it. Response time for loading the appointments list should take no longer than five minutes. A general knowledge of basic computer skills is required to use the application.

3.8 Purchased Components:

Not Applicable

3.9 Interfaces:

There are many types of interfaces as such supported by hospital Management system are User Interface, Software Interface, Hardware Interface.
The protocol used shall be HTTP.
The Port number used will be 8080.
There shall be logical address of the system in IPv4 format.

3.9.1 User Interface:

The system will be developed to run on a web server, and will be accessible via a web browser. It should be compatible with the following web browsers: Google Chrome, Mozilla Firefox, Safari, Microsoft Edge, and Internet Explorer

The user interface shall be implemented using any tool or software package like Java Applet, MS Front Page etc.

3.9.2 Hardware Interface:

Since the application must run over the internet, all the hardware shall require to connect internet will be hardware interface for the system.

As for e.g. Modem, WAN – LAN, Ethernet Cross-Cable.

3.9.3 Software Interface:

The Hospital management System shall communicate with the doctors and patient appointment details.
The Hospital Management System shall communicate with patient's disease
And doctor specialization.
The Hospital Management System, Time-Specification we can schedule appointment at any time.

3.9.4 Communications Interface:

The hospital Management system shall use the HTTP protocol for communication over the internet and for intranet communication will be through TCP or IP protocol suite.

3.10 Licensing Requirements:

Not Applicable

3.11 Legal, Copyright, and Other Notices:

Hospital Management System displays the disclaimer, copyright, word mark.

3.12 Applicable Standards:

It shall be as per the industry standard.