

1.

Software Requirements Specification

for

<Hospital Management>

Version 1.0 approved

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Revision History

Name	Date	Reason for Changes	Version

1. Introduction

1.1 Purpose

A software requirements specification is a documentary where it is described about what the software will do and how it will perform the tasks. It also describes the functionalities of the project. SRS is nothing but an agreement between the software developers and the clients. It also gives confidence to the team members who will develop the functions of the project which is described in the SRS. Therefore, it's importance in a project is a must.

The Hospital Management System is an advanced software database project which can control different directions of clinical workings. It provides great health care performance along with administrative and medical facilities. In this project our goal is to make the software user friendly. Admin, patients and doctors can easily access the software. Any visitors/patients can check the hospital website and take appointments for checkup. The system can also handle the patients and doctor's data. It can update and store data efficiently. Overall, the system will be much easier and faster than the manual system.

1.2 Intended Audience

The Hospital Management System SRS is intended for clients like - development team, system testers, project managers, documentation writers, marketing staffs, stakeholders, shareholders and also for the specific member of the workforce in the hospital like – admins, doctors, doctor's assistants, receptionist, accountants, medicine consultants, managers, hospital staffs and so on.

1.3 Intended Use

The project is basically a web-based hospital management system where admins, doctors and visitors/patients can easily use it. Then the other hospital staffs, receptionists, managers, accountants they can also use that. This system is modern and also highly secured. It is easier and faster and also can be informative about the hospital to others. On the other hand, the developer team who worked for it can also use them for future improvement in the functionalities.

1.4 Product Scope

It will be beneficial both for doctors and patients. Nowadays most of us like to do things online. If a hospital is managed online then the authority of the hospital can easily maintain the system. It's will be helpful for doctors because they can check the patients' details and also provide their available time when they are free to see a patient. Patients will also be able to visit the online page of the hospital and can be able to get all the information online. It will also fulfill the business purpose of that hospital because if they provide online service, they will be able to get more patients.

1.5 Risk Definitions

There are also some risks involved in maintaining an online management system. If the server is down, users will no longer be able to access the online page and will not be able to access all services temporarily. We also know that there are lots of professional hackers out there who can easily hack any system. There is also a risk of hacking problems.

2. Overall Description

2.1 User classes and Characteristics

The primary user of the software is of three major classes: Administrators, Doctors, Patients. Apart from these any user can buy medicine from this software and know detail information of the hospital by visiting this software.

Primary users

Administrators: In this class there will be three types of administrators: Central admin, assistants of doctors, medicine sellers.

Central admin can access all information of the doctors and their assistants, medicine sellers, patients. Central admin can verify doctors request for adding themselves in the hospital's database. Central admin can add new medicine seller and assistant in the database. If any doctor, assistant, or medicine seller request the central admin to update some of their information like contact number, email address, room number the central admin can update that. Central admin can also block or delete any type of users.

Assistants can check and delete the appointments of their doctors.

Medicine sellers can add, delete, and update information of the medicines such as its stock availability, price etc.

Doctors: Doctors can see their personal information and their appointments. They can see detail information of the patients including their previous appointments records (if any) who are appointed to them. Doctors can also request the central admin to update their information like contact number, visiting hour etc.

Patients: In this software there will be a section named "Find a doctor" where patients can search doctors according to their preferences. In order to take appointment and book any ward or cabin patients have to first sign up and then they can do these.

Secondary users

Any user can know about detail information of the hospital such as departments, clinics, services and costs by using this software, they can also buy medicine by using this software.

2.2 User Needs

Any hospital can use this software to maintain and manage their services and work. This software will help the hospital to provide their services and also keep track of their activities through online.

Any patient can get to know detail information about the hospital and their services by using this software. Patient can buy medicine, find a doctor, book ward or cabin, take appointment in the hospital by using this software.

Doctors can do their activity in a very organizable way by using this software.

2.3 operating Environment

We will use SQL language for creating the database of this software and PHP language to develop its Back end. While developing this software developers need to have XAMP installed in their computer to develop the project. When this software's database will be transferred to any online server, then this software will become a cross platform software.

Windows, IOS, Linux, Android any operating system user can use this software if they have web browser installed in their devices.

2.4 Constraints

- Since it is a software of web platform for any reason if its server gets down then its real time services like cabin or ward booking, appointment taking will be disrupted for the server issues.
- The present version of this software doesn't support doing medical college activities such as showing academic programs, publishing journals and health magazines, announcing academic notice etc.
- This version of the software only supports hospital management related services such as taking appointments, finding doctors, knowing information about its department, clinics, services and their costs.

2.5 Assumptions

There might be some factors that can impact our ability to fulfill the requirements that we have outlined in our SRS.

- The owner of this software has to keep their database in an online server and if they failed to manage a good server then because of bad server issues performance of this software may be affected.
- Since we are still developing the project some features of the software might be changed a little if we couldn't implement that while building the software.
- External factors like internet connection problem, web browser error or corrupted operating system may affect performance of the software.
- This software can be hacked by hackers but since we are making this software very securely and not sharing its source code anywhere publicly so hacker may not hack this software, so this assumption could turn out to be false.

3. Requirements

3.1 Functional Requirements

Find a Doctor

In this feature, a patient/visitor can search a doctor by their name, department and as well as branch. A patient/visitor can easily check the profile of the doctor they are searching for.

Name Wise: If a patient searches a doctor through their name, he will find the specific doctor whom he was looking for. After that he can check his profile and book an appointment.

Department Wise: If a patient searches a doctor through a specific department of the hospital, he will see a lot of suggestions of that department doctors. Then he can check their profile and book an appointment according to his preferences.

Branch Wise: If a patient searches a doctor through branch, he needs to find the department as well to get the doctor suggestions for an appointment.

Sign up & sign in as a patient

Sign up: In this section, users have to write their email address, user name, password, first name, last name, phone number. Then they have to click the sign-up option. After clicking it they will have to verify it through the email which they mentioned before. After verifying the account, they can have the access to use all the services of that hospital. If anybody want to use the same user id then it will show that he/she has to use a unique id because this user id is already used.

Sign in: If a patient has already created an account, he/she will sign in using his/her username and password. But in any case, if they forget their passwords, they will click the forget password option. Here they will have to answer some basic questions which they did when they create their account. If they answer those questions correctly, they will get the opportunity to change the password. If the user logs in to the account after a long time, then he/she also has to verify that it's his/her account by logging the correct password.

Take appointment

In this function patients can take appointments of the doctors. To take appointments, first a patient must sign up into the hospital. After signing up into the hospital patient can take appointments. From "Find a doctor" section of the software patient can find doctors according to his needs, after finding the doctor patient have to sign in into the hospital and then he can take appointments. Apart from this patient can directly sign in into his profile from the patient sign in section of the software, after signing in he will see his information and a section named "Find a doctor" in that section he can find doctors according to his needs for taking appointments or he can directly take appointments by searching doctor name from the search option of his profile. If any patient

selects multiple appointments at the same time the software will give a warning message to the patient so that patient's appointments schedule doesn't clash with each other.

Admin

This feature has overall control of this software. Three form of users: Central admin, Assistant, Medicine sellers can login into this function. They will have their different controlling authority over the software.

Some information of the users will be stored within the database as security questions which will be able to asked them to verify themselves if they request to recover their password or if they login after 15 days.

Central admin will have the access of all public information of the users. Central admin can search about any doctor, patient, department, clinic, service, medicine, medicine seller, assistant by typing their name to know their information. There will be also a voice search option for the central admin to search anything. Central admin can verify doctors and patient sign-up requests. Central admin can update any public information of the users if they send request to him. Central admin can delete or block any user. Central admin can also access the information of medicine availability, appointments of the doctors and modify any of those if it's needed. Central admin can also add new doctor, patient, assistant, medicine, medicine seller, department, clinic, service into the software's database. Central admin can individually and collectively send emails or text messages to the users.

Assistant can check appointments and clear the appointment records of his doctors. Assistant can also know the general information of the patients. Assistant can change serial number and priority of any appointment in terms of emergency or critical case. In this software there will be an option for the assistants to send email to their doctors. Single user can assistant can assist multiple doctors of different schedule.

Medicine seller can update information of the medicines like availability, price etc. In this software there will be an option for the medicine sellers to send email to the hospital authority and central admin to notify them about any medicine's stock availability status.

Signup and sign in for a doctor

Doctors assigned to this section can sign up for this website using a unique ID and password. The administrators will then approve this data which will be stored in the database. Doctors can then login to the website and they will see their initial information. A doctor can easily access his patient's previous records for better treatment.

Bed & Cabin Management

In this section, there will be only one section which will be known as the Room category. In it, there will be the serial number of the cabin/room, cabin/room type, price of those cabins/rooms, and also there will be the information if their desired cabin/room is available right at that moment or not.

Medicine Management

In this section, a visitor can easily see what kind of medicine they have. A user can buy medicine by this site. On this website all kinds of medicines are organized by different company names like Square, Beximco, ACI, etc. It will provide the medicine information with price. This software will also show the buyers if the medicines are not available. A medicine seller can add, delete and update the list of names, prices, and quantities of medicines. The administrators will allow the medicine officer to keep the drugs information up to date.

Details Information

In this feature, a patient/visitor can check the hospital details like- branches, departments of the hospital, different features, services the hospital provide, present units, hospital facilities, hospital staffs query, lab and therapy departments, specialized doctors, consultants, drugs facilities, quality policy, mission and visions, ongoing projects, publications, achievements contact details and many more.

3.2 Non-Functional Requirements

Performance

Our web-based software will respond to any type of question in seconds. Any kind of reservation such as: making an appointment with a doctor, booking a cabin for patients, or ordering medicine will provide accurate information according to our database. The administration has full power to modify the database as per the demand. Our online service will be available 24 hours a day.

Safety Requirements

Since this is a web-based software if for any reason its server get down then this software may stop responding but its previous data will never be affected.

Security

In this software our one of the prime priorities is to ensure the safety and security of the users. All information will be protected while maintaining high security. Only the administrators can access all public data and correct it if necessary. Doctors will be able to view his patient's previous records. All private information of the users such as password will not be encrypted.

Quality

Our goal is to provide the best quality of hospitality. For this reason, we will develop a very user-friendly interface to provide the best quality of services and maintain a healthy doctor-patient relationship.