

Software Requirements Specification for Smart Health Consulting System

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Revision History

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Chapter 1

Introduction

Health is one of the most important and fundamental thing in everyone's life. To maintain a sound health, everyone needs to consult with doctors. For the time being it become difficult to consult with doctors during the time of need. The Smart Health Consulting System will be able to solve this particular problem.

1.1 Purpose

The main purpose of SMART HEALTH CONSULTING SYSTEM is to maintain patients health record, manage appointment for various treatments within short time and patients will get the opportunity to consult with the chosen doctor. In the case of emergency or if the area is unknown for patient then in this mean situation knowing the right address or contact info of doctor is really important. This website will provide all the current and authentic information that will assist the user to get the right information. On the other hand this process will be less time consuming from find a doctor to get the treatment by identifying the diseases.

1.2 Intended Audience

The website that we will organize is for the general public who know how to use this website. Here patient and doctor are main actors. Our main purpose is to communicate with patients through the doctor's online. So patients are the main audience here. Our intended audience are:

1. Patient
2. Doctors
3. Guests

1.3 Intended Use

It is often seen that the patient does not understand which doctor should be shown for any disease, and even if the patient is in a place from where it is unable to contact for them to go directly to the doctor, then our website can easily understand the patient's problem and consult a doctor and make arrangements for the patient to communicate with that doctor.

1.4 Product Scope

There will be two types of users. There will be two types of users. One of them is that those who have already registered will be able to use the website only with ID and log in password. On the other hand, those who have not registered yet will use the website with ID and confirm password, email and others information. A user will be able to take advantage of the following features.

- * Log In
- * Sign Up
- * Home
- * Search Doctor
- * Disease Prediction
- * View Appointment
- * Pharmacy Area
- * Bill/Transaction
- * Feedback
- * Contact

1.5 Risk Definition

There can be some risks of this SMART HEALTH CONSULTING SYSTEM. For instance,

- * Server crash.
- * Effected by hackers.
- * Database using mistake.
- * People may not have enough faith on this online based healthcare system.
- * Server can go down at the time of need.

Troubleshoot:

- * In this system there will be a review or feedback portion where people can put there opinion after getting the treatment, which will assist other user's whether they can trust in this website or not.
- * Admin will try to keep everything up to date to provide every user a flawless service.

Chapter 2

Overall Description

2.1 User Classes and Characteristics

In Smart Health Consulting System shall have three user classes: administrators, patients and doctors. The admin will control all the functions of the system here. User also have knowledge of the entire system. Public can view the record of previous appointment. User can see doctor's profile. From this patient/user can search the specific doctors. The user also can view doctor's schedule.

2.2 User Needs

- * The patient expect to find a doctor quickly according to his disease.
- * Patients need this system when the their body condition is very worse and this system will save the patient's time also.
- * Patients need to know the cancellation time of their appointment with doctors those schedule may get change.
- * Patients need to get treatment in time because a doctor can have many patients in a day so they may not manage time to check all patients in time. In emergency, it is very harmful for a patient to wait.
- * To find enough doctors for different types of diseases.

2.3 Operating Environment

Software Requirements:

Operating System: Windows 7/8/10

Front End: HTML, CSS, JS

Back End: My SQL

Server Side Language: Python

Technology: WAMP Server.

Hardware Requirements:

Processor: i3

Hard Disk: 80GB

Memory: 1GB RAM

2.4 Constraints

There are few constraints, like,

* Only Admin will be able to update all the information.

2.5 Assumptions

There are some assumptions on this project. They are:

1. User of this website already know basic English and also know how to operate mobile phone or computer.
2. User has the internet connection and know some basic medical terminologies.
3. The system database will be able to access in real time.
4. Doctors will definitely response in time of need.
5. Assuming that users are using this system from Bangladesh.

Chapter 3

Requirements

3.1 Functional Requirements

3.1.1 Log In

User story:

As a registered user, I am required to log in so that I can access the system.

As a forgetful user, I can request a password reminder so that I can log in if I forget mine.

Confirmation:

1. Success:

Valid user can logged in and refer to home page.

a. "Save password" - ticked - store cookie/ automatic log in next time.

b. "Save password" - not ticked - force log in next time.

2. Failure:

Display message:

a. "Email Address is incorrect."

b. "Incorrect user name. Please try again."

c. "Incorrect Password. Please try again."

3.1.2 Sign Up

User story:

As a new user, I want to register in new account so that I can access the system.

Confirmation:

1. Success:

New user can sign in and create new account.

2. Failure:

a. Invalid email address.

b. Mismatched confirmation password.

3.1.3 Home

User story:

As a registered user, I want to visit the main page of the system so that I can get an overall idea and go through the other features.

Confirmation:

1. Success:

a. Logged in successfully.

- b. Can access all the features.
- 2. Failure:
Unsuccessful to logged in.

3.1.4 Search Doctor

User story:

As a registered user, I am required to search a specific doctor according to the diseases so that I can get proper treatment.

As a registered user, I want to search specific doctor so that I can get the information about doctors and their schedule.

Confirmation:

- 1. Success:
 - a. View the information of doctors.
 - b. Can fixed appointment.
- 2. Failure:
 - a. Typing error. b. Can not make an appointment.

3.1.5 Diseases Prediction

User story:

As a registered user, I want to search about my disease so that I can get confirmation about the symptoms and disease.

As a registered user, I need to get information about the related doctors so that I can fix an appointment with them.

Confirmation:

- 1. Success:
 - a. Able to find the disease's symptoms.
 - b. View related doctors.
 - c. Can make appointment.
- 2. Failure:
 - a. Typing error.
 - b. Unable to find any result.

3.1.6 View Appointment

User story:

As a registered user, I want to see the list of patients so that if I would like to see the records of those old patients who have been treated before.

As a registered user, I want to chat online and make video conference so that I can interact with doctors in real time.

Confirmation:

- 1. Success:
 - a. Able to view all previous record of old patients.
- 2. Failure:
 - a. Page not found.
 - b. No database connection.

3.1.7 Pharmacy Area

User story:

As a registered user, I want to order medicine so that I can get the medicine in emergency.

Confirmation:

1. Success:
 - a. Order medicine in emergency.
 - b. Save time.
2. Failure:
 - a. Shortage of medicine.
 - b. Unavailable.
 - c. Delay delivery of medicine.

3.1.8 Bill/ Transaction

User story:

As a registered user, I want to transfer money so that I can pay the bills.

Confirmation:

1. Success:
 - a. Can pay bills through online.
 - b. Save time.
 - c. Secured transaction process.
2. Failure:
 - a. Page not found.
 - b. No database connection.

3.1.9 Feedback

User story:

As a registered user, I want to give some feedback so that other users can get ideas and benefit from this system.

Confirmation:

1. Success:
 - a. Assume ranking of system.
2. Failure:
 - a. Page not found.

3.1.10 Contact

User story:

As a registered user, I want to view contact area so that I can view admins' information and can give message directly to Admin about anything.

Confirmation:

1. Success:
 - a. View admins' details.
2. Failure:
 - a. Wrong phone number.
 - b. Invalid email address.

3.1.11 Log Out

User story:

As a registered user, I want to log out myself from the system so that I can exit the system.

Confirmation:

1. Success:
 - a. "Exit system"- ticked- store cookies/ automatic log out.
 - b. "Exit system"- not ticked- stay logged in.

2. Failure:

a. Poor server service.

3.2 Non Functional Requirements

Non functional requirements do not affect the basic functionality of the system. It is basically the overall attributes of the resulting system. User visible aspects of the system not directly relates to the functional behaviour include quality and constraints. There are a lot of software requirements specifications included in the non functional requirements of the Smart Health Consulting System which contains performance, safety, security, quality maintainability, availability reliability and usability.

3.2.1 Performance

- * Response Time: The system provides response in just one second once the patient's information checked.
- * Capacity: The system needs to maintenance at least 1000 people at once.
- * User-Interface: The user interface accepts within five seconds.
- * Conformity: The system needs to make sure that the rules of Microsoft conveniences are followed.

3.2.2 Security

- * Patient Identification: The system needs to identify himself/herself.
 - * Log In ID: User need to hold a Log in ID and password.
 - * Modifications: Some changes like insert, delete, update for the database can be matched quickly and executed by admin.
 - * Administrator Rights: The admin can view as well as change any information in this system.
- If the system fails, this system will be able to recover very quickly.

3.2.3 Maintainability

Back-Up: The system offers the effectiveness for data back up.
Error: The system will track every mistake.

3.2.4 Reliability

Availability: The system is accessible all the time.
Other than all of those, we have to take care of the following aspects:

- Resource management
- Documentation
- Reliability
- Security
- Quality
- Safety
- Verification
- Recover ability
- Maintainability