Software Requirements Specification
for
Healthcare Service Application
MediCareBD

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Software Engineering (CSE - 327)

15 November 2021

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Introduction

Every human being has a fundamental right to health care. Bangladesh's health-care system is mostly government-funded and provided at little or no cost. However, there are a number of disadvantages to this. Because of the vast number of patients, government hospitals fail to afford high-quality care. As a consequence, thousands of private hospitals have sprouted up to meet the public's increasing demand for high-quality health care. When someone needs to use the services of a hospital, he must first obtain information about the hospital. This information is not only difficult to obtain, but it can also be hard to comprehend in some situations. However, since the internet is now in everyone's hands, the world has shrunk to the size of a village. The COVID epidemic has shook the whole planet. Obtaining healthcare services in this situation comes with many challenges. Going to the doctor has become somewhat alarming since the COVID virus has expanded everywhere and is infectious. As a result, the physical journey is quite risky. That's why, using our online app is considerably safer and sufficient. "MediCareBD" is a web app-based app. This web app is used to provide health care services. It is an online platform where consumers can identify doctors and make appointments based on their preferences or needs.

1.1 Purpose

The objective of developing "MediCareBD" is to help the consumers with all kind of health services. Consumer can quickly get an appointment with the trusted doctor by scheduling time and serial. There will be payment system for getting appointment. Users can also get emergency services. Because of the COVID situation, doctors are having hard time as they are not sitting in their chambers regularly, so they can prescribe their patients online.

1.2 Intended Audience

• Developer
• Marketing Department
• Project Testers

1.3 Intended Use

• **Developer:** Developers may use this SRS to quickly determine what the project is about, which features to focus on, which aspects to improve, and whether there is opportunity for additional features or functionalities in any upgrade.
• **Marketing Department:** This SRS may be used by the marketing department to gain a sense of what they want to advertise, as well as what the project's features are and how they will benefit clients or users.
• **Project Testers:** This SRS may be used by testers to conduct software testing in accordance with specifications. This will improve testing coordination since testers will be able to effectively choose where to look and what issue or bug to check for.

1.4 Product Scope

This project will be the middleman between the doctor and the patient. We often have some information gaps and communication problems between doctors and patients. Our web application will have some features which will help a patient to have better communication service.

1. **Benefits:**
   - Users can sign in and sign up as well login and log out in our page.
   - Users can get appointments by choosing their own doctor by time and serial.
   - Doctors can provide prescription for their patients.
   - Doctors can update their previous prescription.
   - Users can receive emergency care such as oxygen, ambulance, and blood bank services.
   - Users can get information about how much oxygen are available.
   - Users can make an emergency ambulance service request.
   - There will be a payment system so that after getting appointment of a doctor, user can pay for it.

2. **Objectives:**
   - To provide the middleman service between doctor and patient.
   - To let the user know more about doctor details.
   - To provide user access to the prescriptions anytime and anywhere.
3. **Goals:**
   - Our goal is to make the doctor patient path more transparent with our features.
   - Our goal is to help users by providing health service information online.

1.5 Risk Definition

- The user's and doctor's activity may be interrupted due to poor network.

2. Overall Description

A good health care system can play an important role in any countries medical section. Here, we are planning to design an online-based health care system that can reduce the communication gap between doctor-patient. When someone want to use the services of a hospital, however, he must first gather information on the hospital. This knowledge is not only tough to get by, but it can also be difficult to comprehend in some circumstances. However, now the world has turned into a global village due to the net being in the palm of hands. All the country people having the access to the internet can reach the surface of getting help from this platform. This web app works for health care services. This is possibly the best way to provide the patients with the best possible

care in the comfort of their homes. This web app will help patients to register appointments, get prescriptions from doctors, patients also have the comfort to choose their doctors, doctors can update their previous prescription as well, also there will be all history about the patient's backgrounds. In addition, Emergency services like- oxygen, ambulance, and blood bank service can be provided to the patients. This web app for a great purpose that, it will be providing a quick service to all, regardless of one's gender, status, age. Where no one will be neglected or less valued. MediCareBD is the non-stop service center, that comes with a good range of services to provide. Here the services are fast and efficient. Patient's health is the first priority of this web app. This is user friendly based web app.

2.1   User Classes and Characteristics:

This web app works for health care services.This web based application will help sick people or related to sick people This is possibly the best way to provide the patients with the best possible care in the comfort of their homes. This web app will help patients to register appointments, get prescriptions from doctors, patients also have the comfort to choose their doctors, doctors can update their previous prescription as well as Doctors also can benefit from this since it is easy to access and it has an online payment method. They can easily track their appoint-ment. This is a user-friendly web application which may help people in their emergency times.In addition, Emergency services like- oxygen, ambulance, and blood bank service can be provided to the patients. This web app for a great purpose, it will be providing a quick service to all, regardless of one's gender, status, age. Where no one will be neglected or less valued. MediCareBD is the non-stop service center that comes with a good range of services to provide. Here the services are fast and efficient. Patient's health is the first priority of this web app. This is a user-friendly based web app so anyone can use this app for their emergency situation.

- User can be any sick people
- User can be admin
- User can be doctor
- User can be emergency help service provider

2.2   User needs:

Patients and Doctors will be using this web application for appointment purposes. Users or patients can have prescriptions and consultancy from doctors. They can find information about the service system as well. They can also pay the fee through online payment. Users can easily book their appointment. On the other hand, Doctors Will be able to track his appointment using this application. This web app for a great purpose, it will be providing a quick service to all, regardless of one's gender, status, age. Where no one will be neglected or less valued. MediCareBD is the non-stop service center that comes with a good range of services to provide. Here the services are fast and efficient. Patient's health is the first priority of this web app. This is a user-friendly based web app.

2.3 Operating Environment:

The system is divided into two major parts. One for the admin panel and one for the rest of the users. The admin panel is used to enter and update information regarding doctors, and the service system. And the other section offers various key features for general users, allowing them to receive rapid and effective healthcare.

Technologies for implementation:

- · HTML
- · CSS
- · Bootstrap
- · JavaScript
- · React JS
- · Mongoose (mongodb framework)
- · Express JS (A node Js framework)

2.4 Constraints

- We have to develop the applications in the JavaScript language

- Developed system must work in the client's OS environment

- The System must be user friendly.

- This is the non-stop service center, that comes with a good range of services to provide.

- The System must be finished smoothly before the deadline.

2.5 Assumptions

- Users have devices which support internet service.

- Users can read and write English.

- Users are familiar with web browsing and can interact with web application

- Users must have internet connection.

3. Requirements

3.1 Functional Requirements:

1. **As a user (admin)**

He/she can update information regarding doctors, and the service system as well as they can view the whole system.
confirmation:

- Admin has to answer some questions for login and another admin can make anyone as admin.
- After login as admin, they need to go to the View profile.
- admin can update doctor information such as list of specialist doctors
- They will enter the new information
- This information then replaces the old information with the database.
- Admin can view the amount of oxygen, available blood group and available ambulance services.

2. **As a user (doctor\patient)**

anyone can be a user and the admin will decide it by their requirement.

- User has to put name, email id, password, address, contact number, category
- After confirmation of login, users can view their particular services.
- User can update and delete their information

- **3. As a user (patient)**

I can search for available doctors of a particular field. So, that I can choose my own doctors

- The user should be able to enter the first name of a doctor to searched for
- The system displays all doctors to the patient as their criteria.
- The system shall display the doctor available time.

4. **As a user (patient)**

I want to book an appointment so that I can see the doctor and take proper medication for my illness.

Confirmation:

- User has to select an Appointment option.
- Users need to select a particular medical field to choose a doctor.
- User can see the list of doctors where he/she can select one.
- User has to set a date and time to fix an appointment.
- If the date and time matches with doctors selected timing, then user can see his/her appointment as booked.

5.As a user (patient)

I want to see my prescription in my profile, so that I can use it later or get help from it.

Confirmation:
•Users can select the option where he/she can see the prescription.
•Users can see the list of prescriptions that the doctors gave.

6. As a user (doctor)
I want to consult with my patients and prescribe them medicine if needed so that patients can get necessary treatments.

Confirmation:
•Doctors can view all the previous reports.
•Doctors can update their previous prescription.
•Doctors can send prescriptions as pdf format.

7. As a user (doctor)
I can set my available time so that patients can easily take to me.

Confirmation:
•The doctor will enter the time when he\she will be available.
•This information is saved in the database.

8.As a user(doctor)

I want to receive my fees through an online payment method, so that I can take it without any problem.

Confirmation:
•Doctors can see the option a check payment
•Doctors can check their balance in payment window.

9.As a user (patient)

I want to send my fees through an online payment method, so that I can take confirmation appointments without any problem.
Confirmation
- the patient can see the option of sending money.
- Patients can check their balance in payment window.

10. As a user (patient)

I want to get emergency services such as ambulance services, oxygen services and blood bank services. So, I can get these services.

confirmation:
- User has to name, email id, password, address, contact number, Blood group etc.
- User have to select which service he/she needed (ambulance, oxygen and blood bank)
- Users will be able to see if ambulance, oxygen and blood bank services are available or not.
- Users can view full details of these ambulance, oxygen and blood bank services.
- Users can request for these services.

3.2 Non Functional Requirements:

•Performance Requirements:
1. The web app must be available 24 hours with an internet connection. The computer will store both the application and the database.
2. The site should load in 3 seconds when the number of simultaneous users is less than 10003. Each request should be processed within 10 seconds

•Error Handling:
1. The operating system must handle predicted and unexpected failures in a way that prevents data loss and prolonged downtime.
2. System will use secure database.
3. The system must be able to recover from failures like power down, so it should be convenient to have a power generator that runs automatically if the power supply fails.
4. All normal users can just see or write information in their particular section but they can not edit or modify others information without their permission.

•Safety Requirements:
1. System use must not cause any harm to human users.
2. System shutdown in the case of a cyberattack.
3. The software system protects sensitive data and restricts access to it to only those who are permitted. For example, the website will not save any card information supplied by customers throughout the checkout payment process**.**
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Appendices

4. GLOSSARY:

•SRS: A software requirements specification (SRS) is a description of a software system that will be produced. The software requirements specification brings out functional and non-functional requirements, as well as a set of use cases that explain how the software should interact with the user for a seamless interaction.