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# **Chapter 1**

## Introduction

#### 1.1 Introduction

Online hospital management system: A one-of-a-kind cloud-based hospital management system that serves both patients and hospital equipment (Doctors, Admin). The primary goal of this design is to improve the current hospital experience. No one wants to go to the hospital, but there are times when we have no choice. The old hospital system is not very user-friendly. The first large stem has been in line for several hours. Numerous other issues contribute to a negative hospital experience. Our primary goal is to make people's lives easier in their time of need. We are working to create a system that will reduce paperwork and save people time.

## 1.2 Motivation

As patients, we face numerous challenges when attempting to schedule an appointment with a doctor in their offices or other locations. When people become ill, they need to see a doctor for a checkup, but they must first go to their chambers or hospital to make an appointment. It is a time-consuming and inefficient process. Sometimes people go to the doctor's office for a check-up, but the doctor is not available for various reasons. It's the only way to find out when people have recently visited their locations. It causes a lot of bother to people. Aside from that, people require an ambulance service to transport patients to hospitals. People must simply go to hospitals or clinics to hire an ambulance, which is a time-consuming process.

Our motivation is that if we can get this appointment quickly, it will be more valuable to us. Then we intend to put in place a Web-based doctor appointment system.

## 1.3 Objective

Our main goal is to assist people in finding doctors and scheduling appointments. Users can search for doctors, making it easier to find a specific doctor. A platform where doctors can review a patient's previous medical history in order to provide a more thorough examination. Collecting requirements is essential for building a flawless system. The study will provide a clearer picture of people's needs, the system we intend to build, and how much we intend to cover. The document will also detail all interactions between patients, doctors, and administrators. Anyone can understand the project at a glance thanks to the above document.

#### An admin can-

- Get appointment request
- Access to this request
- Check previous medical history
- Able to get patient profile
- Give appointments

#### And Patients can

- View doctors list
- Easily take doctor appointments
- See when his/her expected doctor is available
- Able to see categorized doctors department

## 1.4 Expected Outcome

There is a Web-based pattern that allows individuals to conveniently and securely book people appointments and reservations online through any web-connected device such as computer, laptop, smartphone, tablets, and so on. Once a date and time are chosen, the system will provide booking confirmation as well as recorded documents for the next requirement. Our system's flexibility allows it to be used for a variety of different services and activities for a patient and doctor, such as,

## **Time Saving**

The staff spends a lot of time on the phone booking and can't keep appointments properly, so booking online by individuals saves time because they don't have to take time out of their busy schedule to call their medical, healthcare, or wellness provider.

## **Monetary Saving**

The staff in the doctor's chambers are always willing to accept payment in exchange for scheduling appointments for patients. It is an unethical method of obtaining a faster appointment. People will be able to see the entire schedule of any doctor in our system, allowing him or her to make an easy appointment for them whenever they need it without paying extra money to the staff.

## Sustain tranquility

If a person becomes ill and wishes to see a doctor for a checkup, he or she must go to the chambers and wait until the doctor becomes available. While waiting for an appointment, the patient also waits in line. As a result, a chaotic environment is possible. If the doctor cancels the appointment due to an emergency, the patients will try to cause a commotion in those locations. There will be no need to wait in line in this system, and patients will be able to see when doctors are available, allowing them to easily avoid the crowding situation.

# Chapter 2

## **Background**

## 1.1 System Background

The hospital system has been automated but the benefit is not for all. In such a situation we have figured out that there should be something for the patients. Some simple features for checking appointments, asking for appointments, prescriptions, and test reports can reduce the hassle by up to 70-80%. Because those are the sectors where we face a lot of trouble and can find a way out. So this will allow us something that we were waiting for so long. The world is moving to the internet so this is the right time to think about this. We have checked some hospital management systems on the internet and some local programs that the hospital staff is using near us. They are also very well designed and have rich features too but the features are more geared towards the patient to search for doctors than actually connect the patient to the doctors. If we compare the benefits and the satisfaction from every point of view then we cannot conclude things beneficial for all. If a system does not provide help for every user group then it cannot be a perfect system. We came a long way in maximizing benefits for all. Still, there are a lot of things that can be added but at this point, this is the most we can expect.

Two portals will be available on our website, Sheba. The first portal is for the Admin, and the second portal is for the patients Portal. Patients must first check in to the Patient Portal to utilize this app. After that, a patient can view a list of doctors by selecting one of three options: fees, designation, or specialty. They can schedule a consultation with the doctor after doing some research and choose which one they want to confirm. After logging in, patients can view their medical history and payment history. They have three options for paying the bill: cash, bkash, and a Visa card.

Additionally, after an admin logged in. The admin can find all appointment history and decide whether to accept or reject a scheduled appointment. If the patient is his or her past patient, they can also view the patient's prior medical history using this website. The admin can also add a doctor and the doctor's information to the

admin portal. If necessary, the admin can also delete a doctor's information. If it's essential, the administrator can also change a doctor's information.

### 1.2 Related Works

There are a lot of websites that provide doctor-related services, after studying some of them we found the following. Online doctor appointments at United Hospital have listed the name of their department and services on their website, and patients can get information about their treatments there as well. doctorola.com gives the client the freedom to choose one's city and search for a doctor by doctor's name or doctor's specialization on the website, the client can make an appointment with a doctor or hospital. Additionally, they offer blood donor alternatives, e-sastho, health recommendations, and care packages. Medicsbd website specializes in online consulting where the doctors are listed according to their departments. And the client can view the online consultation process and may schedule one's appointment time. Bdcare also provides a similar service to the websites mentioned earlier where The client can book one's appointment by selecting their city, area, and doctor's specialties. And find the hospitals according to the districts. Additionally, the client can video chat with doctors, and ask for a doctor. Popular Diagnostic Centre Ltd website provides the user with a list of doctors from their franchise branches and by their specialty. Other features on the website include an option to call an ambulance, an option to call for an appointment, an option to message a help center for additional help and guidance, the option to download a Patient Report, the option to choose a career in this diagnostic franchise, and the option to publish news or blogs. Icliniq's website provides online consultants in 196 countries, 24 hours. The website has the option to ask questions in the form, the option to have any Health plan/Package, and search doctors by country. Doctime website gives a client/patient the ability to choose a doctor and consulate with the doctor online and the option to have any Health plan/Package just like some of the other websites. Alongside with that the website also has features like the option to order medicine, the option to get home diagnostics, the option to work with Enterprise, the option to keep a record of the past of the patient, and the option to verify the doctors as an admin.

In contrast to these websites, our website will feature three sections where patients can search for doctors who are a good fit by searching for doctors based on their costs, specialty, and designation. On our website, we will give the client the option to choose a doctor's appointment as long as the information is provided by the doctor and the allotted slot is not taken by another client/patient. Since the listed doctor has a physical chamber it will give the user/client a much better scope as online doctors from Doctime will not be available all the time. Also, the client will have the option to pay their bills online using a credit card, debit card, or bkash. Additionally, we will not offer any online consultation systems or any video chat and checkup system right now, or the ability to search beyond Dhaka due to a lack of resources.

## 1.3 Comparative Studies

The internet is incredibly important in today's technological age. A web-based system is another name for an online system. There is always a demand for faster and more efficient communication because everything in the world is moving so quickly. No such thing exists that emerges without any restrictions, but we concentrated to overcome it as best we could. Determining the characteristics of the patients was our main goal. They should benefit the most from the system because they make up a sizable portion of it. Both doctors and patients gain from using this technique.

Many patients have issues when they visit a hospital or clinic regularly, including not knowing the specialties of the doctors, having to wait a long time for appointments, and not knowing how much the doctors' charge. There are various methods for scheduling an appointment. A person can either schedule a consultation appointment online from their home or go immediately to the hospital for one. To address this issue, we created a scheduling system that increases patient satisfaction by enabling fast and dependable access. We, therefore, want to provide a system that will greatly benefit them. Our system will deliver the greatest results while also saving them important time.

## 1.3 Scope of the Problem

Patients experience certain challenges getting doctor appointments, as we previously stated. The requirements are not being met by our current system. We can therefore summarize some issues here.

- 1. Using various platforms might not be sufficient to get every patient an appointment with a doctor.
- 2. The appointment mechanism is partially manual but entirely online-based.
- 3. People do not fully trust internet systems, preventing them from reaping the full benefits of this system.

Our system provides treatments for these issues that will benefit patients. The system is easily accessible to users at all times and locations. This system is very easy to use and basic.

## For Patients, help

- 1. There is a huge collection of doctor information.
- 2. A smart way of appointment
- 3. Find a doctor based on rating or area
- 4. Reduce the appointment delay
- 5. Can upload prescription for future
- 6. Reduce cost

## For Doctors,

- 1. No need for any assistance with appointment
- 2. Easily access to the history of medication of a patient.
- 3. Can know acceptability by a rating of patient

## 1.5 Challenges

Every job has a few difficulties. Consequently, we also have to deal with a few difficulties.

- 1. The system won't assist users if they don't make appointments and reservations online using web-enabled devices such as computers, laptops, smartphones, tablets, etc. as it is a Web-based system.
- 2. The main goal of this system will fail if a doctor doesn't verify the notification for confirmation, which is a patient booking.

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