

TELE HEALTH CARE SYSTEM

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This Report Presented in Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science in Computer Science and Engineering

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DAFFODIL INTERNATIONAL UNIVERSITY

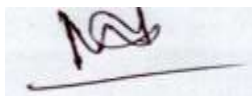
DHAKA, BANGLADESH

02 JANUARY 2022

APPROVAL

This Project titled “**TELEHEALTH CARE SYSTEM**”, submitted by Priyanka Nandi, ID No:181-15-11155, Bappi Kumar ID No: 181-15-11300 to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 02/01/22.

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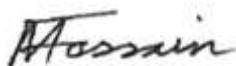
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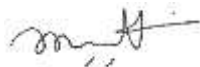
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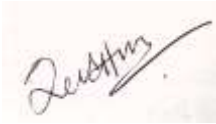
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DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Md. Zahid Hasan, Associate professor & Associate Head, of Department of CSE, Daffodil International University**. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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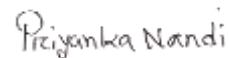
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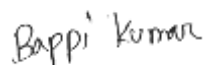
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ABSTRACT

Going to the doctor is more complicated for persons who live in remote locations. They fetch many problem such as traveling, service costs etc.

People are unable to just go outside during the COVID-19 pandemic. Many hospitals have reduced, delayed, or postponed non-emergency services. As a result, several emergency patients were unable to enter the hospital. As a result, not only patients with covid19 are unable to enter the hospital, but also patients with cardiovascular disorders or those who are unable to enter the hospital due to covid-19 circumstances. The problem will be resolved by creating a system. That's why, in order to solve this issue, we developed a telehealth care website. By this website, we are decreasing the number of people who must travel for medical treatment. We will reduce service costs and ensure that everyone has access to medical care. This website also helps improve doctor-patient communication in the case of emergency. Telehealth is a promising new method for increasing access to specialized treatment, particularly in remote areas. In this pandemic, this project is capable of removing all direct physical interaction.

TABLE OF CONTENTS

| CONTENTS | PAGE |
|---------------------------------------------|-------------|
| Board of examiners | i |
| Declaration | ii |
| Acknowledgements | iii |
| Abstract | iv |
| | |
| CHAPTER | |
| | |
| CHAPTER 1: INTRODUCTION | 1-3 |
| 1.1 Introduction | 1 |
| 1.2 Motivation | 2 |
| 1.3 Objectives | 2 |
| 1.4 Expected Outcome | 3 |
| 1.5 Project Management and Finance | 3 |
| 1.6 Report Layout | 3 |
| | |
| CHAPTER 2: BACKGROUND | 4-7 |
| 2.1 Introduction | 4 |
| 2.2 Related Works | 5 |
| 2.3 Comparative Analysis | 7 |
| 2.4 Scope of the problem | 7 |
| 2.5 Challenges | 7 |
| | |
| CHAPTER 3: REQUIREMENT SPECIFICATION | 8-11 |

| | | |
|-----|-------------------------------------|----|
| 3.1 | Business Process Modeling | 8 |
| 3.2 | Requirement Collection and Analysis | 9 |
| 3.3 | Use Case Modeling and Description | 9 |
| 3.4 | Logical Data Model | 10 |
| 3.5 | Design Requirement | 11 |

CHAPTER 4: DESIGN SPECIFICATION **12-23**

| | | |
|--------|-----------------------------|----|
| 4.1 | Front-end Design | 12 |
| 4.1.1 | User Login Page | 12 |
| 4.1.2 | Doctor Registration Page | 13 |
| 4.1.3 | Doctor Appointment page | 13 |
| 4.1.4 | Admin Login Page | 14 |
| 4.1.5 | Doctor Home Page | 15 |
| 4.1.6 | Doctor Request Page | 15 |
| 4.1.7 | Doctor List | 16 |
| 4.1.8 | Doctor Designation Page | 17 |
| 4.1.9 | Doctors Page | 18 |
| 4.1.10 | Patient Home Page | 20 |
| 4.2 | Back end Design | 22 |
| 4.2 | Implementation Requirements | 22 |
| 4.3.1 | PHP | 22 |
| 4.3.2 | HTML | 22 |
| 4.3.3 | CSS | 22 |
| 4.3.3 | Bootstrap | 23 |

CHAPTER 5: IMPLEMENTATION AND TESTING **24-28**

| | | |
|---------------------------------------------------------------------|---------------------------------|-----------|
| 5.1 | Requirements for implementation | 24 |
| 5.2 | Testing Implementation | 24 |
| 5.2.1 | Functionality Testing | 24 |
| 5.2.2 | Test forms on all pages | 24 |
| 5.2.3 | Database Connection test | 25 |
| 5.2.4 | Responsive test | 28 |
| CHAPTER 6: IMPACT ON SOCIETY, ENVIRONMENT AND SUSTAINABILITY | | 31 |
| 6.1 | Impact on Society | 31 |
| 6.2 | Impact on Environment | 31 |
| 6.3 | Ethical Aspects | 31 |
| 6.4 | Sustainability Plan | 31 |
| CHAPTER 7: CONCLUSION AND FUTURE WORK | | 32 |
| 6.1 | Discussion and Conclusion | 32 |
| 6.2 | Scope for Further Developments | 32 |
| REFERENCES | | 33 |
| PLAGIARISM REPORT | | 34 |

LIST OF FIGURES

| FIGURES | PAGE NO |
|----------------------------------------------------------|----------------|
| Figure 3.1: Business process modeling of Telehealth Care | 8 |
| Figure 3.2: Use Case Diagram | 10 |
| Figure 3.3: E-R diagram of the system | 11 |
| Figure 4.1: User login | 12 |
| Figure 4.2: Doctor Registration | 13 |
| Figure 4.3: Doctor Appointment | 14 |
| Figure 4.4: Admin Login | 14 |
| Figure 4.5: Admin Home | 15 |
| Figure 4.6: Doctor Request | 16 |
| Figure 4.7: Doctor Modify | 16 |
| Figure 4.8: Doctor List | 17 |
| Figure 4.9: Doctor Designation | 16 |
| Figure 4.10: Patient list | 18 |
| Figure 4.11: Doctor ADD Form | 19 |
| Figure 4.12: Doctor meet link ADD page | 19 |
| Figure 4.13: Doctor Update page | 20 |
| Figure 4.14: Patient home page | 21 |
| Figure 4.15: Patient payment page | 21 |
| Figure 5.1: Appointment test | 25 |
| Figure 5.2: Doctor list table | 26 |
| Figure 5.3: Doctor's request | 26 |
| Figure 5.4 Doctor profile | 27 |
| Figure 5.5: Patient list for a doctor | 27 |
| Figure 5.6: Mobile view of home page | 28 |
| Figure 5.7: Responsiveness of doctor homepage | 29 |

CHAPTER 1

INTRODUCTION

1.1 Introduction

For people who live in cities, going to the doctor is a straightforward concept. The majority of patients will be able to obtain medical services near to home, travel will be simple, and the trip will only take a short portion of their day. But for people who living in rural areas, 'going to the doctor' is a more difficult concept. Work and school can be disrupted, and hundreds of kilometers can be traveled. Sometimes on irregularly scheduled public transportation. Families may need to arrange for alternative child care, and daily routines may be difficult to maintain. Sometimes people need to leave country for serious cases.

Healthcare systems, organizations, and doctors can use telehealth to improve access to and quality of treatment in remote places. Telehealth can help patients overcome obstacles and burdens, by delivering and aiding with the delivery of healthcare services in remote locations, such as transportation concerns while going for specialist treatment. Within the healthcare system, telehealth may also enhance monitoring, timeliness, and communication. When patients and doctors wished to limit in-person contact for routine checkups during the COVID-19 epidemic, telehealth became a more important way of providing healthcare.

In that modern time, communications technology is an integral part of daily life. Using existing technologies to provide excellent patient-centered health care is a must.

These policies could help to close the gap between urban and rural health-care delivery by increasing access to specialty care in medically disadvantaged areas or treatment for certain illnesses.

1.2 Motivation

For people who live in rural areas, going to the doctor is a more difficult matter. Telehealth systems that are well-implemented can reduce total healthcare costs by reducing emergency hospital visits and unnecessary treatment. Telehealth can help the patient in overcoming difficulties and limitations such as transportation issues while receiving specialised care. That is our main motivation to create telehealth care website.

During the COVID-19 pandemic, People are unable to simply go outside. During that time patients and doctors wanted to reduce the amount of time they spent in person for routine appointments. Patients want a better solution to interact with their healthcare professionals during the pandemic. As a result, telemedicine care provides a simple solution to this problem..

1.3 Objectives

Our project's key objectives are as follows:-

1. Providing treatment to people in remote and rural areas.
2. Reducing the need for people to travel for medical treatment.
3. Reduce the number of unnecessarily admitted patients to hospitals.
4. Improving patient outcomes.
5. The communication between doctor and patients is simple.
6. Reducing cost of providing health-care services.
7. Provide access to medical specialists.

Comparison with Traditional Method

Traditional Method

1. In traditional, patients do not have access to a fully automated system.
2. If the patient has a problem, he should call a doctor or go to the hospital.

Our system

1. The major benefit of our technology is that it is completely automated.
2. No need to call the doctor because our technology provides all patient information to the website automatically.

1.4 Expected Outcomes

We think that our website will create a better user experience that will benefit both rural and cities patients. By this project we're reducing the amount of people who have to travel for medical treatment. We will reduce service prices and ensure that all people have access to medical professionals. This website also help to increase emergency communication between doctor and patient.

With all of the features, telehealth website will be lot easier to handle and very interactive with it's users.

1.5 Project Management and Finance

We used the visual studio code IDE, which is a free program, to create the website. We also used the MySQL database that is free for a specific number of users. However, when the number of users grows, Firebase will start charging money.

1.6 Report Layout

We discussed the history of our development project in Chapter 2. We also added details about similar projects, the project's opportunities and challenges, and we compared our initiative to others. Our project's need requirement is found in Chapter 3. We gave use cases, several diagrams, and design specifications. We also discussed the characteristics. In Chapter 4, we discussed the UI functions of our website. In Chapter 5, we used several tests to evaluate our project and presented the outcomes. Chapter 6 describes the conclusion and future developments. In Chapter 7, we share the results of our project as well as our plans for the future.

CHAPTER 2

BACKGROUND

2.1 Introduction

Every human being's health is very essential. The condition of one's health has a significant impact on one's happiness. But due to a shortage of high-quality services, rural areas people are facing so many problems. Because of the complexity, they must travel for medical treatment. Many are unable to get proper treatment due to financial problems. As a result, they are suffering very much as a due to the lack of healthcare.

However, as a result of the pandemic, people in both cities and rural are suffering serious problems. Every patient is now struggling to obtain quality care from hospitals. Even traveling to the hospital is dangerous because of the virus.

Bangladesh has one of the worst medical and health-care systems in the world. During this epidemic, the rate has increased. It is quite difficult for a developing country to fight back against the condition. . As a result, we built a telehealth care website to solve this issue.

Nowadays, everyone has access to the internet. It creates a new platform for business and services. As a result, many physicians and patients are working to figure out how current technology works and how it may make their situation simpler.

2.2 Historical Background

The first time medical practitioners utilized the phone to send and receive medical paperwork over long distances was in 1959. The television was revolutionizing how people around the country conveyed and received information in 1960, but the Nebraska Psychiatry Institute took it a step farther. By broadcasting live, doctors could engage with their patients even if they weren't in the same room. The US Space Program began conducting animal-test flights in 1961, employing remote medical monitoring devices. [1] In the 1990s, the Internet was born. If it weren't for the internet, we wouldn't have healthcare. Thanks to a worldwide networked computer network, healthcare personnel may interchange and share information with only a few clicks. This opened

the way for our present healthcare system. In 2010, the CMS published Meaningful Use Rules for Electronic Health Records. The Centers for Medicare & Medicaid Services offered recommendations on what constituted meaningful use of electronic health records notwithstanding the ARRA's passage. Telehealth has been found in studies to help those living in remote areas the most. In 2016, the Health Resources and Services Administration got \$16 million to enhance rural access to telehealth services. This was also the decade in which the Internet and e-commerce boomed, altering the global economy and society. As more individuals began to do their banking, shopping, and talking with friends and family online, there was a rising expectation that health care could be just as simple. Naturally, telehealth expanded at a quick pace, permanently altering how doctors and patients interacted and delivered care.

Despite the fact that telehealth still has a long way to go before it becomes the backbone of our healthcare system, these achievements and milestones show how far this technology has progressed throughout time.

2.3 Related Works

In a relatively short amount of time, healthcare in the United States and many other countries has been transformed in reaction to the COVID-19 outbreak. Transitions ranging from the conversion of hospital and non-healthcare facilities into intensive care units (ICUs) to the application of new clinical standards and legislation have benefited from hard labor and sacrifice[2]. The growth of telehealth has been one of the most visible, and possibly profound, shifts. Many individuals are celebrating telehealth's fast rise as a solution to current problems and a concept whose time has come. Telecommunications technology has the potential to offer or assist healthcare delivery over time and/or distance, as well as to extend access, facilitate information sharing, and deliver treatment in alternative formats. "Remote patient monitoring," for example, assists in the treatment of chronic illnesses, and "remote ICUs" allow critical patients to be cared for at a distance; with telehealth, care may be extended to remote regions, and mental counseling and therapy can be provided in the patient's home.

The Role of Telehealth in an Evolving Health Care Environment, a 2012 workshop summary from the National Academies of Science, Engineering, and Medicine, discusses how telehealth can drive volume, improve healthcare quality, and lower overall costs for rural communities by reducing readmissions and avoidable emergency department visits.

Telehealth enables tiny rural hospitals and clinics to deliver excellent healthcare services locally and at cheaper prices, benefiting rural patients by eliminating the need for them to travel great distances to get specialized treatment. Avoiding patient transfers when care may be delivered locally is crucial for the survival of both small rural hospitals and providers. It also assists tertiary care hospitals in keeping beds available for patients in need of critical care. Telehealth is a more cost-effective way for rural healthcare institutions to deliver speciality treatments than staffing those facilities with specialty and subspecialty doctors. Telehealth allows experts and subspecialists to virtually visit remote patients, enhancing access and making a larger range of healthcare services available to rural areas.[3] that provide this type of service. But, there is no telehealth system in Bangladesh.

2.4 Comparative Analysis

Telehealth is a broad range of technology and services that provide patient care and strengthen the healthcare delivery system itself. Telehealth is distinct from telemedicine in that it encompasses a broader range of distant healthcare services. Telehealth involves "surveillance, health promotion, and public health activities," according to the World Health Organization. Not all programs, however, are ideal for all users. These apps have a wide range of capabilities, but they also have a lot of issues. Our application provides the best possible service to the user. With our user-friendly interface anyone can use our application and get the most out of it. A smooth video calling experience between doctor and patient can remove the distance so that they can get optimal treatment they desire.

2.5 Scope of the problem

Apps are created in a variety of styles. They have a variety of characteristics. The scope of problems are listed below.

- Some Applications are difficult to maintain.
- There are few numbers of doctors.
- The UI is not user friendly
- Video calling feature is not there.
- Not easy to use for people living in rural area.

2.6 Challenges

The development of each undertaking is plagued with challenges. Similarly, while developing the program, we ran into a number of issues. The following are some of the difficulties we encountered.

- Making the UI user-friendly so that it is easy to use for the rural area people.
- Video calling feature.
- Scheduling appointments for patients and doctors.
- Providing prescriptions to patients.
- Approving Doctors based on experience.
- Sending login credentials to doctors.

CHAPTER 3

DESIGN SPECIFICATION

3.1 Business Process Modeling

The graphical description of a system's operations with the goal of improving, analyzing, and automating the current processes is known as business process modeling. Business process modeling enables firms to quickly understand and optimize workflows by building data-driven visual representations of essential business processes.. [4]. Business process modeling can also assist in grouping similar processes and anticipating how they should operate. Timelines of the overall process and each step in the process. Timelines for the entire procedure as well as each individual phase is represented in the model. Our application's business process model is demonstrated in Figure 3.1.

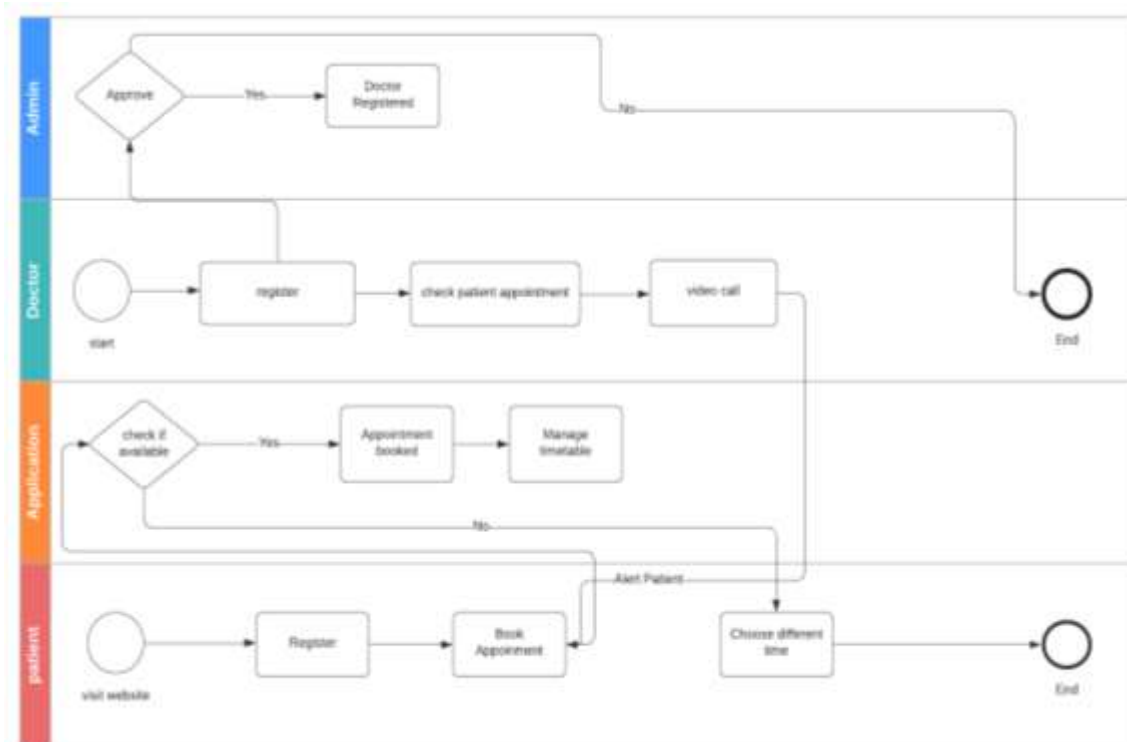


Figure 3.1: Business process modeling of Telehealth Care

3.2 Requirement Collection and Analysis

This application is available for use by anyone who has an internet connection. Anyone can visit the website and get its full feature.

Software Requirements:

1. Visual Studio Code (IDE)
2. Xampp
3. MySQL
4. Adobe Photoshop

Hardware Requirements:

- Windows operating System
- Web Browser
- Computer Configuration:
 - Ram-8GB
 - Hard Disk -1TB
 - Processor 2.7 GHz
 - SSD 256GB

Requirements for User:

- Web Browser
- Internet Connection

3.3 Use Case Modeling and Description

A use case diagram depicts how a user might engage with a piece of technology. [5]. It summarizes the interactions among use cases, actors, and systems.

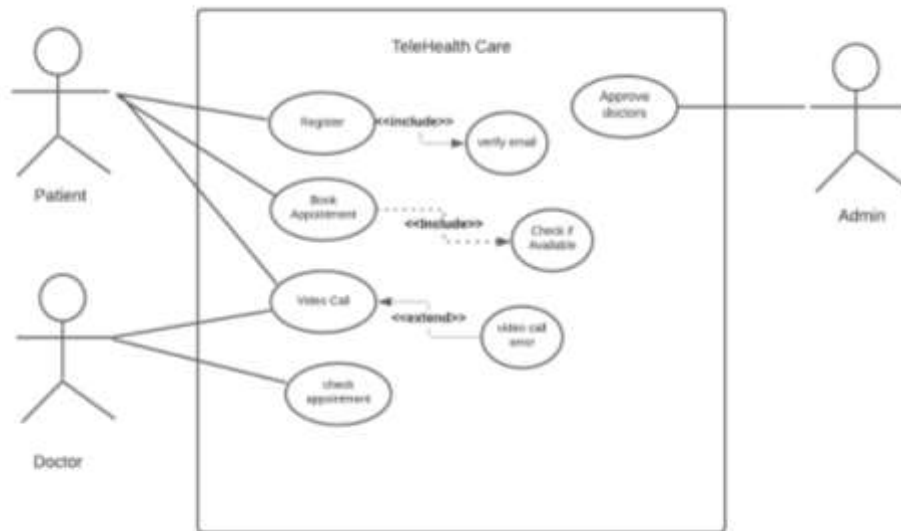


Figure 3.2: Use Case Diagram

This Use Case Model contains three Actors Figure 3.2. The doctor and patient are primary Actors that's why they are in the left side. The Admin is the secondary actor and is in the right side. The patient can login to the website and has to provide a valid email. The patient can book appointments to consult a doctor. Every time the patient books an appointment he can see if the appointment time is available or not. The Doctor has to register to the website in order to see patients. After register the doctor can check the appointment list. The Doctor will provide a video call link to the patient to examine the patient. The Admin can approve the doctors to the system based on their qualification.

3.4 Logical Data Model

A logical data method is a model of data model that is used to portray data entities, attributes, keys, and relationships. [6]. To provide a foundational structure for components of the semantic layer in data management systems, this type of model is unique in that it is not dependent on a certain database. Entity-relationship (ER) diagrams contain all entities and relationships between table showed in Figure 3.3.

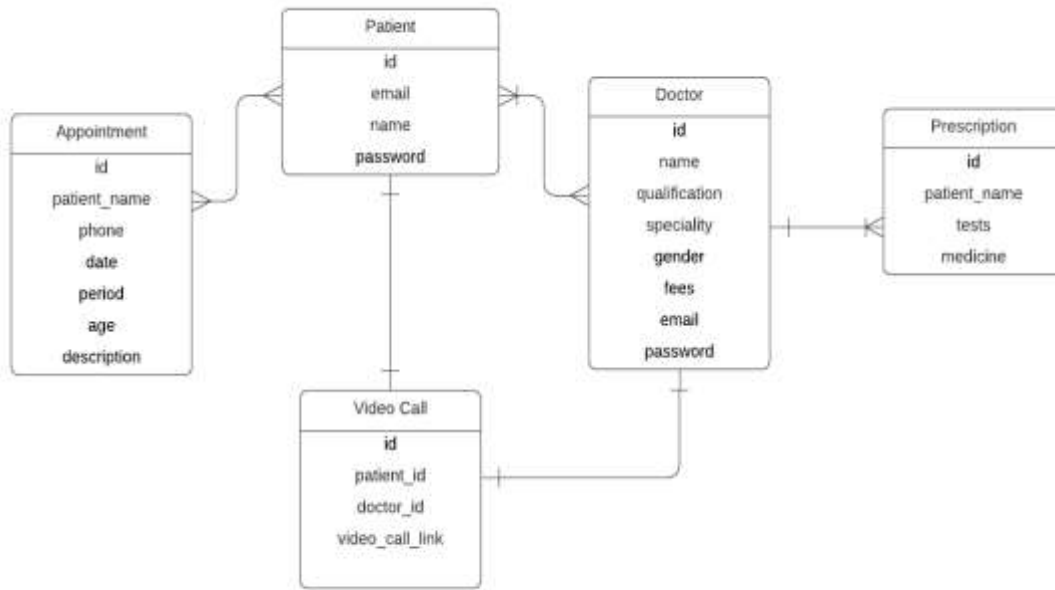


Figure 3.3: E-R diagram of the system

3.5 Design Requirement

Design requirements are the helped achieve that allow the team to translate concepts into design features. [7] Because the requirement design is the foundation for all functionality, it also shows how design friendly the design is. The following are some significant requirements.

- Simple top navbar with easy navigation.
- Solid colors that don't irritate the eyes
- User easy authentication.
- It's simple to choose from a variety of options in the dropdown menu.

CHAPTER 4

DESIGN SPECIFICATION

4.1 Front-end Design

We explored the aesthetics of our project's front-end design in this part. This is one of the most important aspects of our program because it is what the user sees . We attempted to make the design as user-friendly as possible so that users would not get lost when using our website.

4.1.1 Login Page

If the user, admin or doctor is not logged in when they first open the website, this login page will show. To log in, the user must give a email , password and select option. If the user does not already have an account, he or she can create one by clicking the “Do not register yet” button. The user can also utilize the Google account shown in Figure 4.1 to log in.

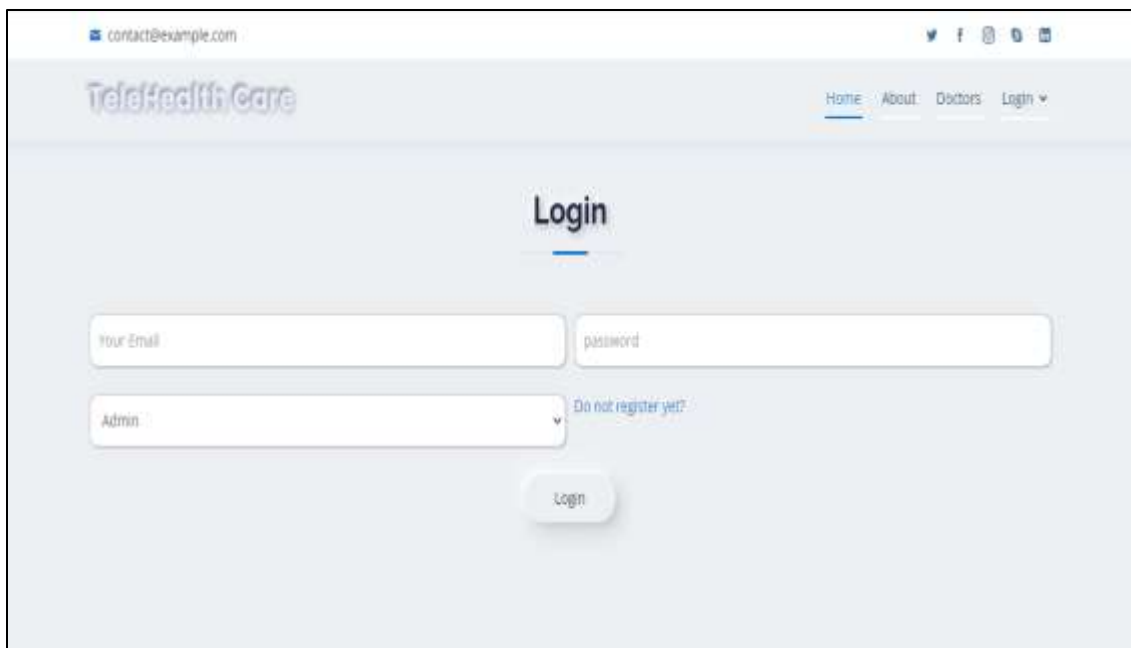


Figure 4.1: login

4.1.2 Doctor Registration Page

The Doctor can create an account by filling out the form below. Because every field is necessary, the user cannot leave any field blank. If a problem occurs, the app will display an error message. To create an account, both the password and the confirm password must be the same and must use the verified email.

The screenshot shows a web browser window displaying the 'Doctor registration' page for 'TeleHealthCare'. The page has a light blue header with the site logo on the left, the title 'Doctor registration' in the center, and navigation links 'Home', 'About', 'Doctors', and 'Login' on the right. Below the header is a registration form with the following fields: 'Your Name' (text input), 'Speciality' (dropdown menu), 'Your Qualification' (text input), 'Your Image URL' (text input), 'Gender' (dropdown menu), 'Your Email' (text input), 'Select Fees' (dropdown menu), 'password' (text input), and 'confirm password' (text input). A 'Registration' button is located at the bottom center of the form area.

Figure 4.2: Doctor Registration

4.1.3 Doctor Appointment Page

After logging into the website, the user may view a list of doctors who specialize in various fields. The user can then schedule an appointment with a doctor.

The screenshot shows a web form titled "Make an Appointment" on the "TeleHealth Care" website. The form contains the following elements:

- Input field: "Your Name"
- Input field: "Your Phone"
- Date field: "10/30/2021" with a calendar icon
- Dropdown menu: "Select Period"
- Dropdown menu: "Select Gender"
- Input field: "Your Age"
- Text area: "Type..."
- Button: "SEND"

Figure 4.3: Doctor Appointment

4.1.4 Admin Login Page

In this page admin Logged in the website. Log in page contains name phone number date , select gender , select period , age and type.

The screenshot shows the "Login" page on the "TeleHealth Care" website. The form includes the following elements:

- Input field: "Your Email"
- Input field: "password"
- Dropdown menu: "Select Options" (with "Patient" selected)
- Text: "Do not register yet?"
- Button: "Login"

The footer contains the following sections:

- Useful Links:**
 - > Admin Login
 - > Doctor Login
 - > Patient Login
- Our Services:**
 - > Home
 - > About
 - > Total Department & Doctor
- Our Social Networks:**
 - Also connected with our social network!
 - Icons for Twitter, Facebook, Instagram, YouTube, and LinkedIn.

Figure 4.4: Admin Login

4.1.5 Admin Home Page

After login in, the admin can check all of the telehealth care details. On this section, the administrator may see the total number of patients, doctors, requests from doctors, contacts, and reviews.



Figure 4.5: Admin Home

4.1.6 Doctor Request Page

The admin checks the doctor's request on this page. If the doctor is permitted by the administrator, the request will be approved; otherwise, the request will be deleted.

| ID | Name | Specialty | Gender | Email | Fees | Approve | Delete |
|----|------|------------|--------|-----------------------|------|---------|--------|
| 3 | y | Pediatrics | male | y@gmail.com | 900 | ✓ | 🗑️ |
| 4 | Ansh | EyeCare | female | nookkoyummy@gmail.com | 1000 | ✓ | 🗑️ |

Figure 4.6: Doctor Request

4.1.7 Doctor List

The admin can view and manage the list of all doctors on this page. Admin can add, alter, and delete doctors from the list in this page.

| ID | Name | Specialty | Qualification | Gender | Email | Fees | Edit |
|----|-------|------------|---------------|--------|-----------------------|------|------|
| 22 | Rahul | Cardiology | mbbs | male | cokakoyummy@gmail.com | 1000 | ✎ |

Figure 4.7: Doctor Modify page

| ID | Name | Speciality | Qualification | Gender | Email | Fees | Edit |
|----|----------|------------|--------------------|--------|------------------------------|------|------|
| 1 | DD | AA | TT | YY | dd@gmail.com | 1000 | |
| 2 | Mr Rafiq | Pediatrics | AA,BS,CC | male | ahsanofficialash@gmail.comhh | 500 | |
| 3 | DD | AA | TT | YY | dd@gmail.com | 1000 | |
| 4 | Mr Rafiq | Pediatrics | AA,BS,CC | male | ahsanofficialash@gmail.com00 | 500 | |
| 6 | Mr Demo | Hepatology | RS,VE | male | ahsanofficialash@gmail.com | 1000 | |
| 7 | Demo | Cardiology | Demo qualification | Male | dem@gmail.com | 1500 | |
| 8 | Asib | EyeCare | itghr | male | aaa@gmail.com | 1000 | |
| 9 | Hamiyar | Neurology | abbaif | male | prjwku15-11195@stu.edu.bd | 1000 | |
| 10 | y | Hepatology | Rygi | female | nomrehabhasan@gmail.com | 1000 | |

Figure 4.8: Doctor List

4.1.8 Doctor Designation Page

Users may search for doctors they need and choose from a list of categories on this website. They can then appoint the doctor of their choice.

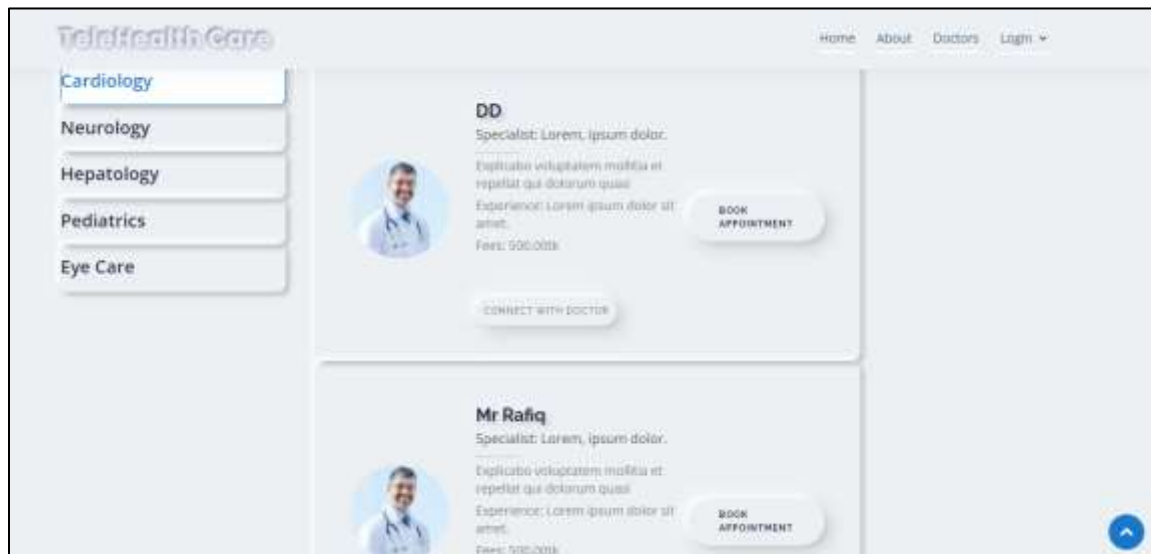


Figure 4.9: Doctor Designation

4.1.9 Doctor Home Page

After logging in, doctors may view their profile and keep track of patient appointments. Then the doctor will have the option of either confirming or canceling the appointment. When the doctors are available, the doctor can consult with the patient. The doctor prescribed depending on their therapy after discussing with them.

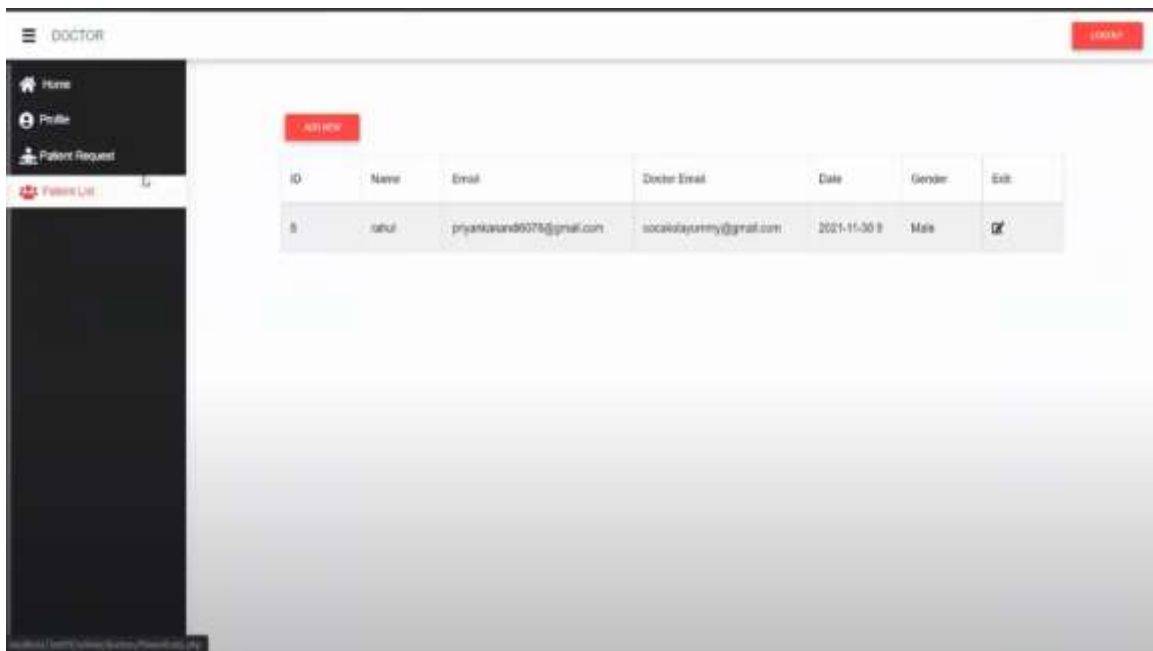


Figure 4.10: Patient list

Doctor can manually add other doctors to this page by filling out a form.

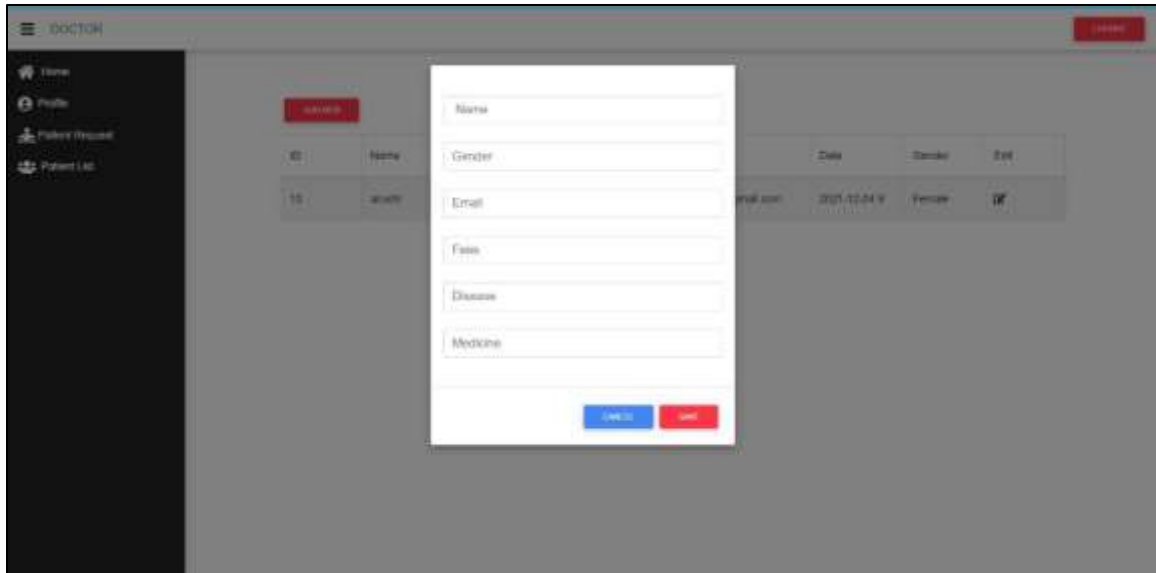


Figure 4.11: Doctor ADD Form

In this page doctors to share the link of their meeting with their patients.

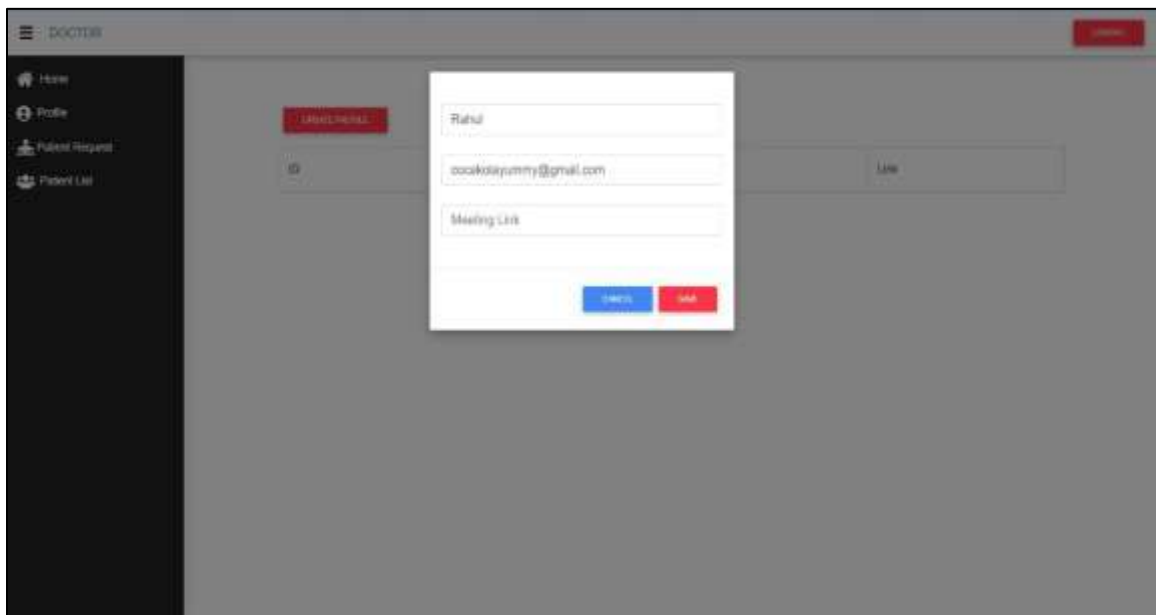


Figure 4.12: Doctor meet link ADD page

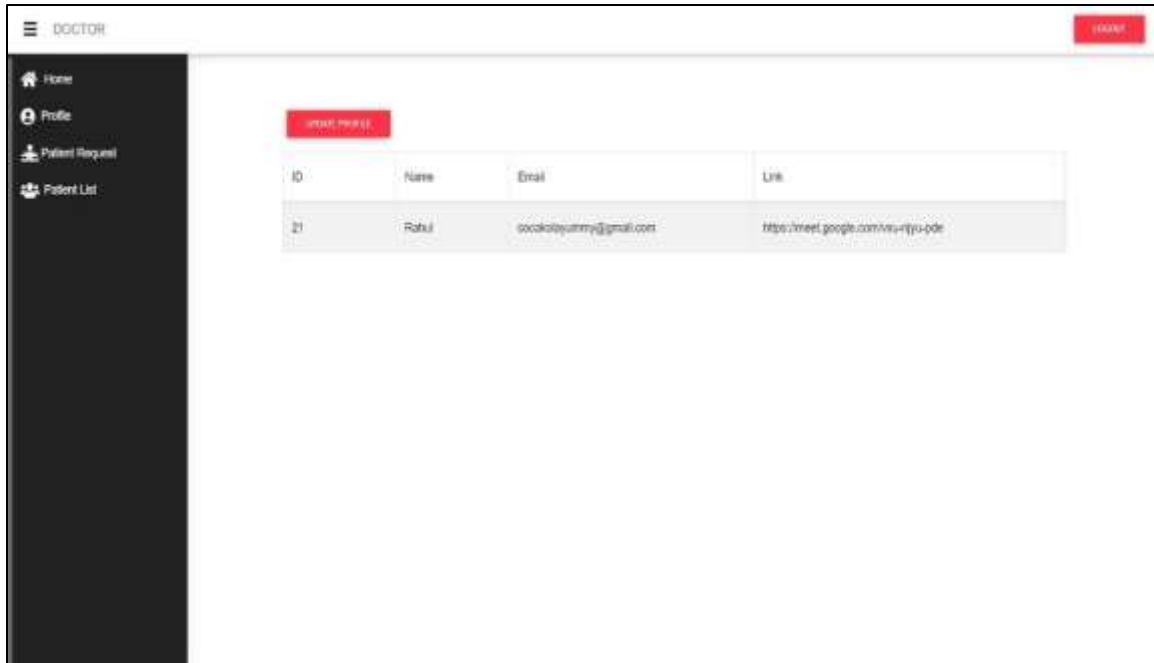


Figure 4.13: Doctor Update page

4.1.10 Patient Home Page

After logging in, users may view their profile, confirm their doctor's appointment, and download the doctor's prescription.

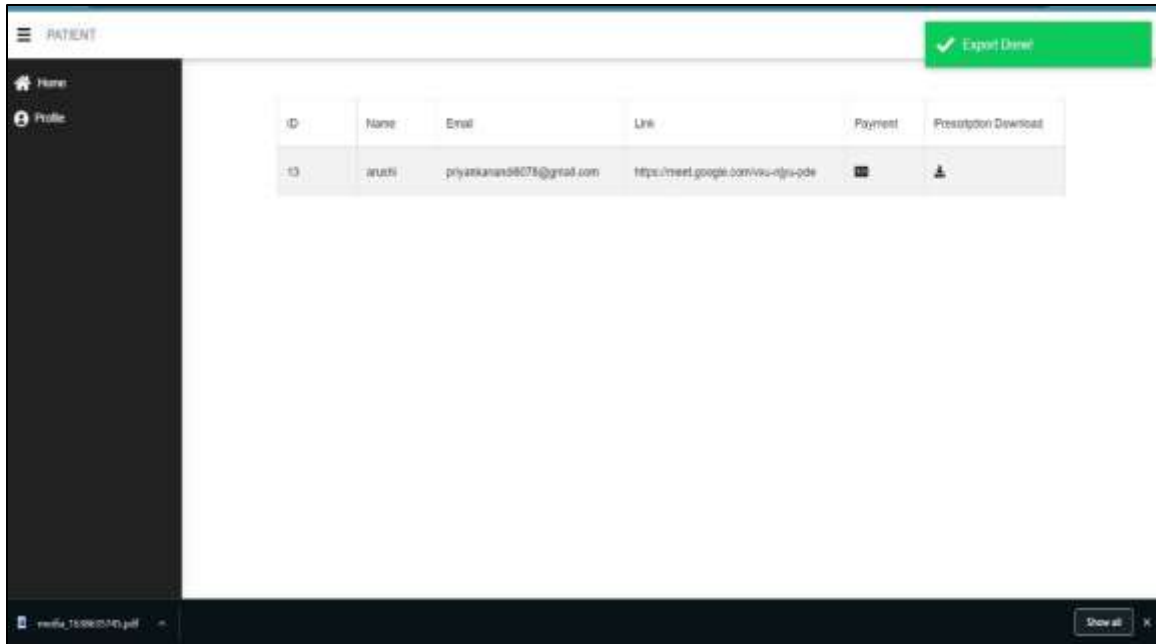


Figure 4.14: Patient home page

Users can pay their bills online on this page. After payment, the website displays the message "payment done."

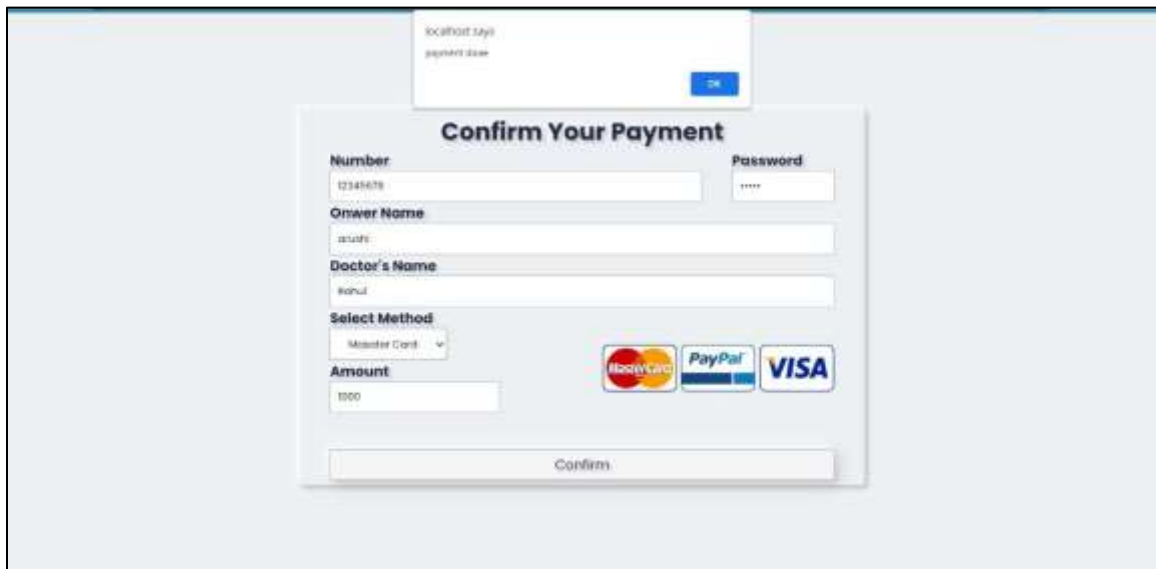


Figure 4.15: Patient payment page

4.2 Back-end Design

The entity relationship diagram was mostly utilized to construct our backend. The Entity Relationship Diagram is a flowchart that depicts how "entities" in a system interact with one another, such as people, objects, or concepts. This is most commonly used in relational databases. User, appointment, call, Message are the four primary entities in our backend. Figure 4.11 depicts the relationships between the various entities.

4.3 Implementation Requirements

We utilized the PHP programming language to build all of the functionality on our website, and the Mysql database for the database. As a tool, we utilized Google's open source IDE, Visual Studio Code. We also needed some third-party software to implement some of the features.

4.3.1 PHP

PHP is a general-purpose programming language for web development. It's mostly used for creating enterprise-level websites.

4.3.2 HTML

HTML stands for HyperText Markup Language, and it is the industry standard markup language for writings that are intended to be seen on a web browser. HTML documents received from a web server or locally stored files are converted into multimedia web pages by web browsers. At originally, HTML offered visual hints for the document's design and logically laid out the structure of a web page.

4.3.3 CSS

CSS is a style sheet language that describes how a document written in a markup language like HTML looks. The World Wide Web's CSS is a foundational technology. CSS separates appearance from text, allowing you to control layout, colors, and fonts. This division may improve content accessibility while also allowing for more flexibility and control in display design.

4.3.4 Bootstrap

Bootstrap is a responsive and mobile-first CSS framework for front-end web development that is free and open-source. It offers CSS and JavaScript design templates for typography, forms, buttons, navigation, and other interface components.

CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Requirements for implementation:

Online testing could be a sort of computer program testing that includes checking websites or web apps for issues. It's the method of altogether testing web-based apps some time recently they go online. Some time recently going live for conclusion clients, a web-based framework must be altogether tried from starting to wrap up. An company may guarantee that a web-based framework is running viably and can be acknowledged by real-time clients by doing site testing [8]. Some essential requirements and test is needed to implement our project. As we make web based service so we need tried to deploy our web site to some free server to test it. The server lists are:

1. Heroku
2. GitHub Pages
3. 000EWebhost
4. Netlify

5.2 Testing Implementation:

After tried above 4 servers we are able to deploy our web site in heroku server. After deployment we applied standard website testing processes like below:

5.2.1: Functionality Testing

In this stage we check all joins in web pages, Database association, shapes utilized for submitting or getting data from the client within the web pages.

For link testing we followed some criteria like all the outgoing links for selected domain. Test our all internal links. Test the behavior when we jumping another page. All of our routing works properly.

5.2.2 Test forms on all pages

Forms are a necessary component of every website. Forms are used to collect data from users and to communicate with them. So we tested each forms very carefully. At first we checked all the validation functionality on each field. After this we checked all default values of each form. Then we give some wrong input to test how vulnerable data is handled by our website.

5.2.3 Database Connection test

In a web application, information consistency is additionally basic. We checked for information keenness and blunders whereas we altered, erased, or altered shapes or performed any database-related errands. Check that all database queries are effectively executed, which information is obtained and updated. More on database testing may well be a burden on the database; we'll cover this within the segment underneath on web stack or execution testing. All connection is given below:

Figure 5.1 represents appointment test. For appointment field are name, email, data, period, datetime, gender age description, doctorsmail. All of fields are able to take data properly.

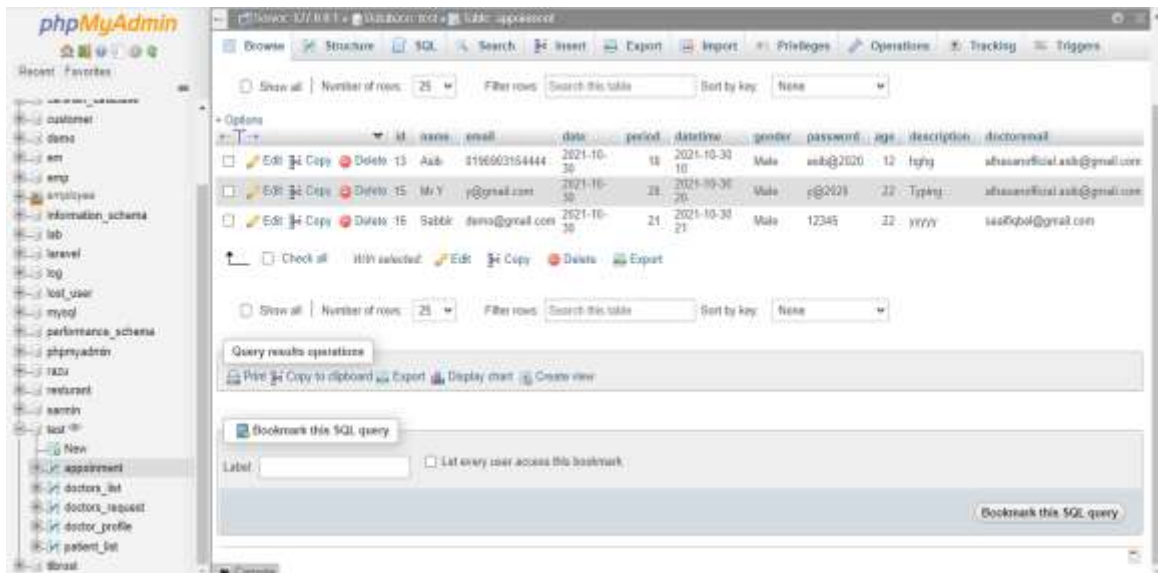


Figure 5.1 Appointment test

Figure 5.3 represents all registered doctors. Doctor list table contains Id, name, specialty, qualification, image, gender. Email, frees password. All of field works properly. We showed all entity by SQL query select * from 'doctors_list'

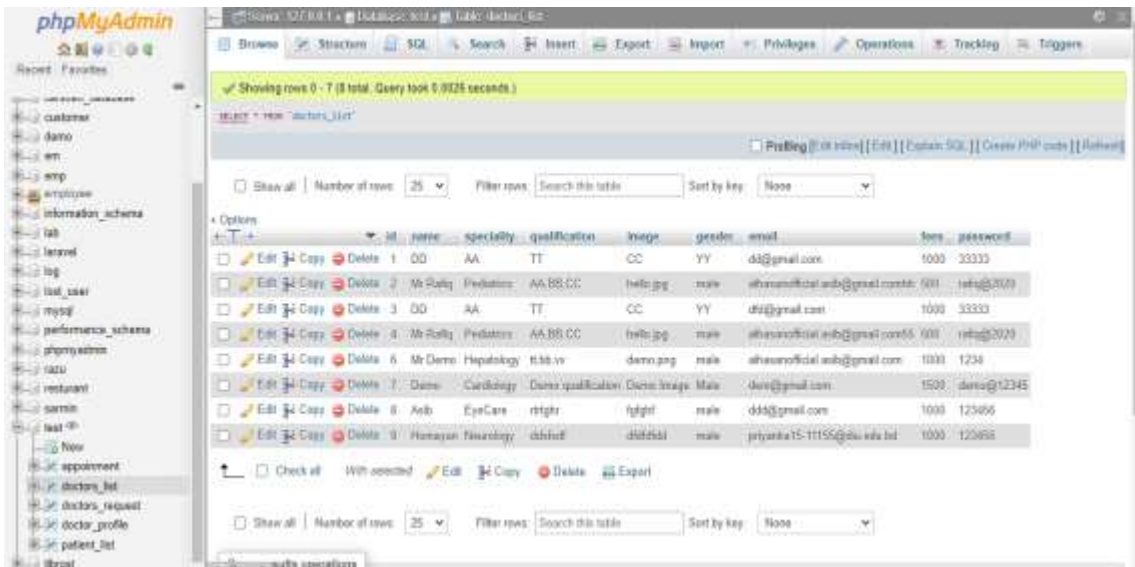


Figure 5.2: Doctor list table

Figure 5.3 represents the request form patient for a doctors. This table contains id, name, specialty, qualification, image, gender, email, fees, password. We retrieve data by query select * from 'doctors_request'. But there is not request for doctor that's why we can not see any entity form this table.

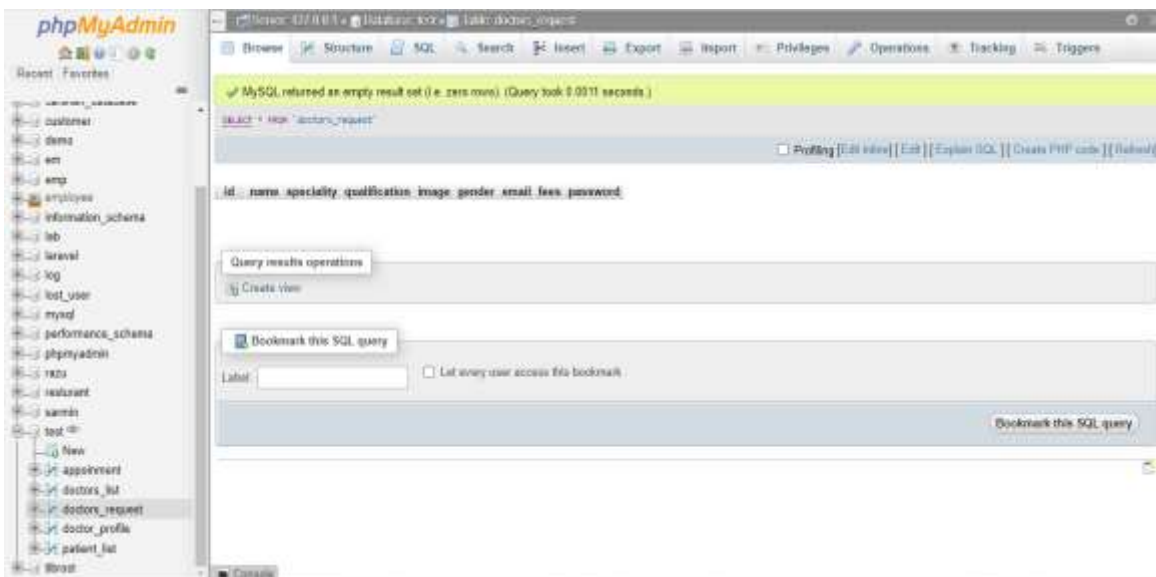


Figure 5.3: doctor's request.

Figure 5.4 represents the doctor profile. Each of registered doctor have a profile. Doctor profile table contains id, name, email, link, dir_id.

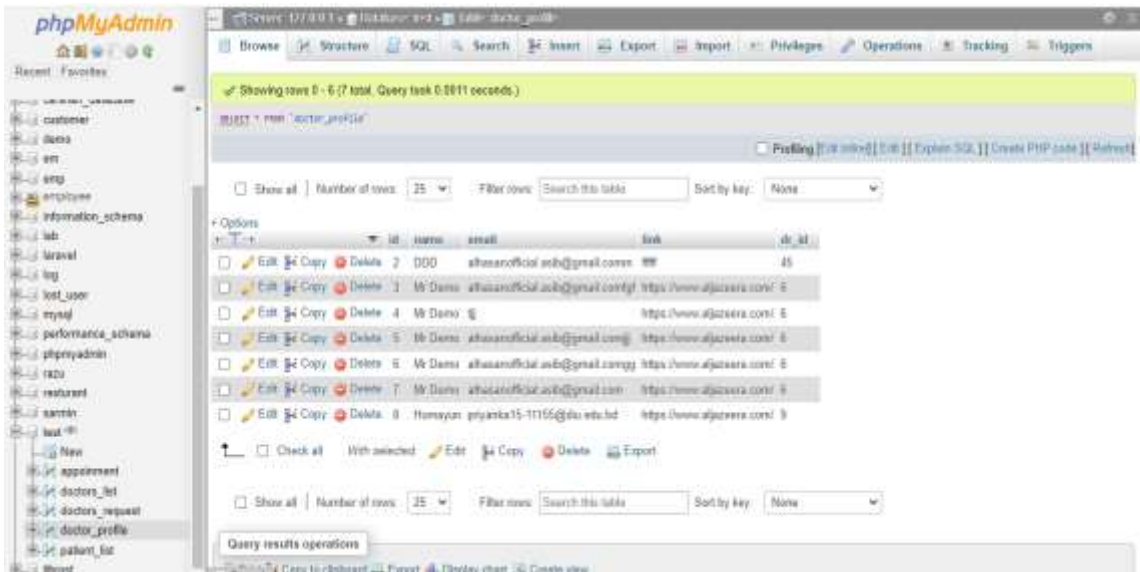


Figure 5.4: doctor profile

Figure 5.5 represents the patient list for a doctor. We created a one to many relation doctor to each patients by unique id. In this figure we can see that each patient contains id, name, email, doctorsemail, datetime, gender, password, link, appointment.

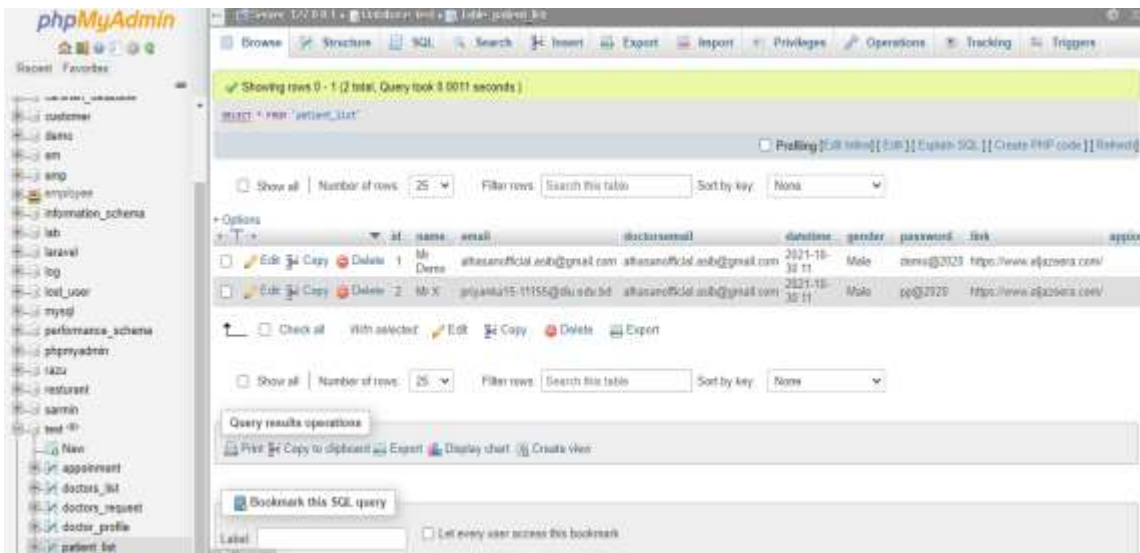


Figure 5.5: Patient list for a doctor.

5.2.4 Responsive test:

The Responsive Evaluation allows us to evaluate our design on various screen sizes for a "real" test of "adaptively." [9] . We tested our website in mobile view, tab view and different screen by real time.

Figure 5.6 represents the mobile view of home page. We can see that button and other text keep its right position according to screen size. A menu bar appeared in right corner of home page.

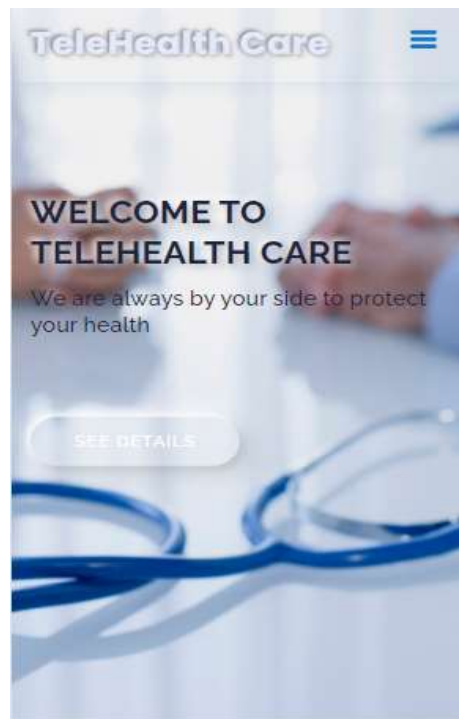


Figure 5.6: mobile view of home page

Figure 5.7 represents responsiveness of doctor page. This doctor page different categories of button. Each of button takes its own please in mobile view. There no overlap happened.

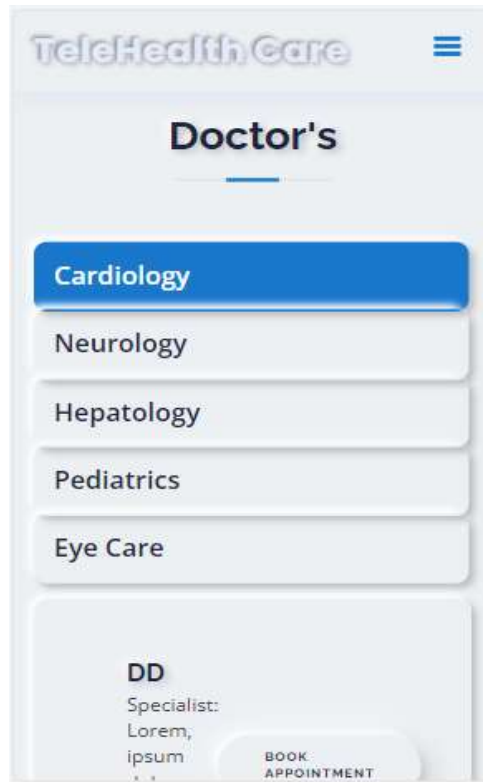
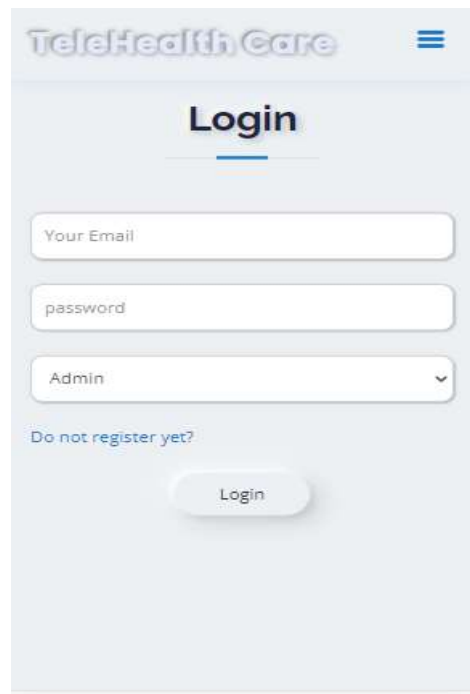


Figure 5.7 responsiveness of doctor homepage.

Figure 5.8 represents the form responsiveness. Here is login form is given. Each of the input form performed very responsive activity for mobile view.



TeleHealth Care

Login

[Do not register yet?](#)

Figure 5.8 Form Responsiveness

CHAPTER 6

IMPACT ON SOCIETY, ENVIRONMENT AND SUSTAINABILITY

6.1 Impact on Society

“Telehealth Care” can be considered a very important software for our society. It solves the problem that is essential for society. When someone is unwell, the software eliminates the need to drive to the doctor's office or clinic, park, stroll, or wait in a waiting room. From the comfort of one's own bed or sofa, you can consult with your doctor. Virtual visits may be more convenient for people to fit into people's hectic schedule. Remote analysis and monitoring services, as well as electronic data storage, help patients, and insurance companies save money on healthcare services.

6.2 Impact on Environment

Telehealth eliminates the need for travel, lowering the medical industry's carbon footprint dramatically. Using telemedicine to replace actual appointments, according to one NHS research, may reduce carbon emissions by 40-70 times. While it is necessary to clean medical exam rooms, the cleaning equipment is not zero waste. Cleaning wipes are often one-time usage, and cleaning chemicals can be harmful. For medical sterility, even reusable cleaning rags must be cleaned in hot water, and while this is a better solution than single-use wipes, it still uses energy. The medical business may never be waste-free, but telemedicine is reducing avoidable waste on a daily basis.

6.3 Ethical Aspects

Systemic changes in wellbeing care conveyance are happening at the same time as the development of electronic communication. To supply indeed the foremost fundamental treatment for a populace that's living longer with persistent conditions that require mindful supervision and coordination, a rising amount of therapeutic mastery is fundamental. There aren't sufficient hours within the day for numerous essential care specialists to care for a expansive bunch of patients.

6.4 Sustainability Plan

Our created application is profoundly economical in therapeutic field. “Telehealth Care” has the potential to diminish healthcare costs, increment proficiency and wage, move forward understanding get to care, and eventually result in more joyful, more advantageous understanding[10].

CHAPTER 7

CONCLUSION AND FUTURE SCOPE

7.1 Discussion and Conclusion

We think that our web application "Tele health care system" will benefit both patients and physicians. This application has the potential to help in the field of internet therapy. Our objective was to combine the two platforms' features together in one place, and we feel we succeeded. We've finished the beta version of the software and are planning to release it on Digital Ocean so that everyone may profit from it.

7.2 Scope for Further Developments

In future we will create mobile app version of our website. And try to make global version. We also want to extend features of our web application like provide online payment system with various payment methods like MasterCard, Rocket and Bkash. We want to add online medicine service so that patients can get everything all in one place.

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PLAGIARISM REPORT

| Tele_Health Care System | | | |
|-------------------------|-----------------------------------------------------------------------------------|--------------|----------------|
| ORIGINALITY REPORT | | | |
| 27% | 20% | 5% | 24% |
| SIMILARITY INDEX | INTERNET SOURCES | PUBLICATIONS | STUDENT PAPERS |
| PRIMARY SOURCES | | | |
| 1 | dspace.daffodilvarsity.edu.bd:8080 Internet Source | 9% | |
| 2 | Submitted to Daffodil International University Student Paper | 8% | |
| 3 | Submitted to West Coast University Student Paper | 1% | |
| 4 | Submitted to Rushmore Business School Student Paper | 1% | |
| 5 | Submitted to Herzing University Student Paper | 1% | |
| 6 | effectivehealthcare.ahrq.gov Internet Source | 1% | |
| 7 | Submitted to Colorado State University, Global Campus Student Paper | 1% | |