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**DEPARTMENT OF INFORMATION TECHNOLOGY**

**DIPLOMA IN INFORMATION TECHNOLOGY AND  
COMMUNICATION**

**TECHNICAL REPORT OF PHYSIOTHERAPY CENTRE WEB  
APPLICATION**

**DESIGNED AND DEVELOPED**

**BY**

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**UNDER THE GUIDANCE**

**OF**

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## Declaration

We hereby declare that the technical report entitled "Physiotherapy Centre Web Application" is based on the results of work under the guidance of Madam Norbahiah Binti Zakaria and hope that this project has received due recognition. We also declare that it has not been advanced by other institutions.

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## **ABSTRACT**

Physiotherapy Centre Web Application is developed to make a computerized online appointment booking system which is user-friendly, simple, fast and cost-effective. This web application is designed and programmed to deal with day-to-day activities and appointments. In this web application, we included some features such as easy way of appointment booking for the users. We also provided a simple way for the users by making them to view their booked details. This web application is much convenient for any users because it can be access from anywhere at any time. This web application is free to use for the user. They only thing user need to do is register. This web application is developed and designed by using Visual Studio Code editor and XAMPP web server and phpMyAdmin forthe use of databases. In conclusion, by creating this web application we were learned some tips and tricks about technologies and languages that we were used.

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# CHAPTER 1.0 PROJECT PLAN

## 1.1 Introduction

Physiotherapy is a treatment which can help to treat someone whose movement and function is affected by illness or disabilities. It is also called as “Physical Therapy”. Physiotherapy treatment helps with treating the loss of mobility in future by developing well-trained exercises and medications. It is a professional career where it has many types such as orthopedics, neurology, cardiopulmonary, geriatrics and pediatrics.

There are some benefits of physiotherapy treatment. First of all, the treatment will eliminate or reduce pains and it improves overall strength and coordination. Moreover, it boosts cardiovascular functioning and lung capacity

Physiotherapy Centre Web Application is to make the users easy to access with their fingertips. This web application is much easier and more efficient as it follows the current trends and it helps the user to make their works easy. Well-known that the web application is online which will give freedom for the users to access anytime from anywhere. There is no rushing and needs to stand in a long queue for the appointments. In addition, the web application contains various analytical tools where the users can track each to get more details and information as much as they needed.

Besides, the web application has some features which will help the users to easily interact with it. This web application is a computerized, designed and programmed to deal with day-to-day activities and appointments. The web application can look after records, database treatments, status illness and billings. It also maintains the information of the centre such as doctor’s information. The web application is developed to make a computerized system which is user-friendly, simple, fast and cost-effective. The maintenance of manual ways is complicated and take time compared to this online web application.



## **1.2 PROBLEM STATEMENT**

Online Physiotherapy Centre Web Application is used by the centre user and the admin.

One of the problems that may arise is users unable to make their appointments easily and when they walk in to the centre their waiting time will be longer. Moreover, the users are making their appointment through WhatsApp or by call and the centre unable to manage the appointments according to the queue. The admin also unable to save or backup the database, this makes them to go physically.

Moreover, throughout these days the centre is using manual system for their management and document filing. Probably, the centre doesn't have an official website or any other application to update or get to know information. One of the main disadvantages of this manual system is it takes up lot of space. The document filing will also prone to damage or misplaced. This could lead to start over at square one getting the information back. It can also lead them to lose their users. Other than that, there is also lot of detriment from this such as lack of security, accessing time, higher cost and hard to make changes.

Besides, the centre faces lack of publicity which the public unable to search of get known them easily without the web application. There will be a little bit of confusions for the users. Since, there is no way for them to follow up the centre information, they can't able to make a move for the appointment and treatment. This may lead to a bad sign for the centre development. By having a web application, they able to attract more public to recommend the users.

To solve these problems, this Physiotherapy Centre Web Application will definitely help them.

### **1.3 OBJECTIVE**

In order to develop the Physiotherapy Centre Web Application, the objectives of this project are:

- i. To improvise and computerize appointment
- ii. To manage the database appointment booking
- iii. To provides user with quick and easy access to information

### **1.4 PROJECT SCOPE**

This project is developed to uphold the GT Physio and Rehabilitation Centre. The aim of this centre is to help the people who are affected by injuries and illness through exercises, therapies and movements. The scopes of this project are as below:

#### 1.4.1 User Scope

##### 1.4.1.1 Admin

This web application can be access by an admin to manage and being up-to-date with the databases. They are in charge of updating and maintaining their assigned application. They will be concern with the inquiries from the web application users. Admin can collect information from the users and the application prompts.

##### 1.4.1.2 Users

The users of GT Physiotherapy and Rehabilitation Centre can easily book their appointments through accessing in online. The manual booking system has been updated into digital system. The users can easily observe the basic exercise protocols includes the period of the protocols to be followed.

#### 1.4.2 System Scope

This web application will help for booking an appointment through online and will update the availability of the time slots. The database of it will be listed in both admin profile and the user profile.

### **1.5 PROJECT SIGNIFICANT**

In this modern global, people are seeking for an easier and efficient lifestyle. In this century, one of the greatest advances in technology is invention of applications. The usability and usefulness of this web application will make the user's life more handily.

The importance of this project is to make users to be more convenient when using the web application. users will be offered for an online scheduling where they can book an appointment without having a call with front desk or scheduler during business hours. It allows to access all the necessary information and it saves the time which can make the process faster to complete.

Besides that, having a web application means the information they need is always available and all in one spot. Users can view and be up to date with the centre's information at any time and from anywhere. This means they can get all the information even after business hours.

Furthermore, this web application can be also accessed by admin. Admin able to edit, update and delete the databases as their needs. The slots of appointment and the other information can be also access and view by admin.

## 1.6 LITERATURE REVIEW

In this chapter we will discuss about comparisons and explain about the applications that use other or similar methods related to physiotherapy centre web application. The literature review will also allow to improve the performance of the app to reduce the problems that often occur in some applications such as excessive advertising, lack of animation and others.

### 1.6.1 PhysiApp

PhysiApp is the companion app to Physitrack, the platform that lets healthcare providers such as physiotherapists create and prescribe clinical exercise programs and conduct Telehealth consultations. When you use PhysiApp, your healthcare provider can accurately monitor your progress and feedback, allowing them to provide better support based on real data. Clinical studies confirm that apps like ours can help improve outcomes for users.

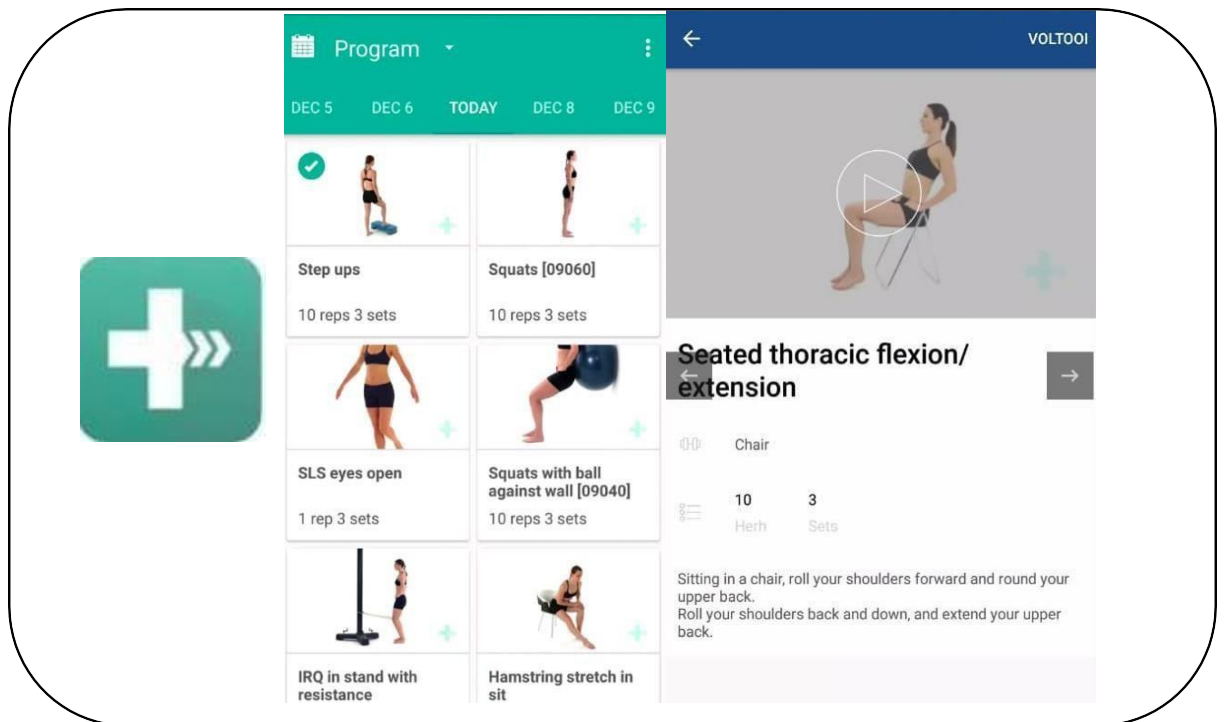


Figure 1.1 PhysiApp

## 1.6.2 ViaTherapy

ViaTherapy represents over 5 years of work by an international panel of stroke rehabilitation researchers and clinicians from Physiatry, Neurology, and Physical & Occupational Therapy. The collective expertise encompassed research interests in epidemiology, motor control, and knowledge translation. Use ViaTherapy to learn about the latest therapies, recall established therapies, and create a customized rehabilitation plan for your user.

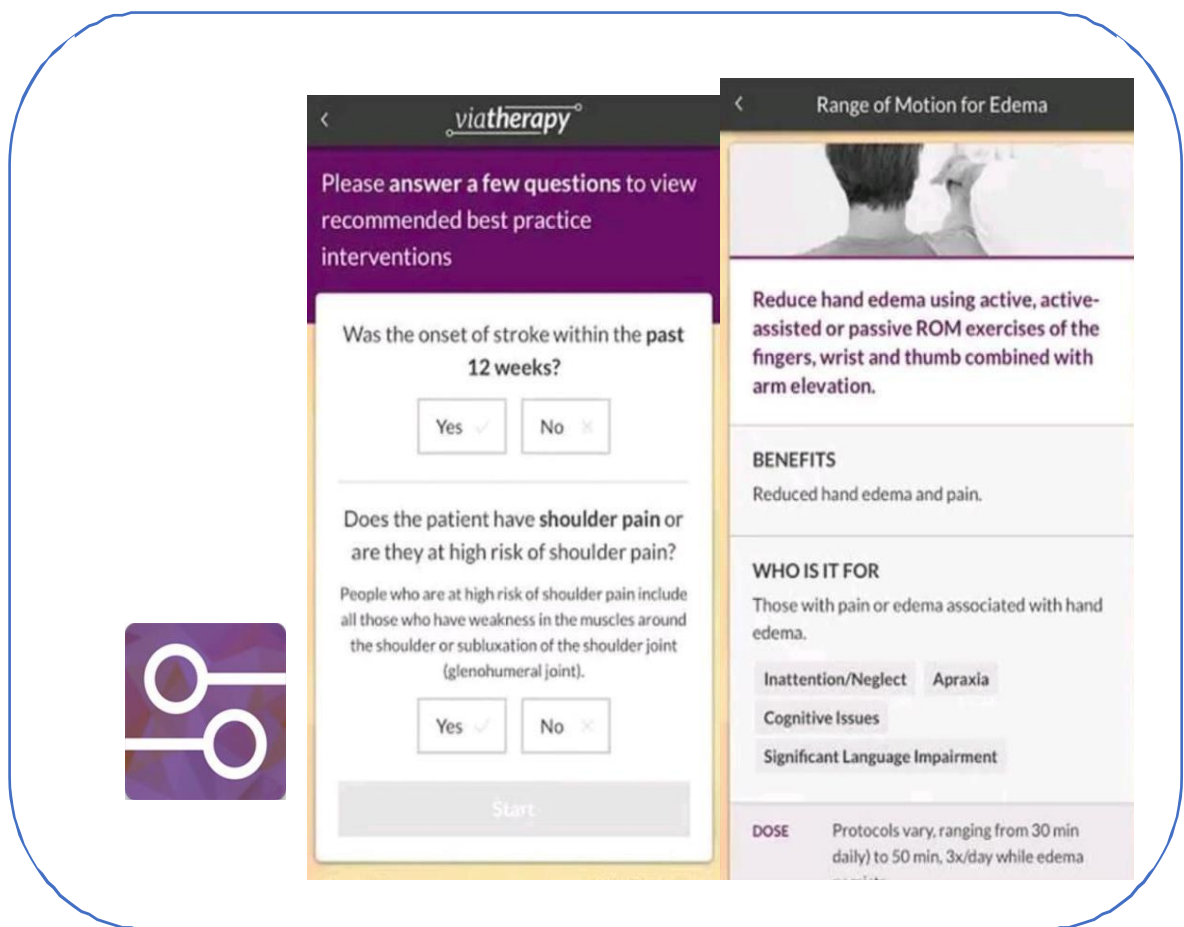


Figure 1.2 ViaTherapy

### 1.6.3 Fysiotest

The Fysiotest team consists of lifestyle assessment professionals and our goal is to help you and your company with modern corporate health and performance solutions. Research shows that about 80% of illnesses can be prevented by the right lifestyle choices. We provide individual assessments and advice on nutrition, exercise, recovery, and other lifestyle-related factors. You learn to know your individual life goals and understand how to achieve balance in an increasingly stressful everyday life.

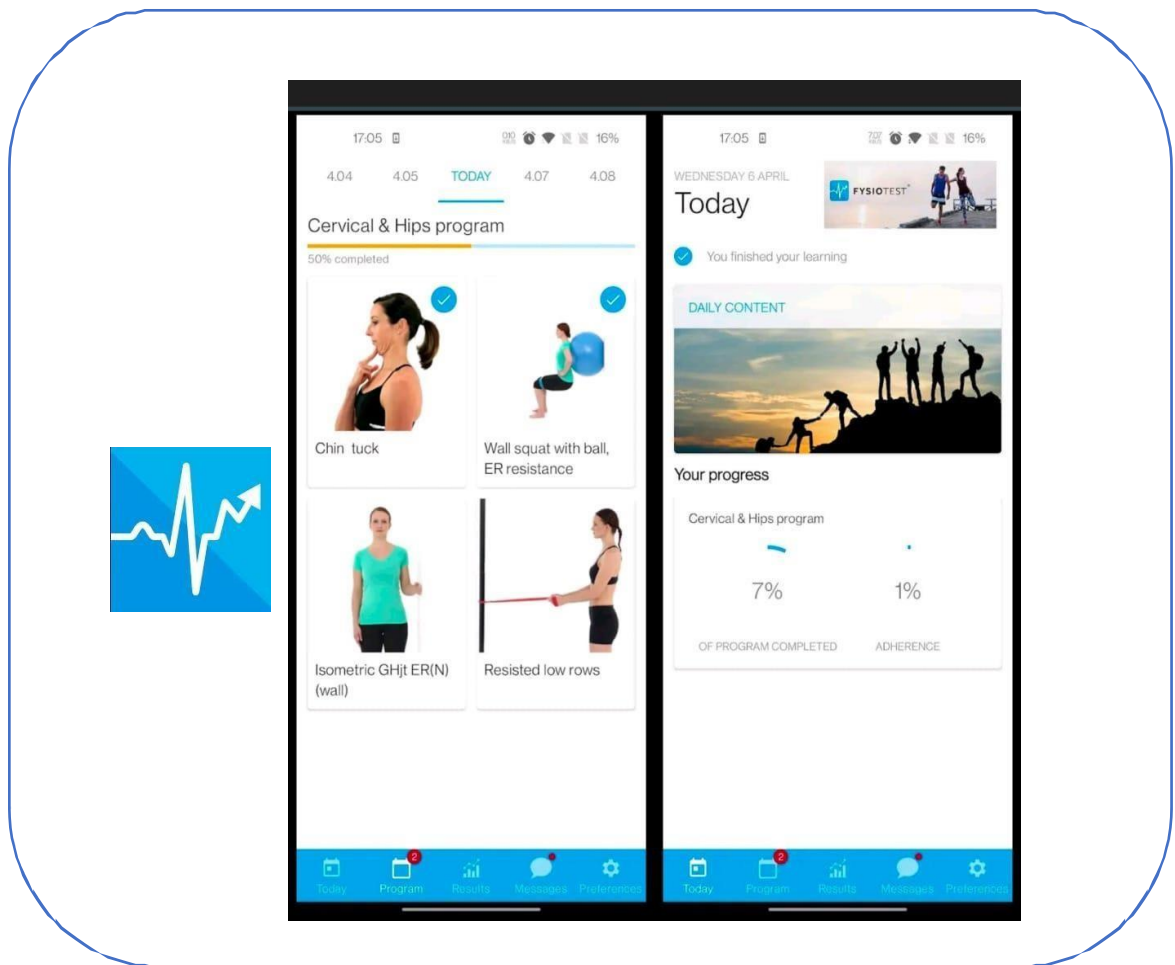


Figure 1.3 Fysiotest

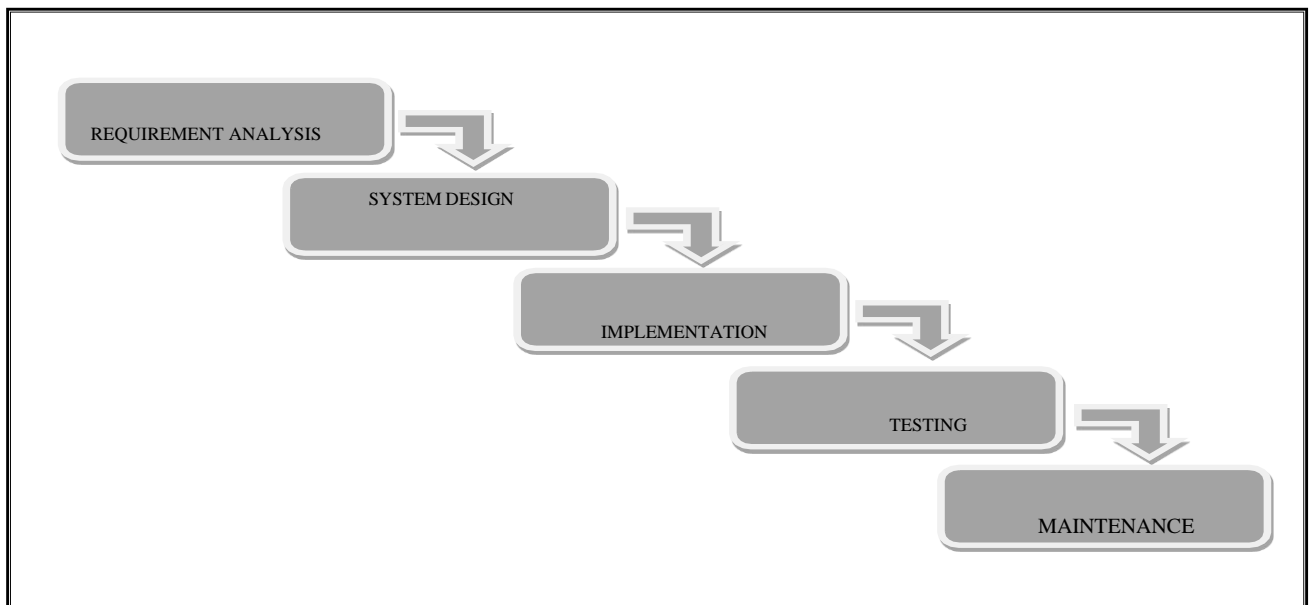
**Table 1.1** Application Function

Function	<i>Online Physiotherapy Centre Web Application</i>	<i>PhysiApp</i>	<i>ViaTherapy</i>	<i>Fysiotest</i>
User registration	✓	✓		
User Login	✓	✓		
User Medical information submission	✓		✓	✓
List of user	✓			
User's Profile	✓			
Treatment Records	✓			✓
Treatment Reports	✓			
Medication Records	✓			
Downloads	✓			
Online Products Store	✓			
Physio Wikipedia	✓			
Tutorial Videos	✓	✓		✓

## 1.7 METHODOLOGY

Methodology that we have used throughout this Physiotherapy Web Application project is “Waterfall Model”. It is a classical model used in system development life cycle to create a system with a linear and sequential approach. Figure 7.1 shows the waterfall model. We chose this methodology because of:

- i. Easy and simple to understand and use
- ii. Easy to manage and review the process
- iii. Phases are processed and completed one at a time
- iv. Determines the end goal earlier



**Figure 1.4** Waterfall methodology



a. Requirement Analysis

The requirements needed are captured and documented. In this phase, we gathered and prepared some information. We chose a company and discussed with the Manager of Human Resources and analysed it. We prepared for an interview session with them and finalized our project.

b. Design

The requirements specifications from the first phase are studied in this phase and the system design is prepared. In this phase, we designed a prototype and discussed with the manager of the center. They also have a look at it and gave some ideas for improving it.

c. Implementation

In this phase, the software design is implemented in the desired programming language. We started to develop the web application based on the designed prototype. Step by step we developed the web application and for the first time the web application was tested as a complete product.

d. Testing

All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.

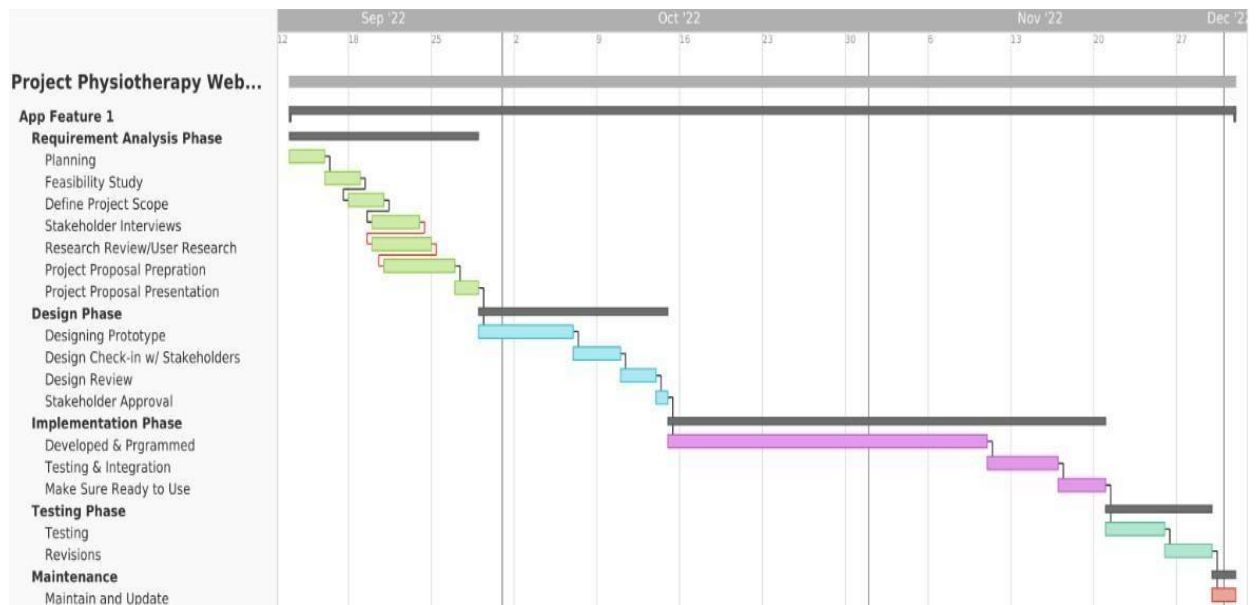
e. Maintenance

If there are some issues which come up from the client environment, patches are released to fix it. To enhance it, some better versions are released. There will be three activities to be done which are bug fixing, upgrade and enhancement.

## 1.8 GANTT CHART

Our team managed to develop our project as we planned and scheduled. To complete our project, we created a timeline for the project progress. The Gantt Chart is as following:

**Figure 1.5** Gantt Chart



### 1.8.1 Requirement Analysis Phase

This phase almost took 18 days to complete. We started to plan our project on 13<sup>th</sup> Sept until 15<sup>th</sup> Sept. The feasibility studies took almost 3 days together with defining the project scope. From 20<sup>th</sup> Sept we started to contact with stakeholder and prepared for the interviews and did the interview session on 23<sup>th</sup> Sept. then, the research review has been held for 4 days followed by project proposal preparations. The project proposal presentation held on

### 1.8.2 Design Phase

It took 15 days to complete design phase. The first task we did in design phase is started to do prototype. We started on 30<sup>th</sup> Sept and finished it on 6<sup>th</sup> Oct. To check the prototype with stakeholder and to review the design to 13 days. Finally, the stakeholder approved the design.

### 1.8.3 Implementation Phase

For implementation phase, the development and programming took almost 3 and half weeks. We started on 15th Oct and we finished on 10<sup>th</sup> Oct. for testing and integration it took 2 weeks and we make sure the web application is ready to use.

### 1.8.4 Testing Phase

For the testing phase, we started on 21<sup>st</sup> Oct where it took almost 1 week to completely ready to use.

### 1.8.5 Maintenance Phase

Once the web application has been deployed, three activities will be look through which is bug fixing, upgrade and enhancement.

## **CHAPTER 2.0 REQUIREMENT SPECIFICATION**

### **2.1 Functional Requirement**

#### **2.1.1 User Requirement**

- i. All users shall be able to log in into the website.
- ii. All users shall be able to view homepage, about page, services page, doctors, contact page, appointment page
- iii. All user shall be able to use all functions and features based on their positions.
- iv. Admin shall be able to update data.

#### **2.1.2 System Requirement**

- i. The website must allow users to log into their account by entering their user username and password
- ii. The website shall be used for all users to view homepage, about page, service page, doctors and contact page, appointment page.

### **2.2 Non-Functional Requirement**

#### **2.2.1 Performance Requirement**

- i. The website's load time is not more than 1 second for users.
- ii. Maintenance time and recovery occur quickly if they are needed in by the system.
- iii. Having a quick recovery time in case something goes wrong.

#### **2.2.2 Security Requirement**

- i. Session data will be cleared out after the user logs out from system.
- ii. Only the users with the position "admin" can manage the approval system.

### 2.2.3 Availability Requirement

- i. The website shall be available for use 24 hours per day.

## 2.3 Hardware and Software Requirement

### 2.3.1 Hardware Requirement

Table 2.3.1.1:Hardware Requirement

<b>Laptop</b>	
<b>Model</b>	<ul style="list-style-type: none"><li>• Acer (LAPTOP-PMDIG5RT)</li><li>• Dell (DESKTOP-DNVA098)</li></ul>
<b>Processor</b>	<ul style="list-style-type: none"><li>• Intel(R) Core(TM) i5-1135G7 @ 2.40GHz 2.42 GHz</li><li>• AMD Ryzen 3 3250U with Radeon Graphics</li></ul>
<b>RAM</b>	<ul style="list-style-type: none"><li>• 12.0 GB</li><li>• 4.00 GB</li></ul>
<b>Operating System</b>	<ul style="list-style-type: none"><li>• Windows 11 Home</li></ul>

### 2.3.2. Software Requirement

Table 2.3.2.1: Software Requirement

Software	Description
Visual Studio Code	Visual Studio Code is a source-code editor that can be used with a variety of programming languages ,including PHP, HyperText Markup Language(HTML), CSS, JavaScript to build the system.
Xampp	XAMPP is a free and open-source cross platform web server solution stack package that was formerly used to create and manage the database required for the system.
Microsoft Word	To create and edit all documentations relation to the project.

### 2.4 System Configuration

System configuration encompasses every element which composes the end system as a whole. This may include all physical devices, such as computers, and non-physical elements.

GT PHYSIO is a web-based system that does not utilize Internet of Things (IOT) and any other form of physical device integration, therefore there are no physical components that are integrated to the computers and server that are used to store and run the system.

As for non-physical elements, XAMPP was formerly used to run database. This database has been used to store all required data for the system to fully function with the data such as user of the system data, user login data, student registration data.

## **2.5 SECURITY REQUIREMENT**

### **2.5.1 Registration of New User**

- i. User must be the sole user that can register to the system.
- ii. User can reset their password in case any problems happen.
- iii. Every user must have only one account which will be detected with their ic number.

### **2.5.2 Login into the System**

- i. Login credentials (Username and Password / ic number and password) must be correct.
- ii. Every user must be logged in and redirected to the system's specific interface based on their position.

### **2.5.3 Insert Data into the system**

- i. Inserting new registration data and appointment data can only be done by user.

### **2.5.4 Verifying of the Data**

- i. Verifying of data such as new appointment by user can only be approved by admin only.

## **CHAPTER 3.0 FINAL DESIGN**

Final Design is a design activity that follows preliminary design and expressly includes the preparation of final work and detailed specifications. It consists of two parts which is 'Logical Design' and 'Physical Design'. Logical Design is a conceptual, abstract design where it involves in arranging data into series of logical relationships called entities and attributes. In the Physical Design, it has a most effective way of storing and retrieving the objects.

### **3.1 Logical Design**

To start the web application, user will be given two login options namely 'Admin' or 'User'. After completing the registration of user by clicking 'User', the user will go to login. For the admin login, user should choose 'Admin' in order to login. If the user is not succeeded to login, the page will redirect to login page again to get the correct the correct information. If user successfully login, they will enter to the user menu while admin will enter to the admin menu. In user menu, there will be and overview of the website, book appointment and send messages. User have to fill the appointment details in order to book the appointment. If succeeded, user can view and delete the details in profile. User can send message to the admin by filling in the details in 'Reach Us' section. In admin menu, there will be dashboard, appointments, inbox and user directory. Admin can view the databases of appointments such as pending and finished appointments in dashboard. Other than that, in appointment site admin can add user appointment, edit the details and delete the booked appointment. In inbox site user can view and delete the messages that is sent by user. In addition, admin can also view and delete user details in 'User Directory'. Finally, both users and admin can logout.



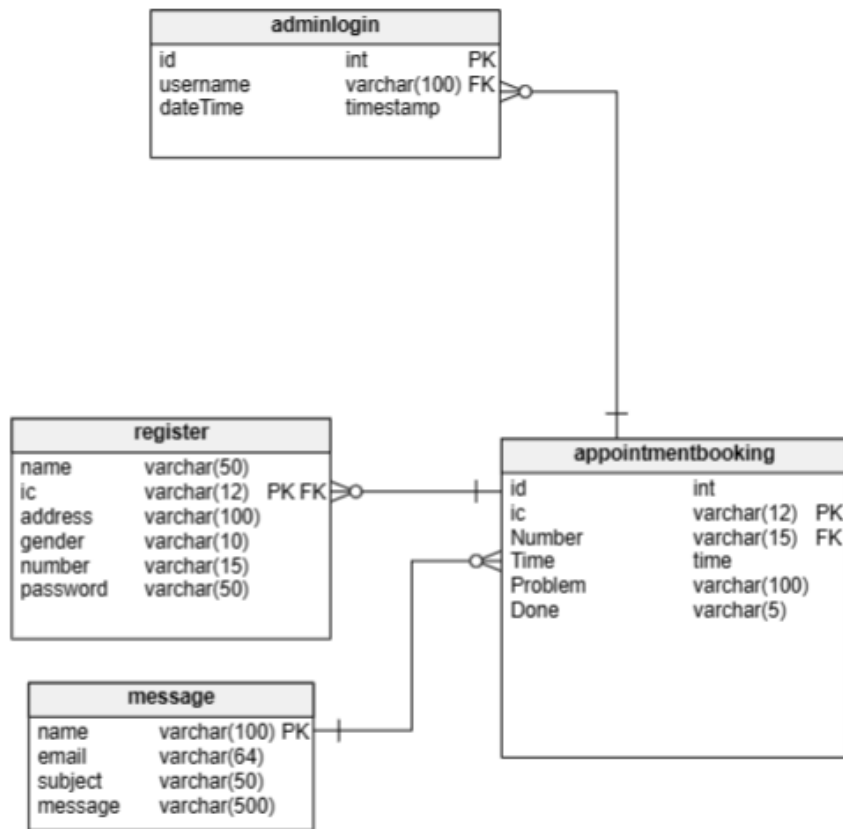


Figure 3.1 ER Diagram of the Web Application

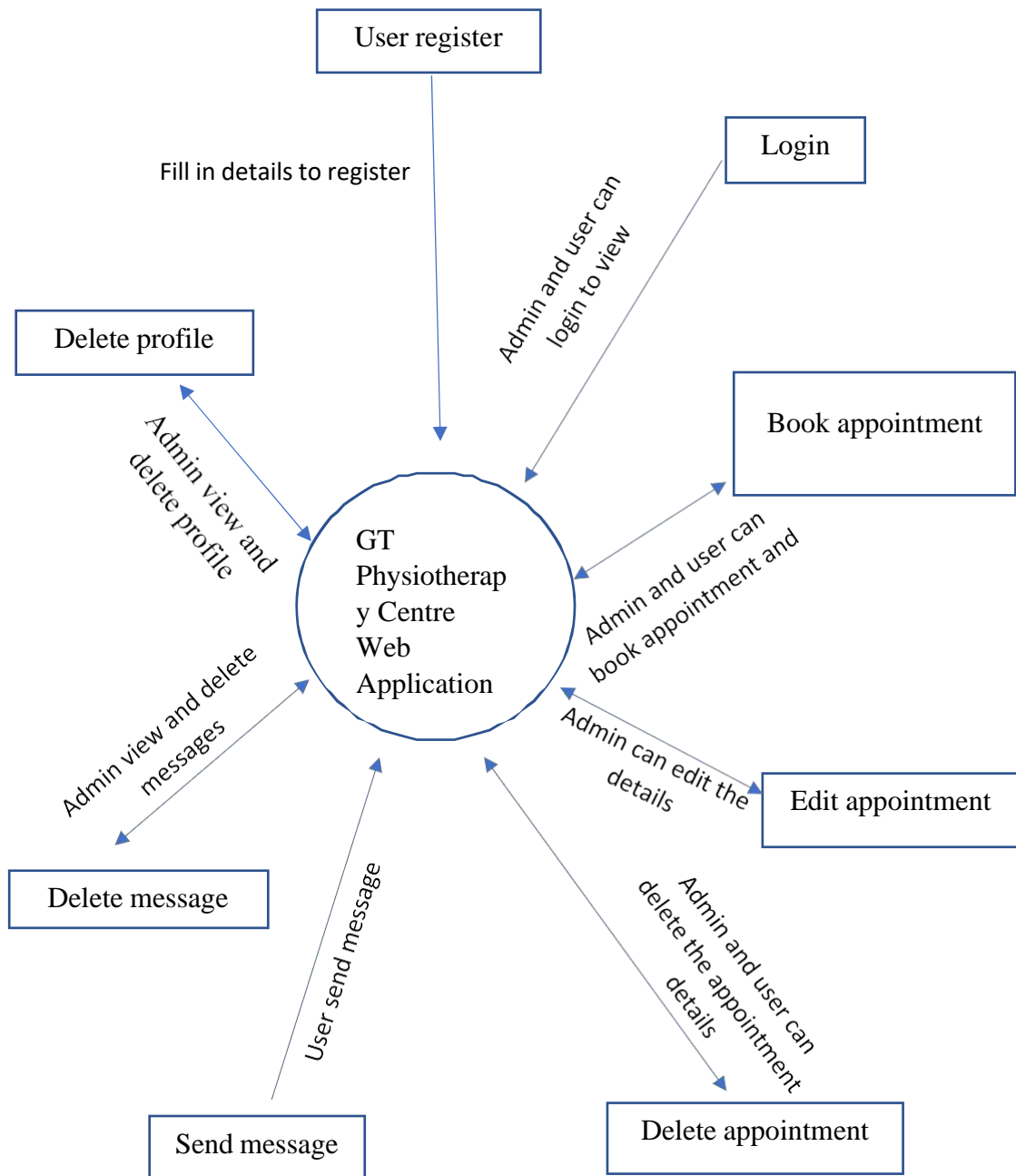


Figure 3.2 Context Diagram

To start the application, admin will login to enter the admin menu. Once login successful, admin will direct to admin menu that contain dashboard, appointment, inbox and user directory. To view the databases user can click the dashboard. By clicking the appointment option, admin can view the booked appointment data. Admin can also add new booking, while can edit and delete the listed details of appointments. Admin can view and delete the messages that is sent by the user by clicking the inbox option. Admin also can view users details in user directory while can delete by clicking delete button. In the end, admin can logout from the application.

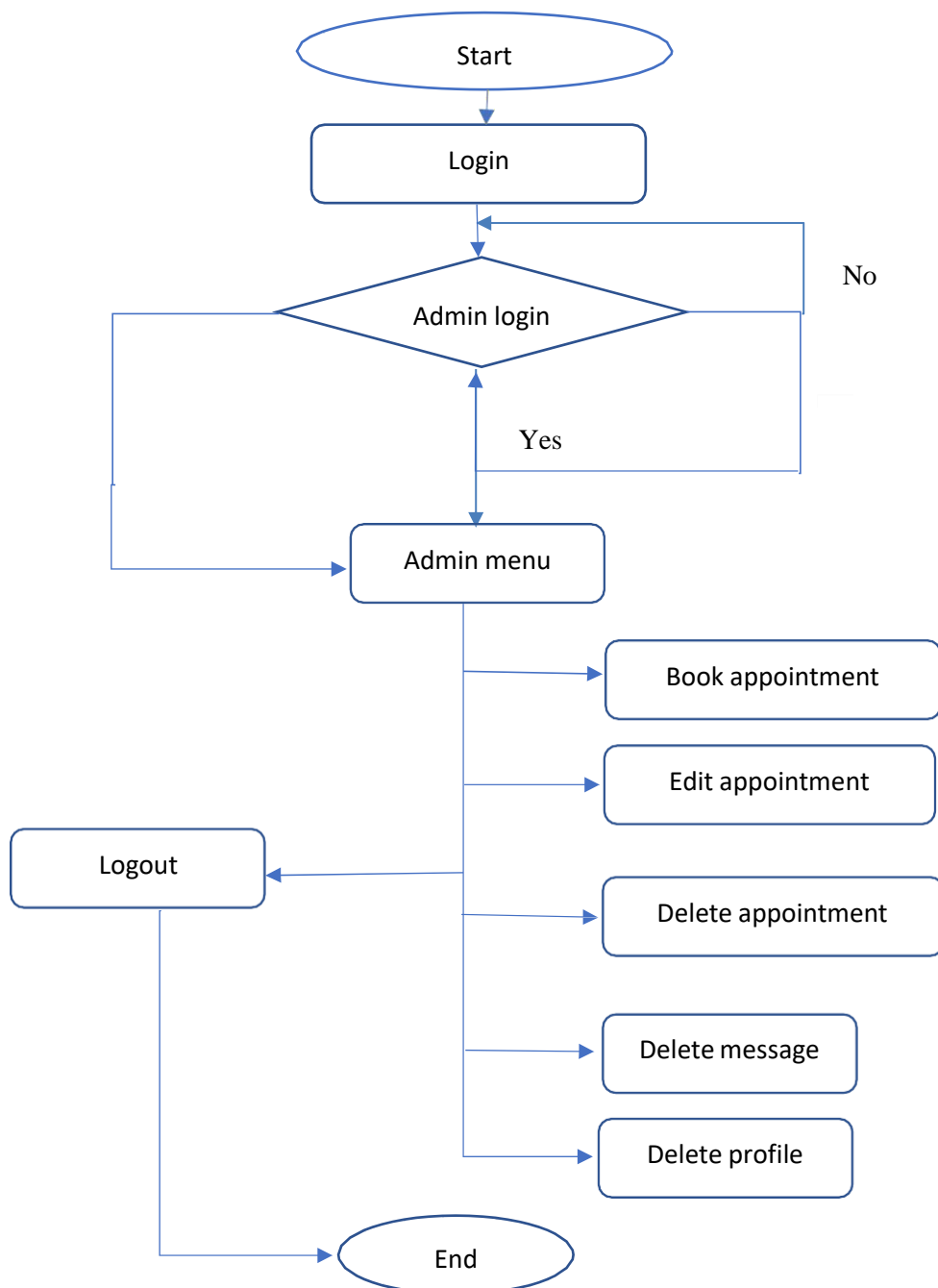


Figure 3.3 Flow Chart of admin

To start the application, user will register and login to enter the user menu. Once login successful, user will direct to user menu where user can view the details of the centre, book appointments and send messages. User can book appointment by filling up and sending the appointment details. User can view their booked details in profile. User can also send messages to admin. Finally, user can logout.

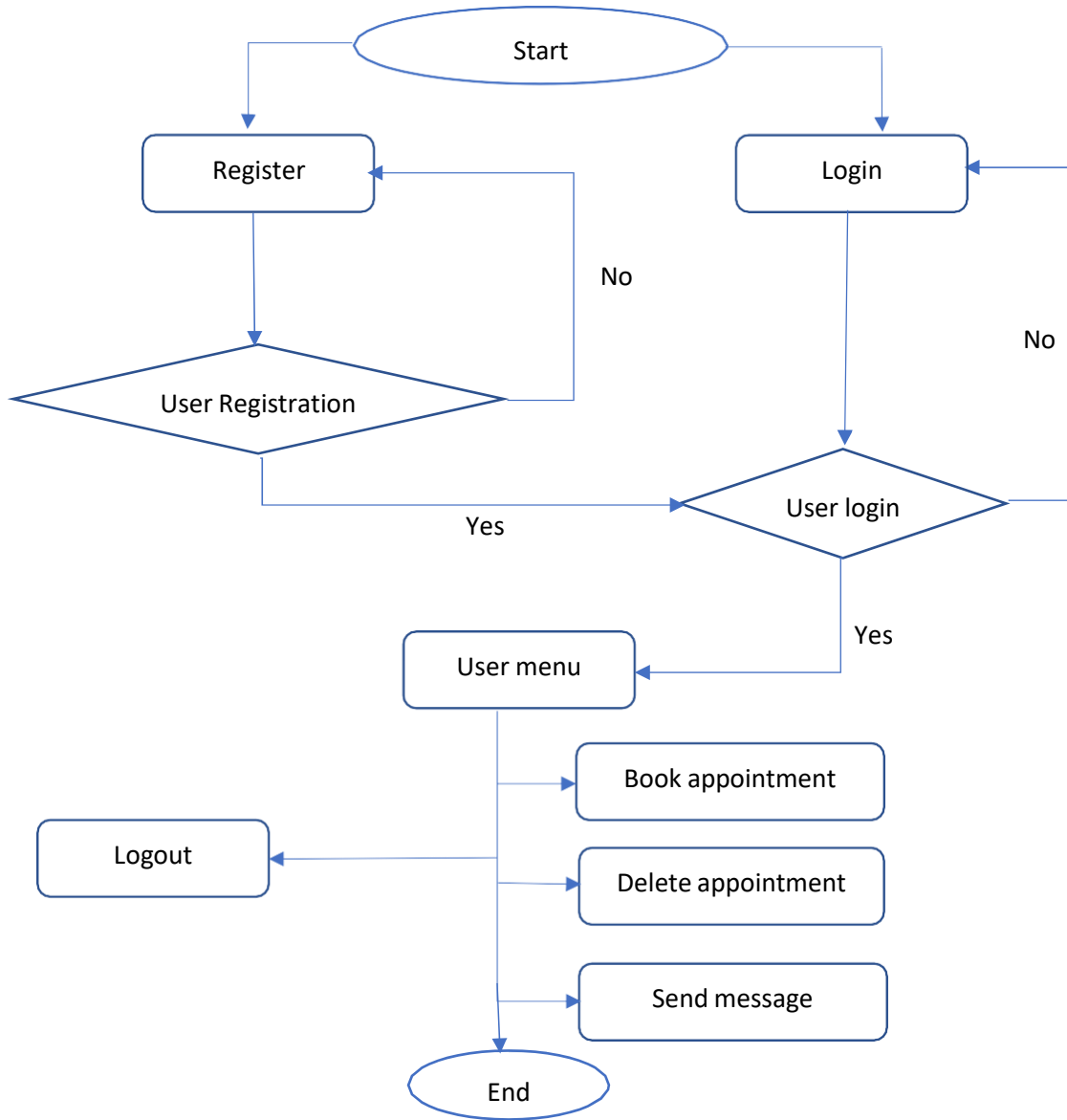


Figure 3.4 Flow Chart of user

### 3.2 Physical Design

There will be main page when user enters the web application. there will be two options for user namely as 'Admin' and 'User'.



Figure 3.6 Main Page

Admin is chosen, it will enter to admin login. If succeeded login, it will direct to admin menu.

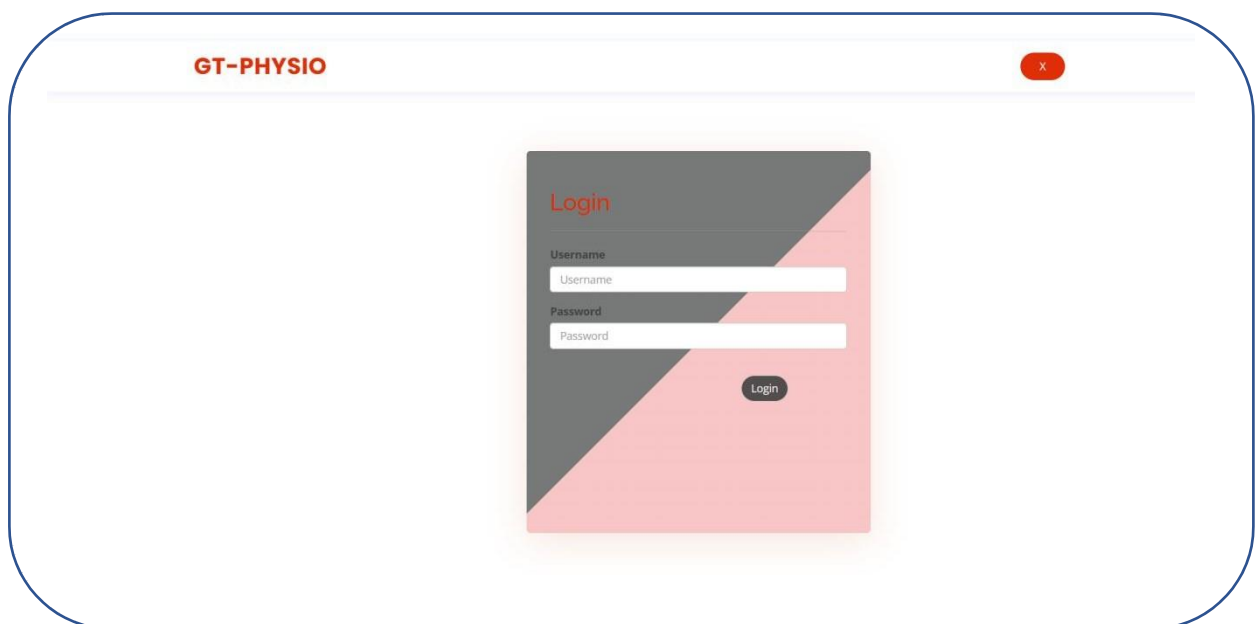


Figure 3.7 Login page

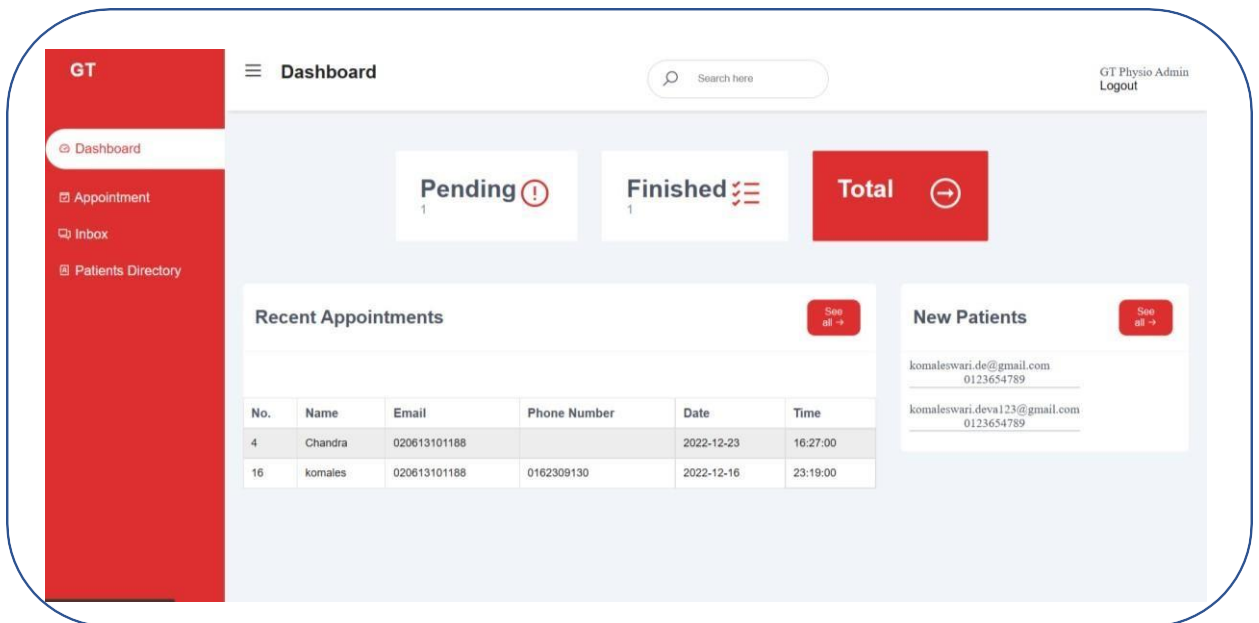


Figure 3.8 Dashboard

Once admin enters the admin menu, admin can view the databases and some other details. If admin choose appointment, there admin can view the booked user appointment details. Admin can add new bookings, edit the details and delete the details.

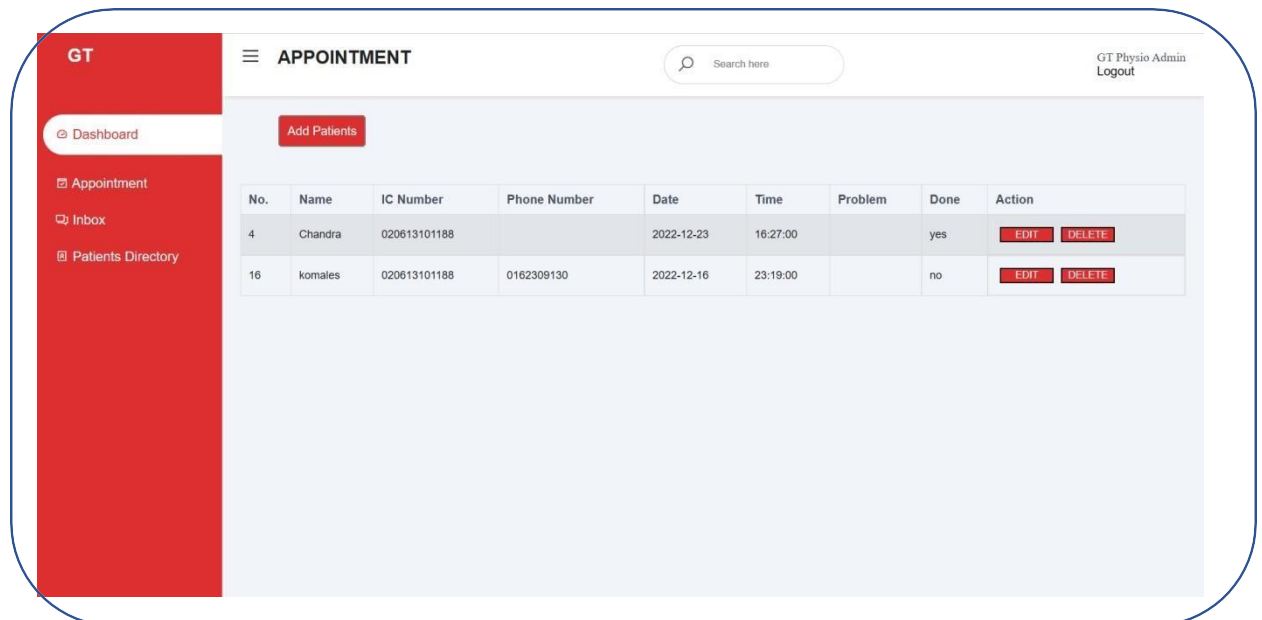


Figure 3.9 Appointment page

Admin can fill in the patient's details and click submit to save the appointment details.

The screenshot shows a web interface for adding new patient data. At the top left, it says "INSERT PATIENTS DATA". To the right is a search bar labeled "Search here" and a user profile "GT Physio Admin Logout". On the left side, there is a red "Back" button. The main area contains a form with the following fields:

Patients Name	:	<input type="text"/>
IC Number	:	<input type="text"/>
Phone Number	:	<input type="text"/>
Date	:	<input type="text" value="dd/mm/yyyy"/>
Time	:	<input type="text" value="--:--"/>
Problem	:	<input type="text"/>

At the bottom right of the form area, there is a red "Submit" button.

Figure 3.10 Add new booking page

Admin can edit the patient's details by editing the fields and click submit.

The screenshot shows a web interface for updating patient data. At the top left, it says "UPDATE PATIENTS DATA". To the right is a search bar labeled "Search here" and a user profile "GT Physio Admin". On the left side, there is a red "Back" button. The main area contains a form with the following fields:

Patients Name	:	<input type="text" value="Chandra"/>
IC Number	:	<input type="text" value="020613101188"/>
Phone Number	:	<input type="text"/>
Date	:	<input type="text" value="23/12/2022"/>
Time	:	<input type="text" value="04:27 PM"/>
Problem	:	<input type="text"/>
Done	:	<input type="checkbox"/> Done <input type="checkbox"/> Pending

At the bottom right of the form area, there is a red "Submit" button.

Figure 3.11 Update booked data page

In inbox, admin can view the messages that is sent by users and can delete the messages is does not need. This if for latest messages.

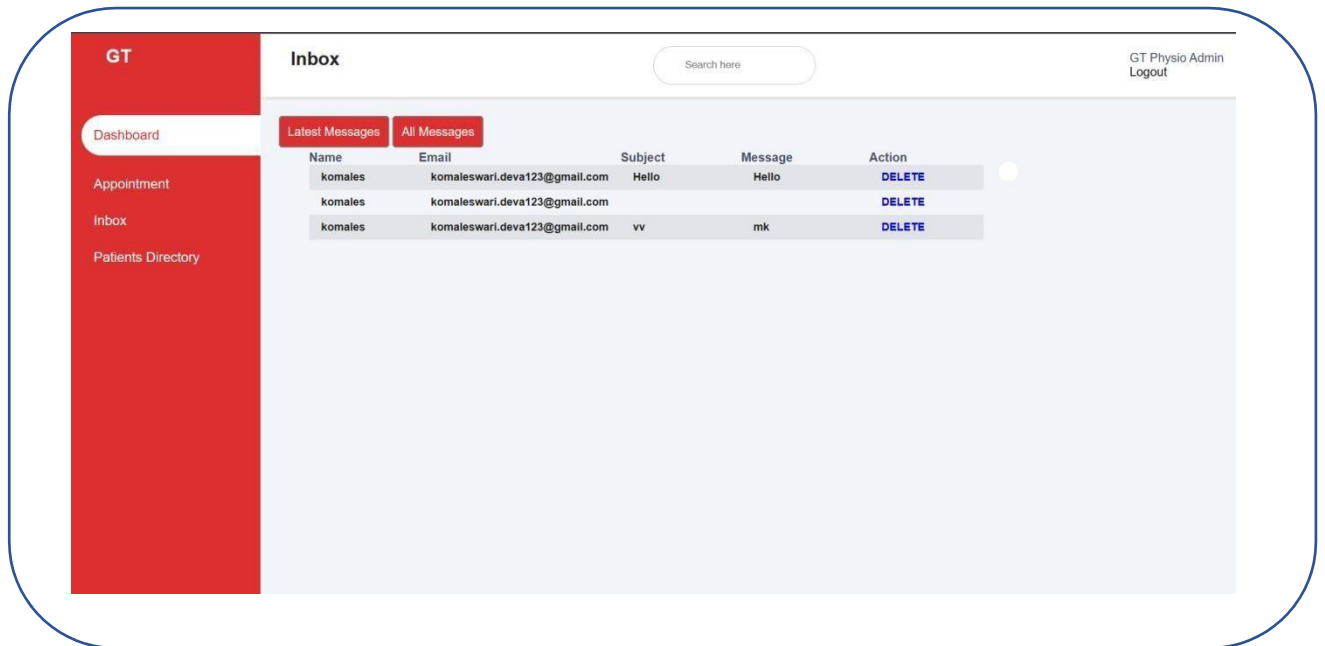


Figure 3.12 Inbox page

This is for all messages.

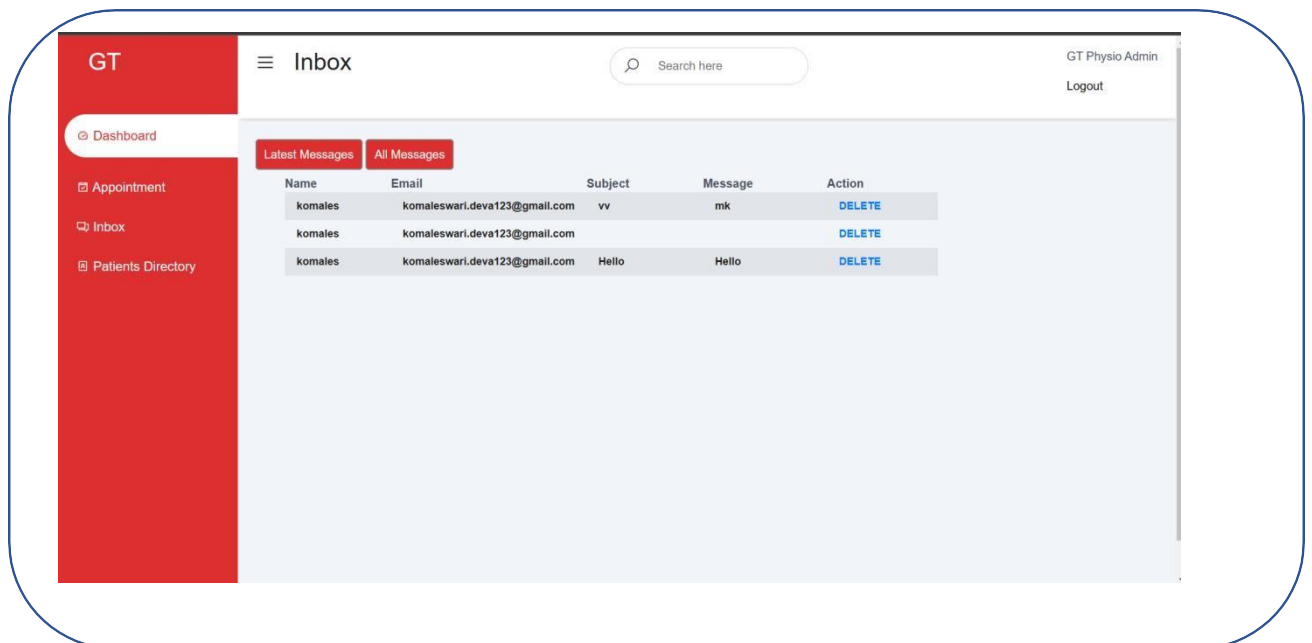


Figure 3.13 Inbox page



In user directory, user can view details of registered users and can delete their details.

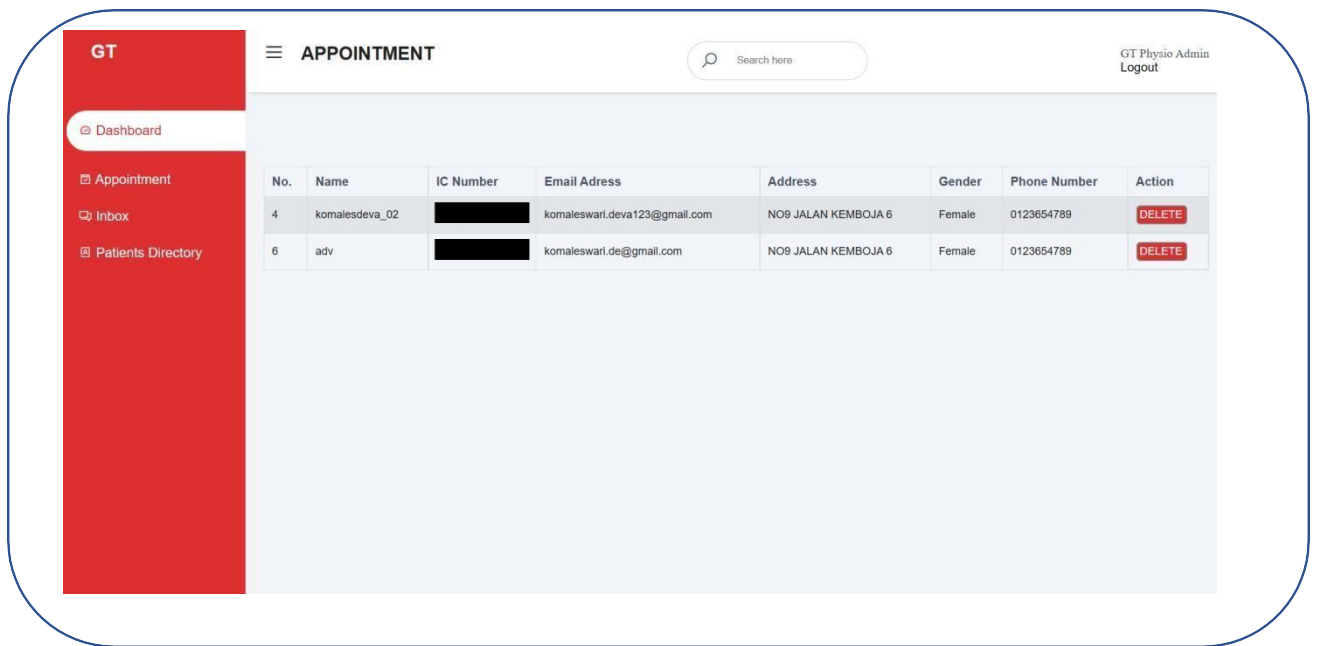


Figure 3.14 User directory

Finally, admin can logout.

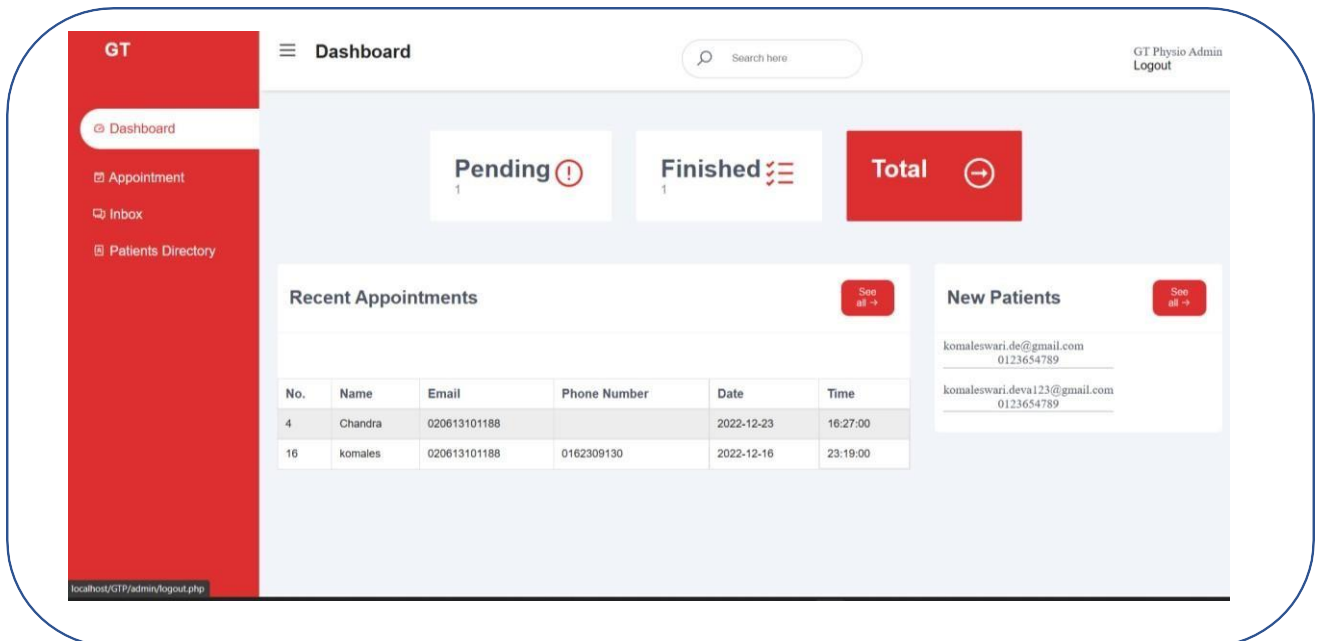
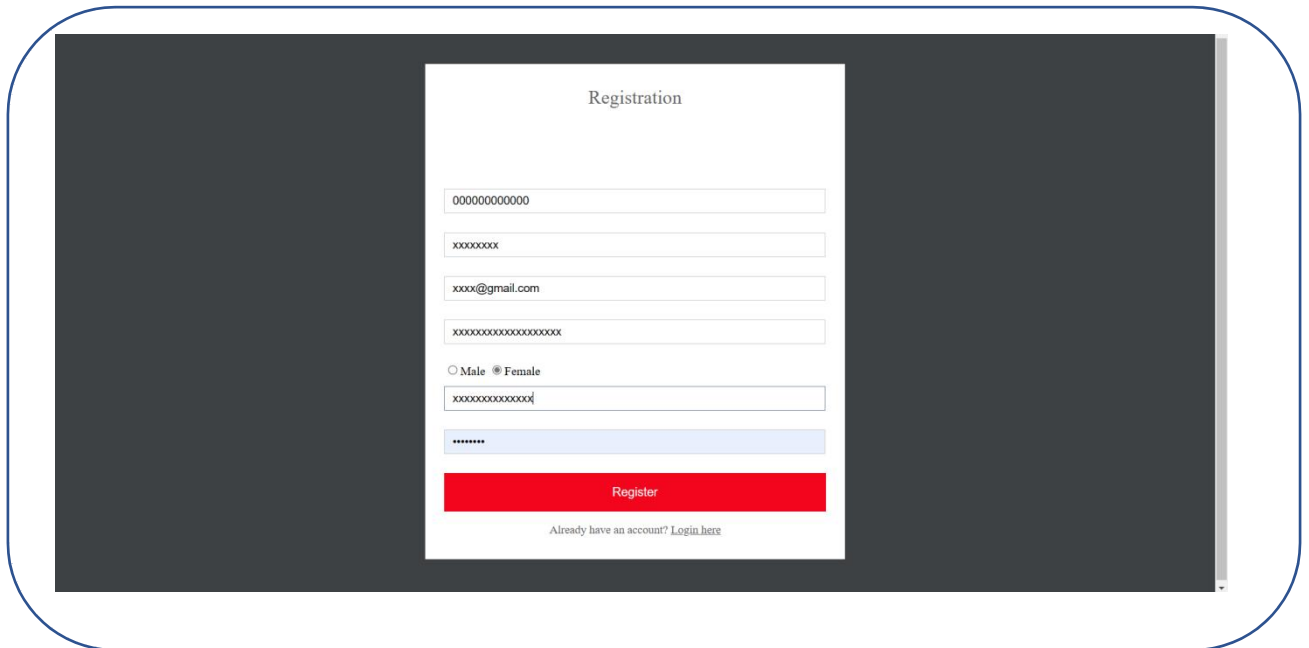


Figure 3.15 Admin dashboard

If 'User' is chosen, it will enter to register page.

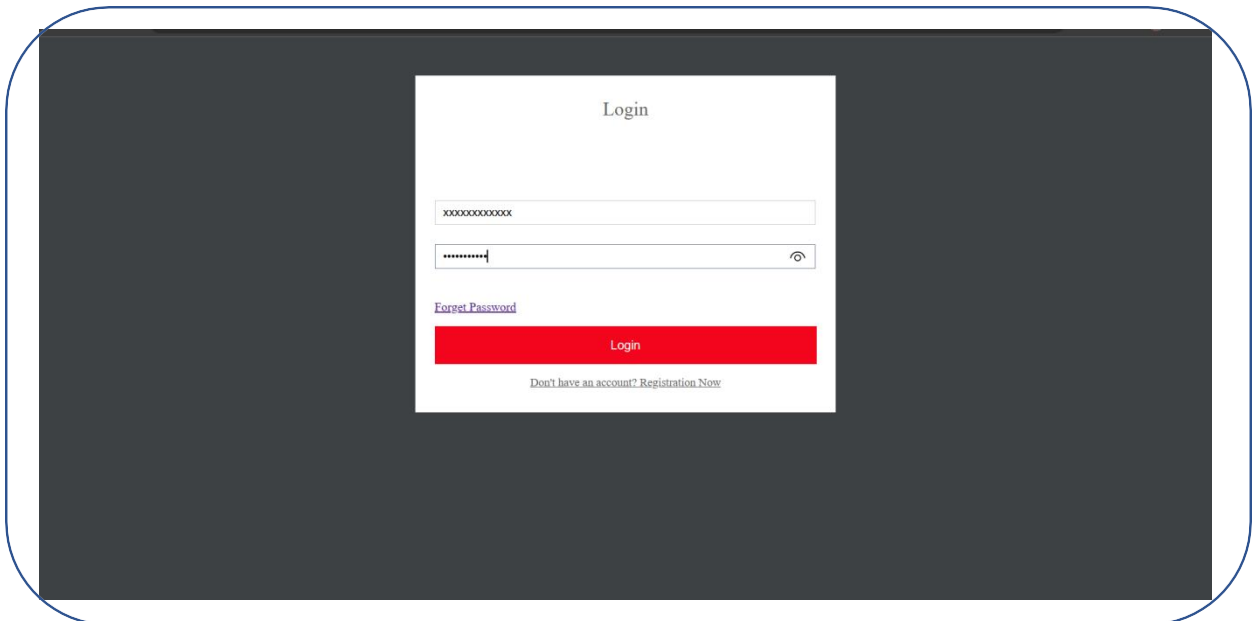


The screenshot shows a registration form with the following fields and elements:

- Title: Registration
- Field 1: 000000000000
- Field 2: xxxxxxxx
- Field 3: xxxx@gmail.com
- Field 4: xxxxxxxxxxxxxxxxxxxx
- Gender selection:  Male  Female
- Field 5: xxxxxxxxxxxxxx
- Field 6: \*\*\*\*\*
- Register button: A red button with the text "Register".
- Footer: "Already have an account? [Login here](#)"

Figure 3.16 User registration

Next, when user successfully registered, it will enter to login page.



The screenshot shows a login form with the following fields and elements:

- Title: Login
- Field 1: xxxxxxxxxxxx
- Field 2: \*\*\*\*\* with a visibility toggle icon.
- Link: [Forget Password](#)
- Login button: A red button with the text "Login".
- Footer: "Don't have an account? [Registration Now](#)"

Figure 3.17 User login

In addition, user successfully login it will enter to user menu.



Figure 3.18 User page

Once user login to the page, user can freely book their appointment by filling in the details and can view the details in profile.

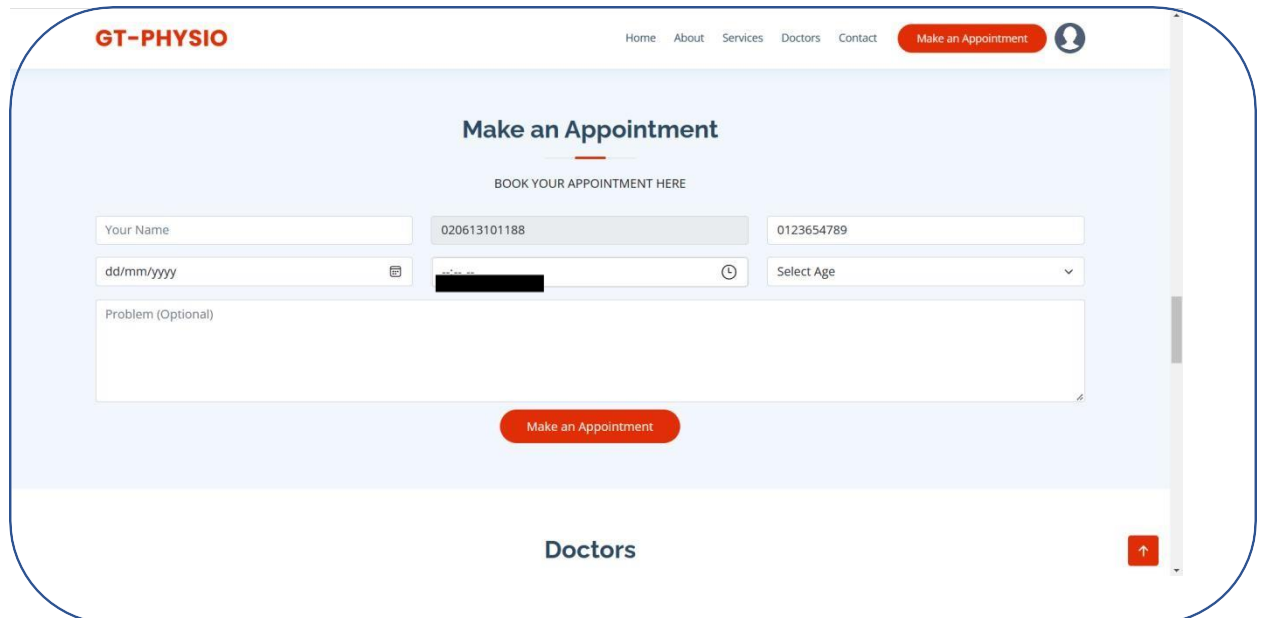


Figure 3.19 Book appointment

User can click profile in order to view their booking history.

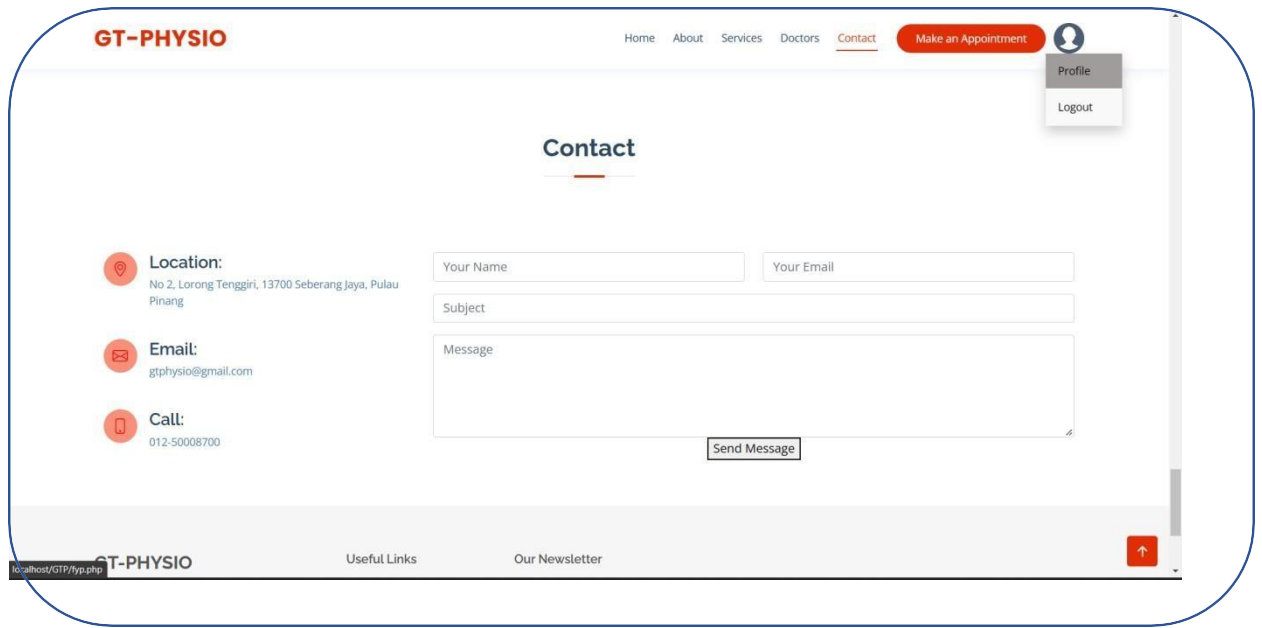


Figure 3.20 User Profile Navigation

User can view their booking history.

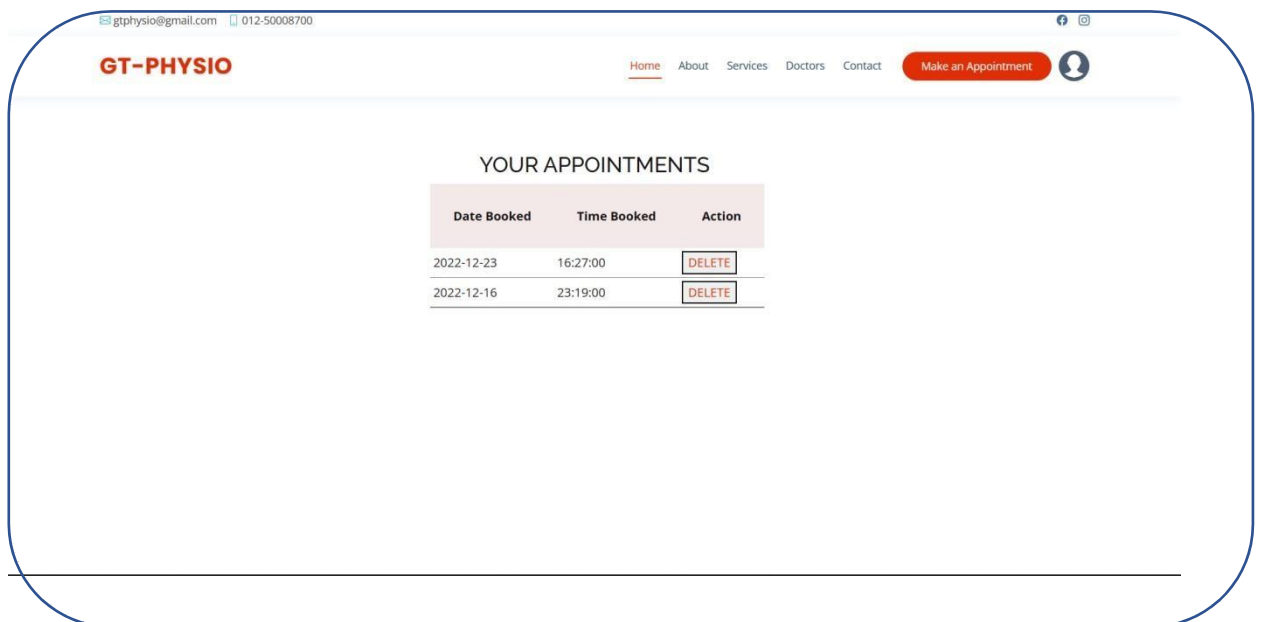


Figure 3.21 User Profile

User can send message to admin by filling in the details.

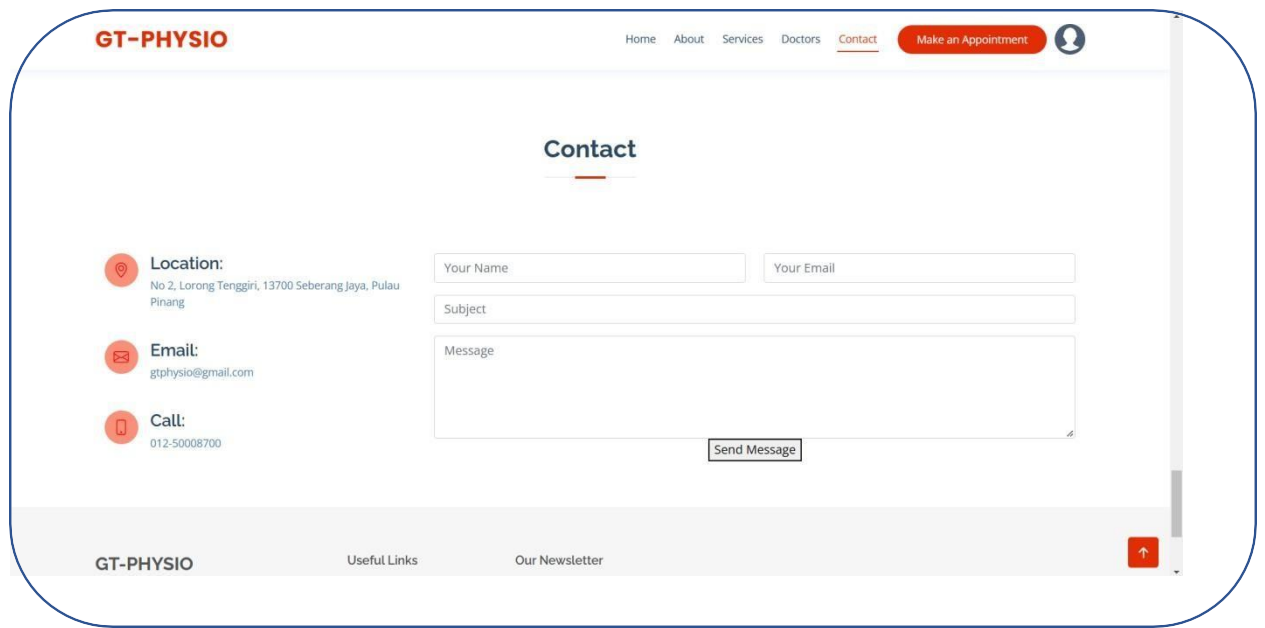


Figure 3.22 Contact

Finally, user can logout.

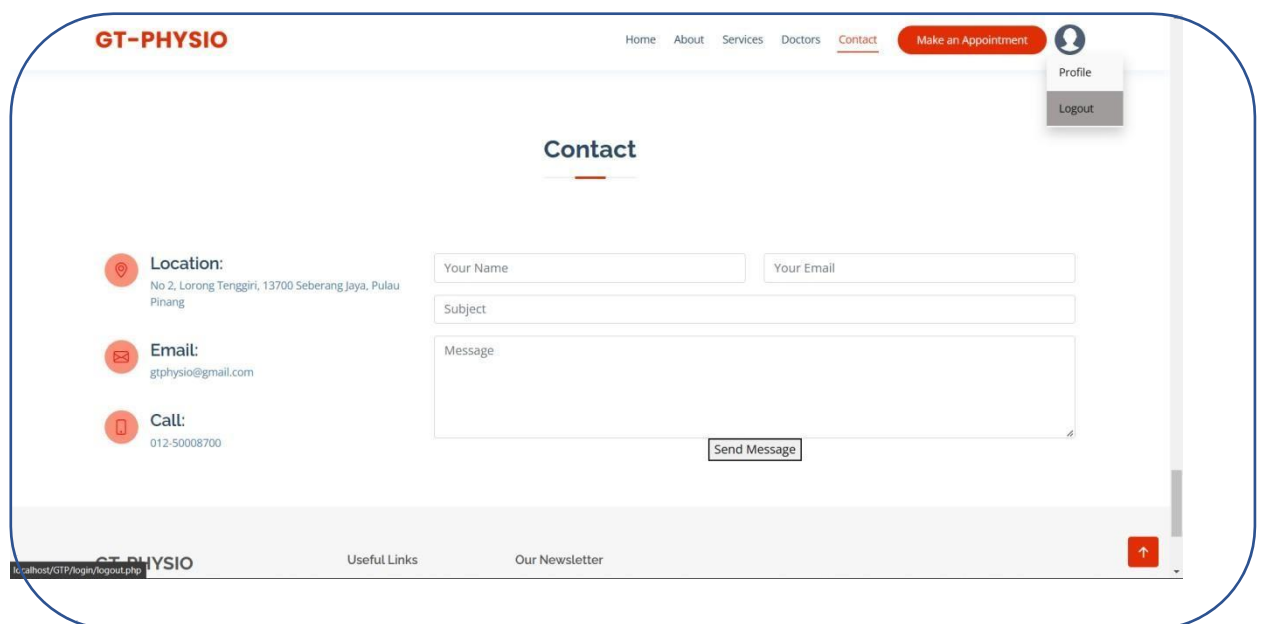


Figure 3.23 Logout

It will navigate to main page when user logout.



Figure 3.24 Web Application main page

To store the database admin uses phpMyAdmin. Figure 3.24 show the structure of gtpdb database.

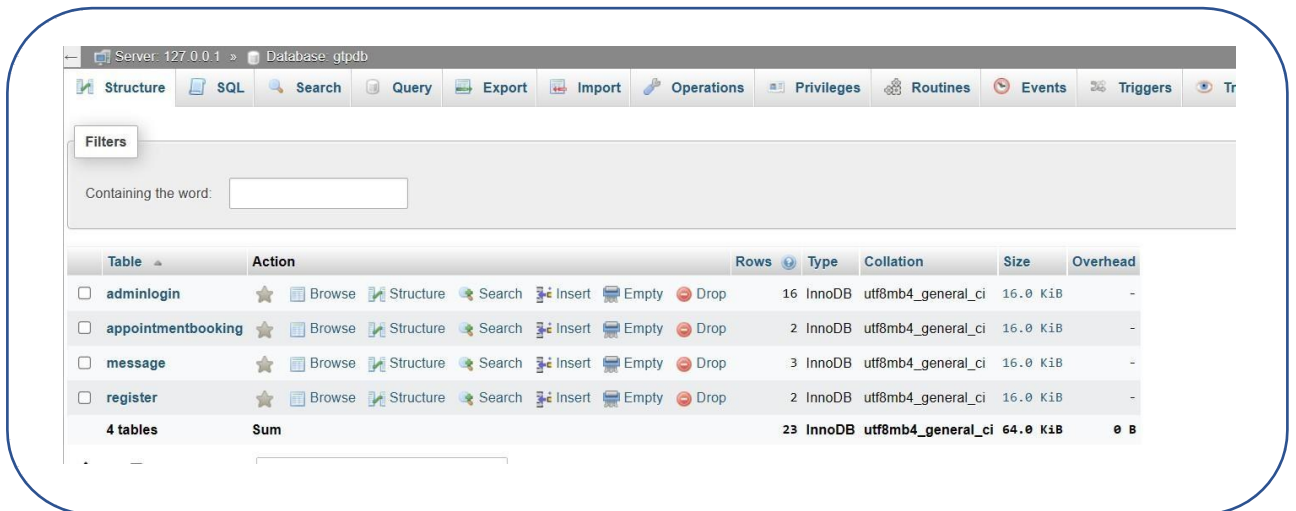


Figure 3.25 Database structure

When admin login to the website it will be saved in the 'adminlogin' table. The details of login such as username, password and date and time will be saved.

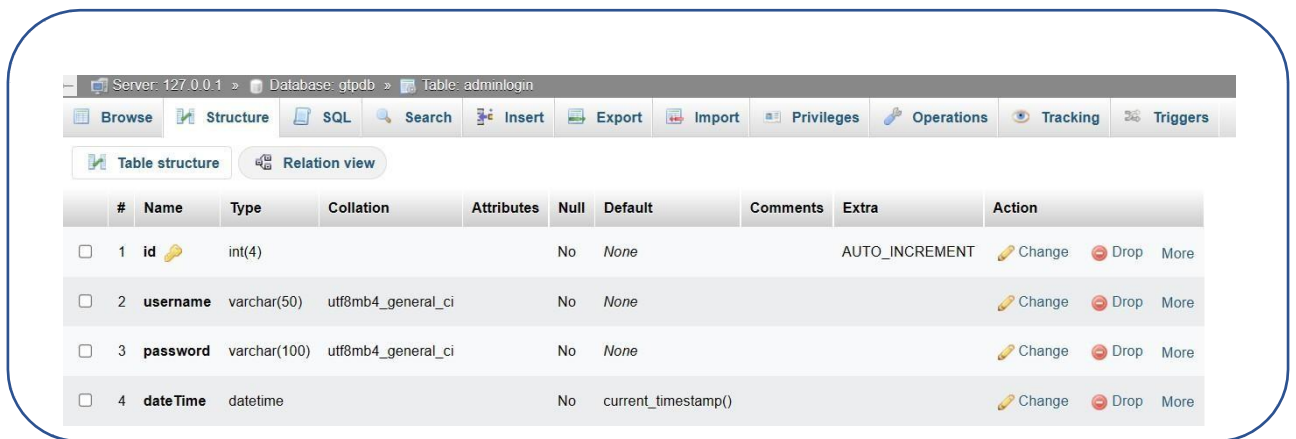


Figure 3.26 Structure of admin login table

When user and admin add new bookings for appointment it will be saved in 'appointmentbooking' table. Booking history of the appointment will be fetched from here and display it in user profile while when user delete the data, it will be updated in this table. In appointment interface in admin menu, the data will be fetched from here and will be saved here when admin edit or delete. The data that will be saved is name, ic number, phone number, date, time, problem and result.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	Name	varchar(50)	utf8mb4_general_ci		No	None			Change Drop More
3	ic	varchar(12)	utf8mb4_general_ci		No	None			Change Drop More
4	Number	varchar(15)	utf8mb4_general_ci		No	None			Change Drop More
5	Date	date			No	None			Change Drop More
6	Time	time			No	None			Change Drop More
7	Problem	text	utf8mb4_general_ci		No	None			Change Drop More
8	Done	varchar(5)	utf8mb4_general_ci		No	None			Change Drop More

Figure 3.27 Structure of appointment booking table

The messages that is sent by the user will be saved in message table and it will be fetched from here and display it in inbox at admin menu. When, admin make any changes it will be updated here. In this table, data that will saved is name, email, subject and message.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(4)			No	None		AUTO_INCREMENT	Change Drop More
2	Name	varchar(50)	utf8mb4_general_ci		No	None			Change Drop More
3	Email	varchar(100)	utf8mb4_general_ci		No	None			Change Drop More
4	Subject	varchar(200)	utf8mb4_general_ci		No	None			Change Drop More
5	Message	text	utf8mb4_general_ci		No	None			Change Drop More

Figure 3.28 Structure of message table



The details of user who register will be saved in 'register table. In this table, it will contain name, ic number, email, address, gender, number and password. The details that are saved here will be displayed user directory.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/>	1 <b>id</b>	int(11)			No	None		AUTO_INCREMENT	Change  Drop  More
<input type="checkbox"/>	2 <b>name</b>	varchar(50)	utf8mb4_general_ci		No	None			Change  Drop  More
<input type="checkbox"/>	3 <b>ic</b>	varchar(12)	utf8mb4_general_ci		No	None			Change  Drop  More
<input type="checkbox"/>	4 <b>email</b>	varchar(50)	utf8mb4_general_ci		No	None			Change  Drop  More
<input type="checkbox"/>	5 <b>address</b>	varchar(100)	utf8mb4_general_ci		No	None			Change  Drop  More
<input type="checkbox"/>	6 <b>gender</b>	varchar(10)	utf8mb4_general_ci		No	None			Change  Drop  More
<input type="checkbox"/>	7 <b>number</b>	varchar(15)	utf8mb4_general_ci		No	None			Change  Drop  More
<input type="checkbox"/>	8 <b>password</b>	varchar(50)	utf8mb4_general_ci		No	None			Change  Drop  More

Figure 3.29 structure of register table

## CHAPTER 4.0 TESTING

After we done developing web application and added the functions where data enters into database, we did testing before give it to the users. We uses three stages of testing which is unit testing, integration testing and application testing.

### 4.1 Unit Testing

Table 4.1 User Unit Testing Table

User						
No	Test Case	Test Procedure	Pre-Condition	Expected Result	Tester	Result (Pass/Fail)
1	Log in	User must enter their registered 'ic number' and 'password' and click login.	User must have an existing account based on their position.	User is redirected to their specific home page based on their position.	Chandraleka	Pass
2	Register	User must fill in the required fields to create new account for specific new user and click register.	The account for new user is about to create does not exist.	User Is redirected to the login page.	Chandraleka	Pass
3	Forget Password	User is required to fill in ic number and new password to change the password.	Users (all) must registered before.	The user is redirected to login page.	Chandraleka	Pass

4	Book appointment	Users must fill in the require details and click make an appointment.	User must login before making an appointment.	The Data is shown in profile	Chandraleka	Pass
5	Delete appointment	User must click the delete button in according to their preference details.	User must book an appointment before.	The data will be deleted from the table.	Chandraleka	Pass
6	Send message	User must fill the required details.	All the data must exists.	Message sent prompt will be displayed.	Chandraleka	Pass
7	Logout	User must click logout.	User must login to the web application	User will redirect to main page	Chandraleka	Pass

Table 4.2 Admin Unit Testing Table

Admin						
No	Test Case	Test Procedure	Pre-Condition	Expected Result	Tester	Result (Pass/Fail)
1	Log in	Admin must enter their 'username' and 'password' and click login.	User must have know the correct username and password	User is redirected to their specific home page based.	Chandraleka	Pass

2	Book appointment	Admin must fill in the require details and click make an appointment.	Admin must login before making an appointment.	The data will be shown in the table in appointment.	Chandraleka	Pass
3	Edit appointment	Admin must fill in the require details and click update	Admin must enter required data in the fields	The data will be shown in the table in appointment.	Chandraleka	Pass
3	Delete appointment	Admin must click the delete button in according to their preference details.	Admin must book an appointment before.	The data will be deleted from the table.	Chandraleka	Pass
4	Edit message	Admin must click delete.	Admin must login	The data will be disappeared	Chandraleka	Pass
5	Delete profile	Admin must click delete.	Admin must login	The data will be disappeared	Chandraleka	Pass
6	Logout	Admin must click logout.	Admin must login to the web application	Admin will redirect to main page	Chandraleka	Pass

## 4.2 Integration Testing

Table 4.3 User Integration Testing Table

User						
No	Test Case	Test Procedure	Pre-Condition	Expected Result	Tester	Result (Pass/Fail)
1	Log in	User must enter their registered 'ic number' and 'password' and click login.	User must have an existing account based on their position.	The session will be started	Chandraleka	Pass
2	Register	User must fill in the required fields to create new account for specific new user and click register.	The account for new user is about to create does not exist.	The details will be saved in register table in the database	Chandraleka	Pass
3	Forget Password	User is required to fill in ic number and new password to change the password.	Users (all) must registered before.	The password will be updated in register table in database.	Chandraleka	Pass
4	Book appointment	Users must fill in the require details and click make an appointment.	User must login before making an appointment.	The data that have been filled by user will be saved in appointment booking table in database.	Chandraleka	Pass

5	Delete appointment	User must click the delete button in according to their preference details.	User must book an appointment before.	The data that have been deleted by user will be deleted from appointment booking table in database.	Chandraleka	Pass
7	Send message	User must fill the required details.	All the data must exists.	The data that have been filled by user will be saved in message table in database.	Chandraleka	Pass
8	Logout	User must click logout.	User must login to the web application	The session ends.	Chandraleka	Pass

Table 4.4 Admin Integration Testing Table

Admin						
No	Test Case	Test Procedure	Pre-Condition	Expected Result	Tester	Result (Pass/Fail)
1	Log in	Admin must enter their 'username' and 'password' and click login.	User must have know the correct username and password	The details will be saved in adminlogin table in database	Chandraleka	Pass
2	Book appointment	Admin must fill in the require details and click make an appointment.	Admin must login before making an appointment.	The data that have been filled by user will be saved in appointment booking table in database.	Chandraleka	Pass

3	Edit appointment	Admin must fill in the require details and click update	Admin must enter required data in the fields	The data will be will be updated in appointmentbooking table in databse.	Chandraleka	Pass
34	Delete appointment	Admin must click the delete button in according to their preference details.	Admin must book an appointment before.	The data that have been deleted by user will be deleted from appointment booking table in database.	Chandraleka	Pass
45	Delete message	Admin must click delete.	Admin must login	The data that have been deleted by user will be deleted from message table in database.	Chandraleka	Pass
6	Delete profile	Admin must click delete.	Admin must login	The data that have been deleted by user will be deleted from register table in database.	Chandraleka	Pass
7	Logout	Admin must click logout.	Admin must login to the web application	Admin will redirect to main page	Chandraleka	Pass

### 4.3 User acceptance

Table 4.5 User acceptance Table

USER					
No	Test Case	Acceptance Requirement	Expected Result	Tester	Result (Pass/Fail)
1	Log in	Users are prompted to fill in the username and password fields to log in into the web application	Users will be able to log in and be redirected to their specific home page	Chandraleka	Pass
2	Register	Users are prompted to fill all fields to register into the web application	User is redirected to the login page	Chandraleka	Pass
3	Forget Password	User is required to fill in ic number and new password to change the password.	User is redirected to login page.	Chandraleka	Pass
4	Book Appointment	Users must fill in the require details and click make an appointment.	A successfully booked prompt will appear	Chandraleka	Pass
5	Delete Appointment	User must click the delete button in according to their preference details.	The data from the table will be disappear	Chandraleka	Pass
7	Send Message	User must fill the required details.	A prompt will appear.	Chandraleka	Pass



8	Logout	User must click logout.	User will be redirect to main page	Chandraleka	Pass
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Table 4.6 Admin acceptance Table

Admin					
No	Test Case	Test Procedure	Expected Result	Tester	Result (Pass/Fail)
1	Log in	Admin must enter their 'username' and 'password' and click login.	User is redirected to their specific home page based.	Chandraleka	Pass
2	Book appointment	Admin must fill in the require details and click make an appointment.	The data will be shown in the table in appointment.	Chandraleka	Pass
3	Edit appointment	Admin must fill in the require details and click update	The data will be shown in the table in appointment.	Chandraleka	Pass
4	Delete appointment	Admin must click the delete button in according to their preference details.	The data will be deleted from the table.	Chandraleka	Pass
5	Edit message	Admin must click delete.	The data will be disappeared	Chandraleka	Pass

6	Delete profile	Admin must click delete.	The data will be disappeared	Chandraleka	Pass
7	Logout	Admin must click logout.	Admin will redirect to main page	Chandraleka	Pass

## CHAPTER 5.0 DISCUSSION

### 5.1 Advantages of web application

This Physiotherapy Centre Web Application has its own advantages compared to other appointment booking applications. Firstly, admin can manage the user's appointments digitally and easily. They won't miss any data because all the data will be saved securely and there is no need to do paper works for manual appointment bookings. This application will help the user to organize the data systematically.

Moreover, this web application is more time saving. User will need only phone or any other gadget to make their appointment. It will not take more than five minutes to book their appointments. It will be very helpful web application for busy people such as working users. The admin spends less time on managing appointments, and phone booking, therefore, they can use their free time for more urgent and vital tasks.

Other than that, user can view their booked time and date with only one step which is clicking profile. For the manual booking system, user need to remember their booked date and time if they forgot it, user have to contact the centre to get the details. The solution for this problem is solved in the web application, where user can always view the details in the application.

Furthermore, beyond simplifying admin management, this web application also provides a helpful means of automation for the bookings, freeing up valuable staffs time. Automation also eliminates the chance of users not being able to book because your staffs are busy scheduling other clients.

Adding on, this web application is easy to use from anywhere in anytime. It will be more convenient for the user to use it. User can use this website anytime because it will be work for 24-hours.

## **5.2 Disadvantages of web application**

Although, this web application has more advantages but it has also some disadvantages.

### **5.2.1 Inconvenience of Internet**

This website needs Internet connection to access. It will be the major problem for the user and admin to use when there is loss of internet connections. The databases that is used when booking an appointment needs internet connection to work. Otherwise, the data that is sent will not save.

### **5.2.2 Low level of security**

The level of security for admin menu is not much stronger. This is because for the admin username and password all the admin will use one default username and password. It will be helpless when it comes to protect from intrusion by other parties. Therefore, the risk of invasion from those parties should not be high in order to protect the data.

### **5.2.3 Difficult for some customers**

The use of this web application will be harder for those is not computer-savvy. Some potential customers might find it difficult to find or fill out your appointment form, meaning you may lose them in the process. It will not be easy for the elders to use this web application as they have to seek for others help.

### **5.2.4 Communication problems**

One drawback is that it eliminates the initial interaction between staffs and the clients, in what would otherwise be a stellar opportunity to connect with them. They likely won't interact with them at all until the appointment happens.

## **CHAPTER 6.0 CONCLUSION**

Overall, the result of a comprehensive study of the establishment this application, it shows that it succeeded in achieving all three objectives of the establishment. This project is to create a web application for GT Physiotherapy Centre to improvise and computerize appointment booking and database management of the physiotherapy centre. Besides, in order to accommodate physiotherapy users to have a companion which reminds and gives the right guidance to improve their health condition from this web application. Other than that, this web application provides user with quick and easy access to information such as contact, appointment and direction to the physiotherapy centre. According to that, we strongly believed that the web application that we built can be a problem solver for GT Physiotherapy Centre.

## CHAPTER 7.0 REFERENCE

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