DESIGN AND IMPLEMENTATION OF E-Medical Service

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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
SEPTEMBER, 2020

APPROVAL

This Project titled "**E-Medical Service"** submitted by **MD. NAZMUL HASAN** and **Morhed Khalish Mukut** 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 22/9/2020

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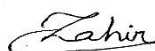Faculty of Science & Information Technology
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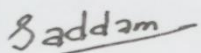**Gazi Zahirul Islam**   **Internal Examiner**
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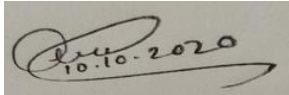**Assistant Professor**
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DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Sharmin Akter, Lecturer, 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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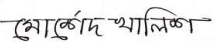
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Acknowledgement

First we express our heartiest thanks and appreciation to almighty Allah for His perfect gift makes us conceivable to finish the last year venture/entry level position effectively.

We truly appreciative and wish our achievement to Lecturer Sharmin Rima, Lecturer of CSE , Daffodil International University, Dhaka who guided us in the field of "Plan and execution of e-clinical assistance" to do this undertaking. Her endless ingenuity, academic guideless, constant help, consistent and vivacious administration, accommodating examination, significant advice, scrutinizing various average drafts and modifying them at all stage have caused all that phase to have made it possible to complete this undertaking. We should offer our heartiest gratitude to all the management stuff of Department of CSE, for their kindhearted help to finish our endeavor and besides to other representative and the staff of CSE part of Daffodil International University.

We might want to thank our whole course mate in Daffodil International University, who participated in this talk about while finishing the course work. At last, we should recognize with due regard the consistent help and patients of our folks.

Dedication

I dedicate my dissertation work to my family and many friends. A special feeling of gratitude to my loving supervisor, Sharmin Akter whose words of encouragement and push for tenacity ring in my ears. I am so pleased with my co-supervisor DR. Fizar Ahmed also. My sisters Sadia Farzana have never left my side and are very special.

Abstract

This development primarily best paper is on "design and implementation of e-medical service". This development based paper give the exact important points of online medical help and medical equipment buying facility in this era. We made this by using laravel framework including HTML,CSS,Javascript,Jquery . Any communication community is possible between doctors, nurse. Among them any public can also call doctor and nurse at their home. In this development based project, the general public can also buy medical equipment. This has been discovered flexibility between medical sector and public.

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Related Diagrams

CHAPTER 1: INTRODUCTION

1.1 Introduction

Successful online clinical arrangement is an on the web application it permits the patient to book arrangements through online enlistment .A more convenient approach going on the web is a simple lifestyle people take plan of action to on the web exchanges for a more secure, advantageous and smoother lifestyle. It is hard to deal with the patients by direct paper arrangement. Throughout the most recent twenty years, the human services has gotten the most significant social insurance administration in many created nations .It is hard to get arrangements by direct contact to the emergency clinic and remaining in a line. The fundamental idea of this venture is to get simple arrangements through online application which settle the issue to the patients. With this application the push to the patients will be diminished which contains the subtleties of the specialist and their accessible time and the time will be put something aside for the specialists and patients. The specialist can plan his own time. Beside that any patient can buy medical equipment like Oximeter, Stethoscope, Oxygen cylinder etc. from home

1.2 Motivation

Here in the third world country, medical service is quietly messy things. Many people don't know the specialist of a disease, many people don't know the fees of a doctor, and many people don't get the exact serial what they are expecting. Think about in this covid-19 situation .Many people don't know that where they can find doctor, where they can find ICU. Besides that, we can see in the covid-19 situation that some the patient need oxygen cylinder, oximeter, nebulizer etc.

So we proposed a system where a patient can hire a nurse to their home, doctor to their home, doctor chamber's appointment where life goes easier

1.3 Objective

- Main objectives of this is making easy the medical services

- To prevent any weird situation on a patient.

- To make life easier.

- To construct a smart employment system doctor and nurse.

- Implement in buying medical equipment to the patient/customer.

1.4 Expected Outcome

The point of this undertaking is to make a stage where patients and specialists can get to/collaborate proficiently with one another and give straightforwardness and solace to the patients. It moreover plans to determine the issues that the service getter client need to confront and pick a arrangements and keeping clinical documents. Service getter client can pick a clinical expert dependent on his proficient info and other service taker's audits. And admin can see a service taker request and refer him/her to a doctor.

This is what we getting from the fact:

• Specialist provide online service expect emergency case

• Nurse catchup to home

• Getting serial without going to the hospital

• Many medical equipment can be bought that can make a ecommerce site

1.5 Report Layout

In chapter one there is introduction, objective and expected outcome of the project work we have done is written here and the report layout.

In chapter two that is approximately background. This following chapter is all about the background situation of our work that we have done. We also provided the literature review of project related studies and tests of the system.

In chapter three we will talk approximately design specification. This bankruptcy is all about the mission design there may be a few front end layout work and back-end design.

In chapter four we will talk about implementation and testing. This chapter tells about how we implement that exact design and tested it and tested it successfully.In chapter five we will talk about impact on society environment and sustainability. This chapter will tell us about e-medical

impact on society hours after environment and sustainability.This chapter six is set Conclusion and destiny scope. In this chapter the conclusion part and the ideas of destiny scope on this to

CHAPTER 2: BACKGROUND

2.1 Preliminaries/Terminologies

The administration of medical clinic to create programming which is more clear by the client and play out the basic and quick. It incorporates the assortment of patient subtleties and specialist subtleties .The framework stores all information and recovers when required .The executives framework can be entered by utilizing client name and secret key which gotten to by a admin within the information will be secured securely for any utilization .The emergency clinic in the board framework is important to store the patient, doctor, nurse data and staffs and so forth. Henceforth by these venture the work become simple and got the time saved

2.2 Related Works:

Modules of this System:

- Specialist Management Module: Used for dealing with the doctor's and nurse's field.
- Specialist Schedule Module : Used for dealing with the info of doctor's and nurse's schedule
- Specialist Fees Module : Used for dealing with the subtleties of doctor fees
- Appointment Management Module: Used for dealing with the data and processing of the appointment.
- Understanding Module : Used for dealing with the patient info
- Booking Module : Used for dealing with the booking information's
- Login Module: Used for dealing with the login info
- Clients Module : Used for dealing with the clients of the framework
- E-commerce Module: Used for selling the medical equipment

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2.3 Comparative Studies

The reason for this venture refers us a system that is getting service, getting serial through online, getting nurse's service at home, getting medical tools. It is significant that the client to understand that the way this application functions and understanding the advancements which are utilized and execute these venture.

At a glance, activities are depicted in detail below:

For the frontend

I.   Web Server

When a client visit a site, the packet data will be sent to his browser. And the packet data will be sent from the server. We work in laravel which is on the MVC format that means model view controller. The model request is responded by a web server. There are different kind of web server in this world. So we used one of them which is known as XAMPP.

II.   PHP

We want to make a dynamic website. So we use a royal language named PHP.PHP and it's content is totally open source so we don't need it spend extra money. It is compliable for almost every operating system. We take the program code after execution because PHP is a scripting language. PHP can likewise be utilized in work area applications. MYSQL supports various kind of language and PHP is one of that things so we picked as an information base

III.   Client Programming Side

For the turn of events and planning of website pages HTML, CSS and JavaScript were utilized. For functionalities JavaScript was utilized.CSS for styling and for including and HTML for making the pages.

IV.   JavaScript

We want to make a dynamic website. So we use another royal language named JAVASCRIPT. It's content is totally open source so we don't need it spend extra money.

It is compliable for almost every operating system. We take the program code after execution because JavaScript is a scripting language. JavaScript can likewise be utilized in work area applications. MYSQL supports various kind of language and JavaScript is one of that things so we picked as an information base

V.   HTML

We can compare HTML with skeleton. A body is nothing without the skeleton, such as HTML. HTML means hypertext markup language. A skeleton gives the shape of a body. HTML is also give the shape of a website. It is primary and most important language to be used. A lot of important tag and section is fulfilled in HTML. So it is compulsory to take HTML language.

VI.   CSS

It is very much needed things to make HTML pages delicious to the clients and for this reason, designers pick number of amount of color, pleasant textual styles, and various formats. This work is finished by the CSS. To put it plainly, If you want to style your html page, you must need the help of CSS. CSS will bring a colorful view into your general HTML formatted pages and for various thing that empowers partition of substance and introduction so it rolls out simpler any.

For the Backend

MYSQL

When a client visit a site, the packet data will be sent to his browser. And the packet data will be sent from the server. We work in laravel which is on the MVC format that means model view controller. The model request is responded by a web server. There are different kind of web server in this world. So we used one of them which is known as XAMPP.

Laravel

Laravel is a web application system with expressive, exquisite sentence structure. Laravel endeavors to remove the agony from improvement by facilitating normal assignments utilized in most of web ventures, for caching, sessions, routing, and authentication. Laravel plans to make the advancement cycle a satisfying one for the engineer without giving up application usefulness. Laravel is available, yet amazing, giving incredible assets expected to enormous, vigorous applications. An eminent reversal of control holder, expressive relocation framework, and firmly coordinated unit testing support give you the instruments you have to assemble any application with which you are entrusted.

2.4 Software Tools

For this project work we use following kind of software to implement this

Sublime Text 3:

Sublime Text is a shareware cross-platform source code editor with a Python application programming interface (API). It natively supports many programming languages and markup languages, and functions can be added by users with plugins, typically community-built and maintained under free-software licenses.

XAMPP:

There are different kind of web server in this world. So we used one of them which is known as XAMPP. It is free and easy to use

2.5 Scope of the Problem

There is no feedback system in this project. So patient can't know the doctors and nurses reputation. Besides that anyone can buy medical equipment which is harmful for general people. Because many people don't know how to use it and many people can do own medical treatment without consulting a doctor which is harmful. But it has no way to solve it. Because we see in corona time that oximeter, nebulizer, oxygen cylinder is much need for particular patient in home

2.6 Challenges

We face different of problem to run this. Main problem is we used old Laravel framework version. Besides that, we can't use API because of lack of knowledge. For signup purpose, we tried to use API to use google account or Facebook account for login. But we failed to do that. But we face a big problem than it. We want to use GPS to locate the patient and suggest them to nearest doctor or hospital. But we failed to do that because of our knowledge limitation. If it would be implemented in our project, the patient would get the best service.

CHAPTER 3

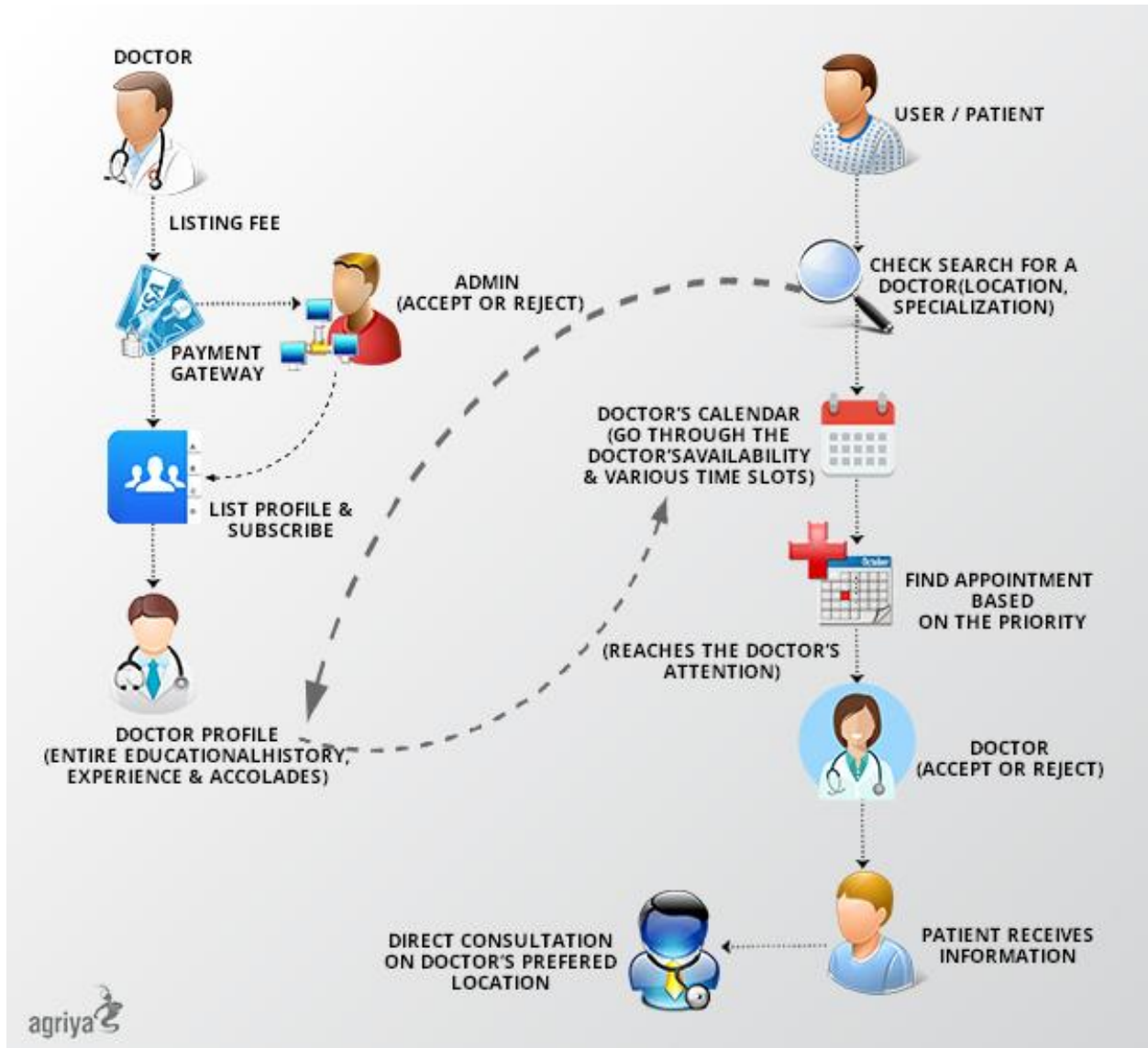# Requirement Specification

3.1 Business Process Modeling

Fig 3.3.1:Business Process Modeling

3. 2 Use Case Modeling and Details

To clarify the way better see and functionalities of the system, everybody choose use case diagram. The use case chart is fundamental to chronicle the need of the system fair as to

demonstrate functionalities of the system. Use case diagram help to clarify the way the client connects with the system
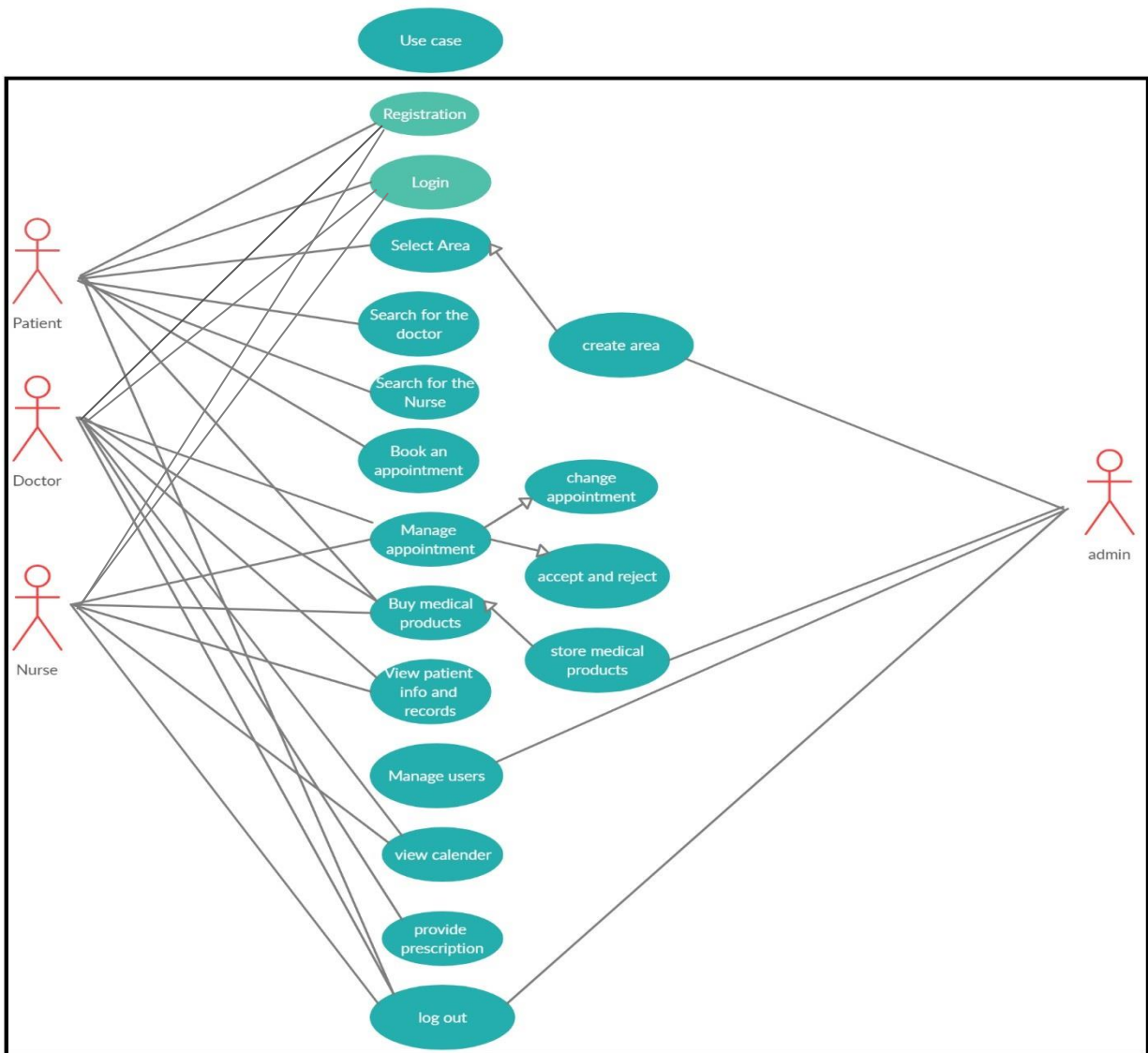

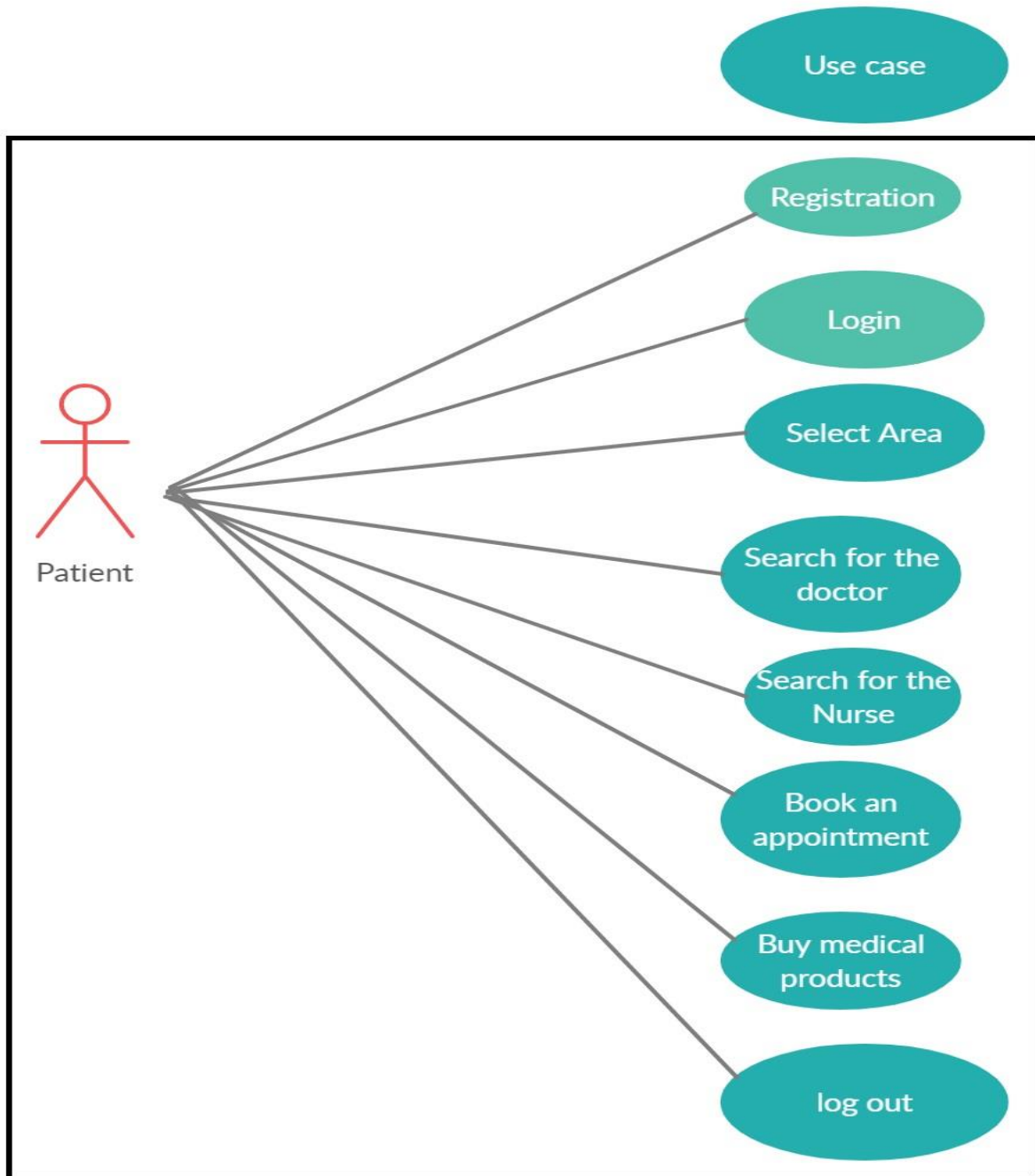Fig 3.2.1: Use Case of the System

3.2.1 Patient Use Case

Fig 3.2.2- Scenario of patient's use case

Number 1 USE-CASE: SIGN UP

Main Holder: Patient or service taker

Detail: For the full facility of the appointment, a person should sign up

Condition: Phone number, right email id.

Primary things: The signup criteria needs some info from the service taker. Here is some info that is needed:

Name

Sexual Identity

Mail ID

11 digit Phone Number

Basic fact: The client/service taker will complete his reg. from the registration that is in the main page. Subsequent to tapping the registration, an enrollment structure will show up and there the client need to put his own data for example name, gender, email address, any clinical history and so forth. In the wake of providing some important info, the service taker is ahead of getting the appointment. In these event which every sector is fulfilled with the substantial mail id, phone number, and those clients would be enlisted in the database. If there should be an occurrence of unfilled section, unidentified arrangement of a mail id or invalid phone number, blunder happens in the section

Violation: Wrong phone no or mail ID

Number 2 Use-case: Sign in

Main Holder: Client/Service taker

Detail: User must need to put the user name and password for the access or getting appointed

Precondition: The patient must need a valid credential.

Primary Things: A user must need to enter a valid credential.

Basic Fact: The service taker must need enter his/her particular username and password to access the service. After putting all of this, the user need to click the "login" button, and it will check the authenticity and redirect him/her to the main page

Violation: if user entered the invalid or wrong credential.

Number 3, 4, 5 Use-case: find for an area, specialist and nurse:

Main Holder: Service taker or client

Details: We see in these that, anybody means who has registered or not, can select location and doctor of any desired specialty.

Precondition: There is no Violation in this use-case

Primary Things: By selecting the location and specialty, the user can see all the registered doctor or nurse

Basic Fact: Client will jump in the head section. A rundown of all fortes would show up in a navigation rundown. Client would click in ideal claim to fame. By doing that, a section will comes up some info with every specialists, nurse from that particular forte. Presently client is able to decision for picking whom he wants: specialist, nurse dependent onto capability, feedback and area and so on.

Violation: N/A

Number 6 Use-case: Booking:

Main Holder: Client/service taker

Details: In this use-case, a registered user can book a doctor or nurse to their home

Precondition: There is no Violation in this use-case

Basic Fact: The user can select booking option from the navigation bar at the top of the page. If a patient can unable to move from home or don't have intention to go to the hospital then he can booking a doctor or nurse to their home to get the premium services

Violation: N/A

Number 7 Use-case: Buying products:

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Main Holder: Client/service taker

Details: In this use-case, a registered user can buy medical products

Precondition: There is no Violation in this use-case

Basic Facts: The user can select product option from the navigation bar at the top of the page. If a patient want something, he can purchase himself

Violation: N/A

Number 8 Use-case: Sign Out:

Main Holder: Client/ service taker

Details: the user get himself signed out from the database

Precondition: the client need to enter the database which means signing in

 Primary Things: Client could easily get signed out from the entire system

Basic Facts: Client need to click on the log out button to execute himself from login format. The would redirect the client onto home interface which is for the guest user.

Violation: N/A
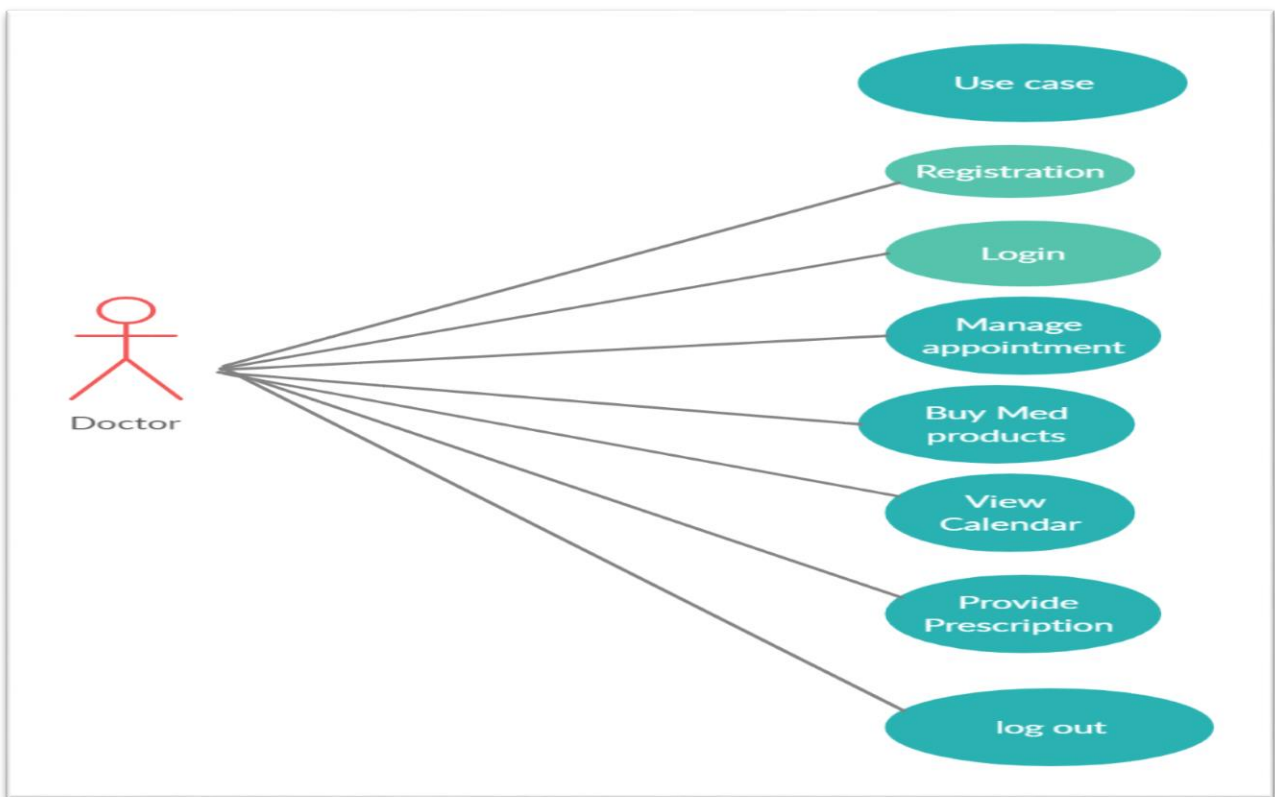
3.2.2 Use-Case of Specialist:

Fig 3.2.3: Specialist Use Case

Number 1 Use-case: SIGN UP

Main Holder: Specialist/Guest

Details: A doctor must need to register himself for getting appointment

Precondition: BMDC/BDC certificate and mail ID.

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Primary things: A specialist need to fulfill the below things:

Name

Valid Mail ID

11 Digit phone Number

Creating a new password

BMDC registration number

Picture of valid BMDC certificate (Practicing license issued by the BMDC authority)

Picture of NID

Basic Facts: The specialist needs to visit into the specialist's registration form in the fundamental section. Subsequent to tapping the registration , an enrollment structure would show up, there specialist needs to put her own just like proficient data for example name, facility address, email address, doc type, mobile number. The client must give substantial BMDC declaration for the registration completing. By the time the admin notice that a incoming requesting data for a medical doctor's enrollment she would check her records so at that moment .the doctor may be enrolled. If any kind of incident set ups means missing section or wrong mail ID or NID, an error will occur on the page. BMDC authentication is a proof that he is really approved by the BD govt. If any doctor doesn't want to put substantial BMDC testament approved by BMDC, admin wouldn't be approved as an enlisted doctor. BMDC testaments are essential for keeping away from any trick.

Number 2 Use-case: log in

Main Holder: User/doctor

Details: For additional capacities, client must need to give his mail id and secret phrase

Precondition: by putting valid credential, user will be able to access the feature

Primary Things: For login, specialist must need to put his password and username

Basic Facts: For accessing the database, so the person need to put appropriate credential. So , after that he or she will be able to login by clicking login button that is floating on that page

Violation: someone put invalid credential

Number 3 Use-case: Manage appointment

Main Holder: User/doctor

Details: For additional capacities, client need to give his valid credential

Precondition: Specialist must receive those patient request.

Primary Things: To avoiding overlap, the specialist should give a schedule

Basic Facts: By giving the schedule, a doctor can manage the timetable. And the patient would be able to go to the chamber by the schedule.

Violation: N/A

Number 4 Use-case: Buy med products

Main Holder: Specialist

Details: For additional capacities, client need to give his valid credential

Precondition: No special precondition

Primary Things: For buy this, the doctor need to login

Basic Facts: A doctor can buy any kind of medical equipment from here

Violation: N/A

Use-case 6: Provide Prescription

Main Holder: Specialist

Details: Client/specialist will have the option to compose the best remarks into the patient's clinical info.

Precondition: Specialist must need to login.

Primary Things: Subsequent to tapping into "compose remarks" option, client/specialist could include best surveys in the wake of patient's info.

Basic Facts: Client/specialist would click the "compose remarks" option. Client (specialist) would compose their remarks. Client/specialist would click the option "submit"

Violation: N/A

Number 7 Use-case: sign-out

Main Holder: Specialist

Details: Specialist would sign out from the database.

Precondition: Specialist need to login

Primary Things: Specialist could sign-out herself from the database.

Basic Facts: the client/specialist taps on the sign-out option. Database will bring that client to the fundamental page for that conventional client.
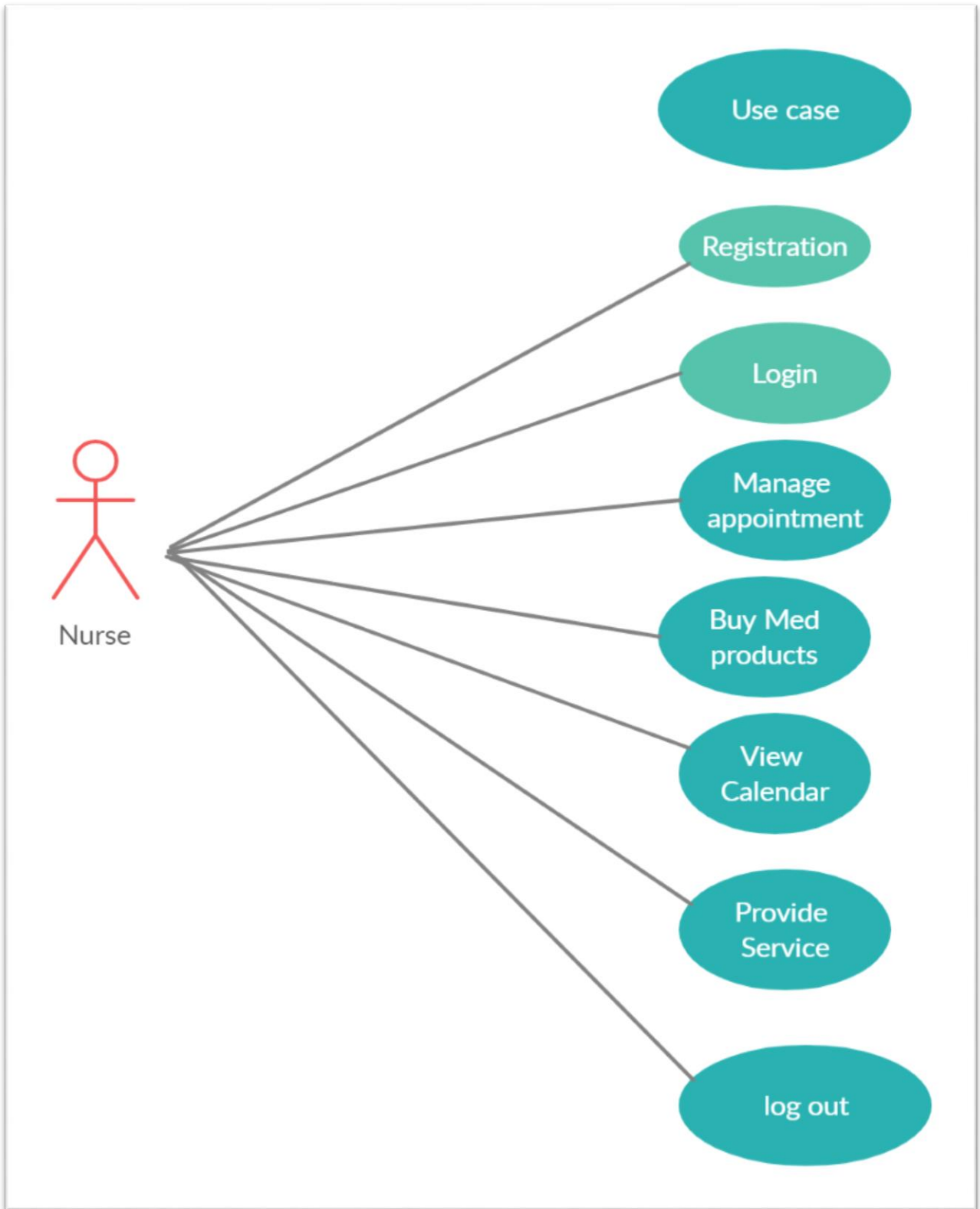
Violation: N/A.

3.2.3 Nurse Use-Case:

Fig 3.2.4: Use case of the Nurse

Use-case 1: Registration

Main Holder: Generic user/Nurse

Details: A Nurse must need to register himself for getting appointment

Precondition: BNMC certificate and valid mail id.

Primary Things: A Nurse need to fulfill the below things:

 Full name

 User name

 Email address

 Mobile number

 Select area

 Select category

 Creating a new password

 BNMC registration number

 Picture of valid BNMC certificate (Practicing license issued by the BNMC authority)

 Picture of NID

Basic Facts: The nurse needs to visit into nurse's registration option from the fundamental page. Subsequent to tapping the registration option, an enrollment structure would show up, there specialist needs to put her own just like proficient data for example name, facility address, email address, doc type, mobile number. The nurse must put her substantial BNMC declaration for completing the registration process. By giving the data, nurse shall ahead of completing the step. By completing all the process for enrollment she will be sent to the admin. When administrator gets a notice for the nurse's enrollment, she will check her records and at that moment, the nurse will get a confirmation of registration. If any kind of incident set ups means missing section or wrong mail ID or NID, an error will occur on the page. BNMC authentication is a proof that he is really approved by the BD govt. If any doctor doesn't want to put substantial BNMC testament approved by BNMC, admin wouldn't be approved as an enlisted doctor. BNMC testaments are essential for keeping away from any trick

Number 2 Use-case: Signed In

Main Holder: Nurse

Details: For additional capacities, Client need to give his valid credential

Precondition: Putting valid credential.

Primary Things: For login, nurse must need to put his password and username

Basic Facts: To have the option to take a look on the database, the client should put right credential either from the principle site or starting from the section header. In the wake of hitting on the sign-in option, a confirmation demand will be sent to database.

Violation: happens if someone put wrong credential

Number 3 Use-case: Manage appointment

Main Holder: Nurse

Details: For additional capacities, client need to put his valid credential

Precondition: The nurse must achieved a patient request.

Primary Things: To avoiding overlap, Nurse should give a schedule

Basic Facts: By giving the schedule, a nurse can manage the timetable. And the patient would be able to go to the chamber by the schedule.

Violation: N/A

Number 4 Use-case: Buy med products

Main Holder: User/nurse

Details: For additional capacities, client need to put his valid credential

Precondition: No special precondition

Primary Things: For buy this, the nurse need to login

Basic Facts: A nurse can buy any kind of medical equipment from here

Violation: N/A

Number 5 Use-case: Provide Service

Main Holder: User/nurse

Details: Nurse will have the option to compose the best remarks into the patient's clinical info.

Precondition: Nurse must need to login.

Primary Things: Subsequent to tapping into "compose remarks" option, client/specialist could include best surveys in the wake of patient's info.

Basic Facts: Nurse would click the "compose remarks" option. Client (specialist) would compose their remarks. Client/specialist would click the option "submit"

Violation: N/A

Number 6 Use-case: log out

Main Holder: User/nurse

Details: the client/nurse would sign out from the database.

Precondition: the client/nurse need to login

Primary Things: the client/nurse could logout herself from the database.

Basic Facts: the client/nurse taps on the sign-out option. Database will bring that client to the fundamental page for that conventional client.

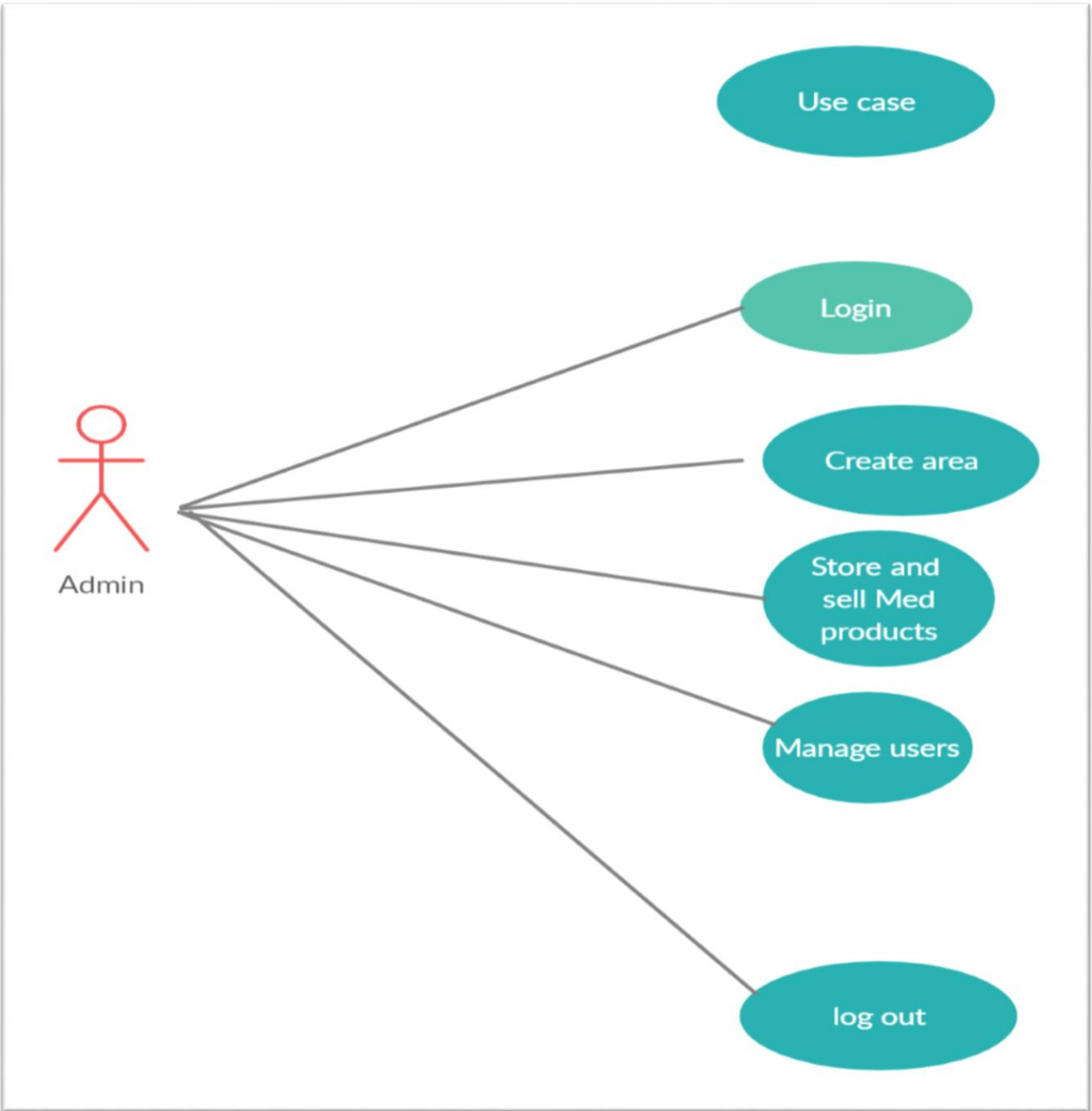**Violation:** N/A

3.2.4 Admin Use Case

Fig 3.2.5: Use case of the Admin

Use-case 1: Sign-in

Main Holder: Admin

Details: A human, who has administrator credential, claims managerial things.

Precondition: Right credential.

Primary Things: Admin needs to put right credential

Basic Facts: Admin should put appropriate credential. By doing verifying, admin would be signed there like an admin and could do any supreme type field work

Violation: If someone put invalid credential

Number 2 Use-case: Create Area

Main Holder: Admin

Details: The admin must need to give his email address and secret phrase means password

Precondition: Logged in properly

Basic Facts: An admin can create any area of a city if he could able to give service at that area

Violation: If someone put invalid credential

Number 3 Use-case: Store and sell med products

Main Holder: Admin

Details: The admin must need to give his email address and secret phrase means password

Precondition: Logged in properly

Basic Facts: An admin can store different kind of medical tools and sell them to the nurse, doctor or registered user

Violation: If someone put invalid credential

Number 4 Use-case: Manage User

Main Holder: Admin

Details: The admin must need to give his email address and secret phrase means password

Precondition: Logged in properly

Basic Facts: An admin can approve a doctor, nurse, to the database. On the vice versa he can remove a doctor, nurse, patient profile. He can view the all things related to this web app at his dashboard

Violation: If someone put invalid credential

Use-case 5: log out

Main Holder: Admin

Details: the admin would sign out from the database.

Precondition: the admin need to sign in

Primary Things: Admin could sign-out herself/himself from the database.

Basic Facts: The admin taps on the sign-out option. Database will bring that client to the fundamental page for that conventional client.

Violation: N/A.

3.3 The Design of the System:

3.3.1 Diagram of the class:

The outlines of the class are picked for clarifying these plan period of that framework. This outline portrays framework's classes, traits, tasks, connections of these in a superior manner. People could likewise tell about the class's graphs are utilized for legitimize the construction or conduct for utilization instances for framework. Its graphs better clarify the reasonable view of framework regarding substances connections. Its outline looks as though as a state that is rectangular, containing three contents in the vertical way. Main rectangular involves its identity, the subsequent center rectangular carries the main things of the class and the last 3 rectangular carries the techniques and capacities done by it. Primary rectangular of the identity is must needed while the others could be precluded to streamline the graph. Along these lines, the random classes outline

first details should be portrayed where the others contents are discretionary. It "quiet" carries numerous borderline, (personal info), that shows the info of the apparent multitude of registered service taker. It just like carries the patient's info, which we can say, achieving appointment, observing medical records. So just like the other class "doctor" has the borderline of personal data that appointed him as a doctor into the database. The service taker will get the appointment, prescription, booking in here. It show the ability of a doctor in this database. Here we can see a class name "arrangement" that has some borderline of time zone and schedule. We can see "division" class which has the border line of identity and strategies incorporate exclude or include division. A doctor can have a venue with any division class. There is a class "report "that contains prescribed medication. At the end, we can see another "administrator" class that carries the borderline like identity and "at a glance". Same things go with booking nurse. Beside that med equipment is also available for buying
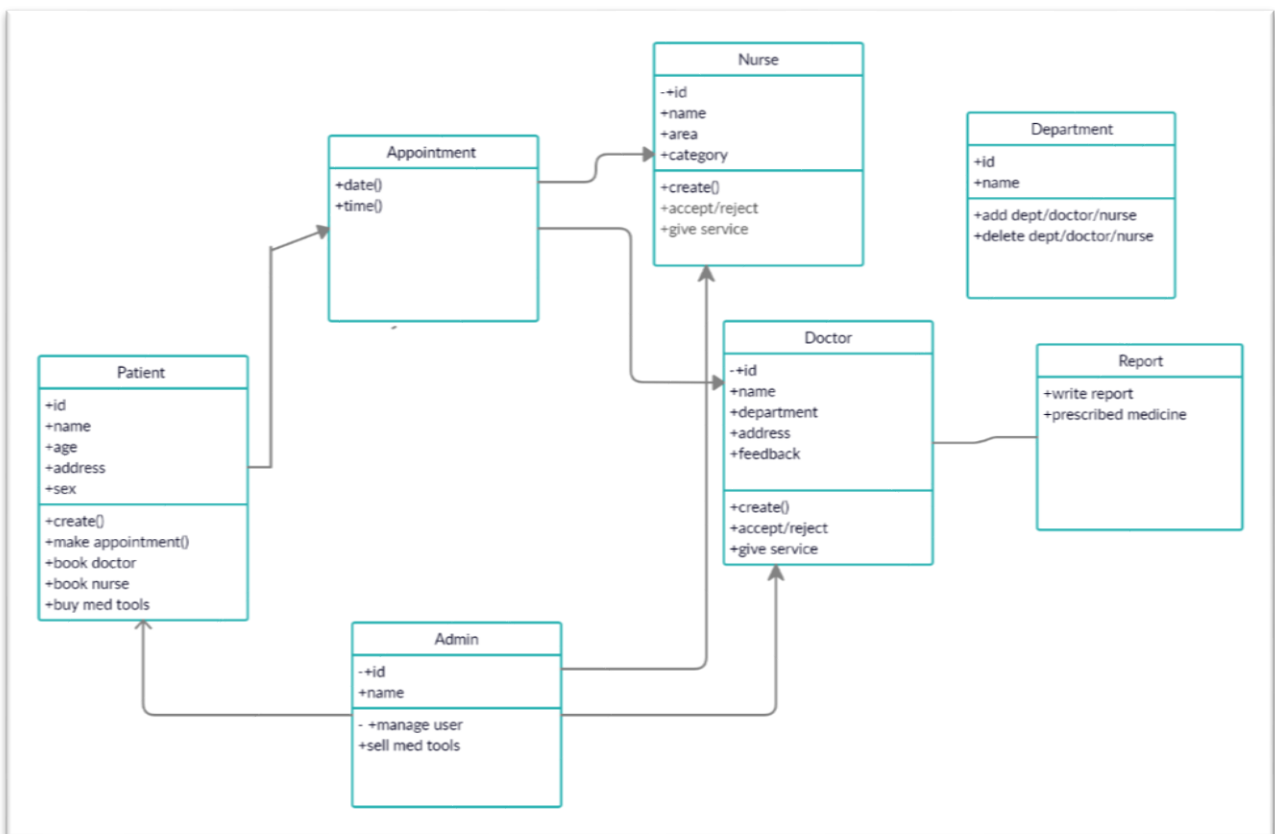

Fig 3.3.1.1:Diagram of the Class

3.3.2 Diagram of the ER:

The model of ER is method where it portrays the relationship between contents and its activity. The main theme of this graph isn't to portray any activity but it makes a at a glance look with contents and activity. Trauma center outline is drawn with "rectangular boxes" .These elements are different from other and has a free existence. All the rectangular has some personal info. By collapsing all outline the user with various kind of node or hand. In this section, all the substance can update, delete, and modify itself. Substances are able to make comparative qualities with the informative contents. That substances are connected with other substances by the node. So it can related with each other by 1-1, 1-more, more-more. In another word, a user and the admin can have "1to more" node relationship, describes a division could got a list of doctor and which he wants to be enlisted.
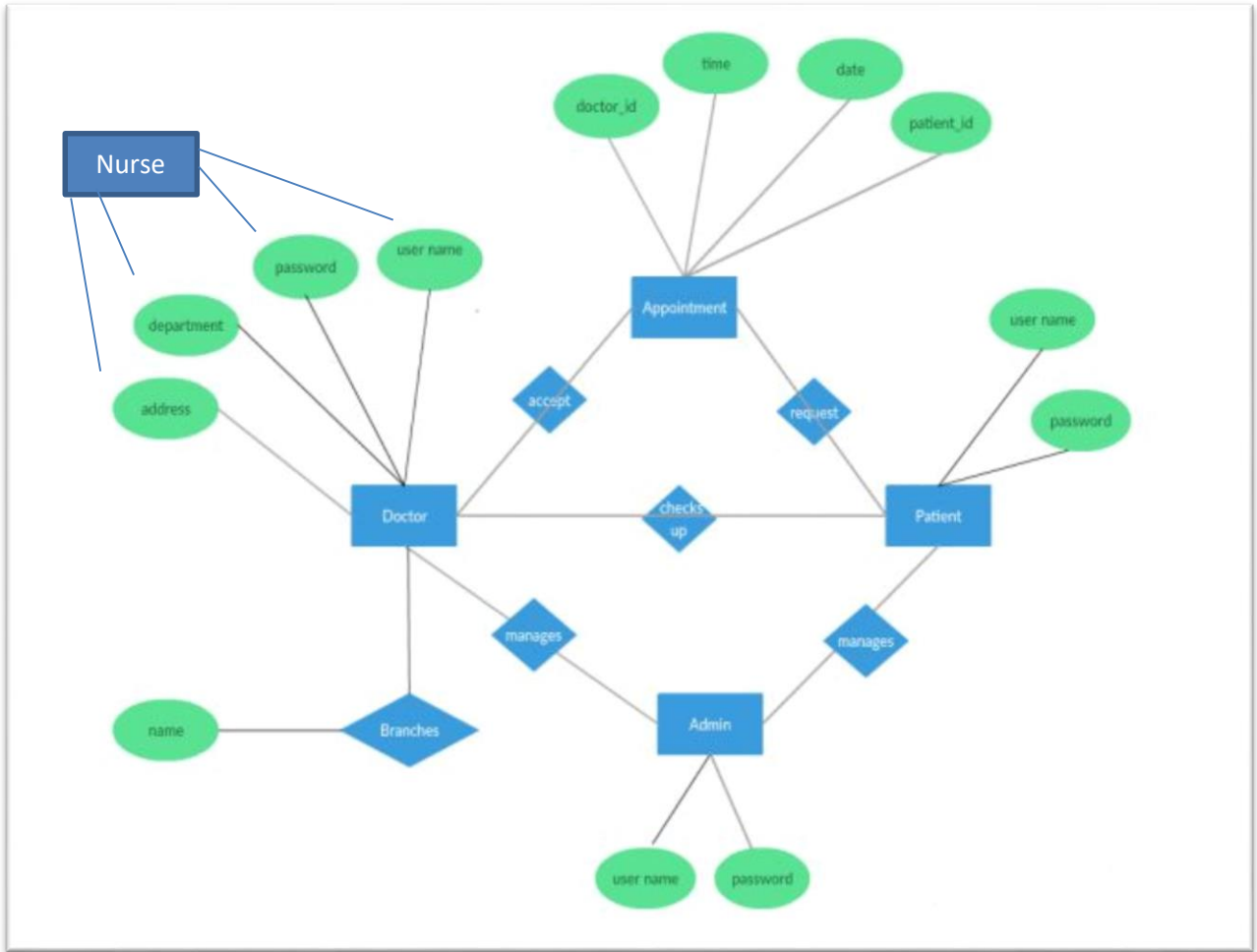
Fig 3.3.2.1: ER Diagram

Chapter 4: Design Specification

4.1 Front-end Design:

```php
app > Http > Controllers > 🐘 FrontendController.php
1    <?php
2
3    namespace App\Http\Controllers;
4
5
6    use App\Review;
7    use App\Product;
8    use App\SiteSettings;
9    use Illuminate\Support\Facades\Artisan;
10   use Illuminate\Http\Request;
11
12
13   class FrontendController extends Controller
14   {
15       //  start here
16       public function indexpage()
17       {
18         //  $data = [ ];
19           $reviews = Review::all();
20           $products = Product::paginate(4);;
21           $settings = SiteSettings::find(1);
22           return view('frontend.index', compact('reviews', 'products','settings'));
23       }
24
25       public function clear ()
26       {
27           Artisan::call('route:clear');
28           Artisan::call('route:cache');
29           Artisan::call('view:clear');
30           Artisan::call('config:clear');
31           Artisan::call('cache:clear');
32
33           return 'Clear Ok!';
```
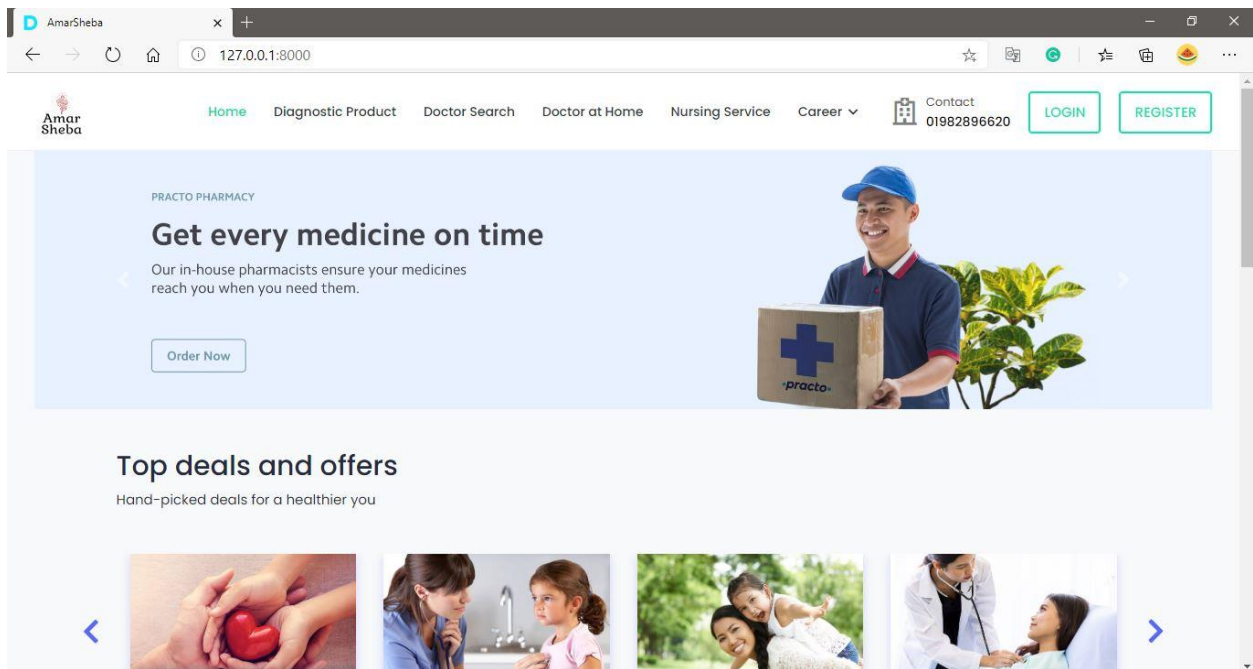

Fig 4.1.1:Front End

4.2 Back-end Design

```
 4   |------------------------------------------------------------
 5   |                    Web & Setup Routes
 6   |------------------------------------------------------------
 7   */
 8
 9
10   Route::get('/install','FrontendController@install');
11
12   Route::get('/clear', 'FrontendController@clear');
13
14   Route::get('/', 'FrontendController@indexpage')->name('frontEndRoot');
15   Route::get('/dashboard', function () { return redirect (route('user.dashboard')); });
16   Route::get('/admin', function () { return redirect (route('admin.dashboard')); });
17   Route::get('/home', function () { return redirect (route('user.dashboard')); });
18
19   /*
20   |------------------------------------------------------------
21   |                    Auth Routes
22   |------------------------------------------------------------
23   */
24   Auth::routes();
25   Route::get('logout', '\App\Http\Controllers\Auth\LoginController@logout');
26   Route::get('register', 'Auth\RegisterController@showRegistrationForm')->name('register');
27   Route::get('password/reset', 'Auth\ForgotPasswordController@showLinkRequestForm');
28   Route::get('password/reset/{token}', 'Auth\ResetPasswordController@showResetForm');
29
30
31
32   /*
33   |------------------------------------------------------------
34   |                    Admin Routes
35   |------------------------------------------------------------
```
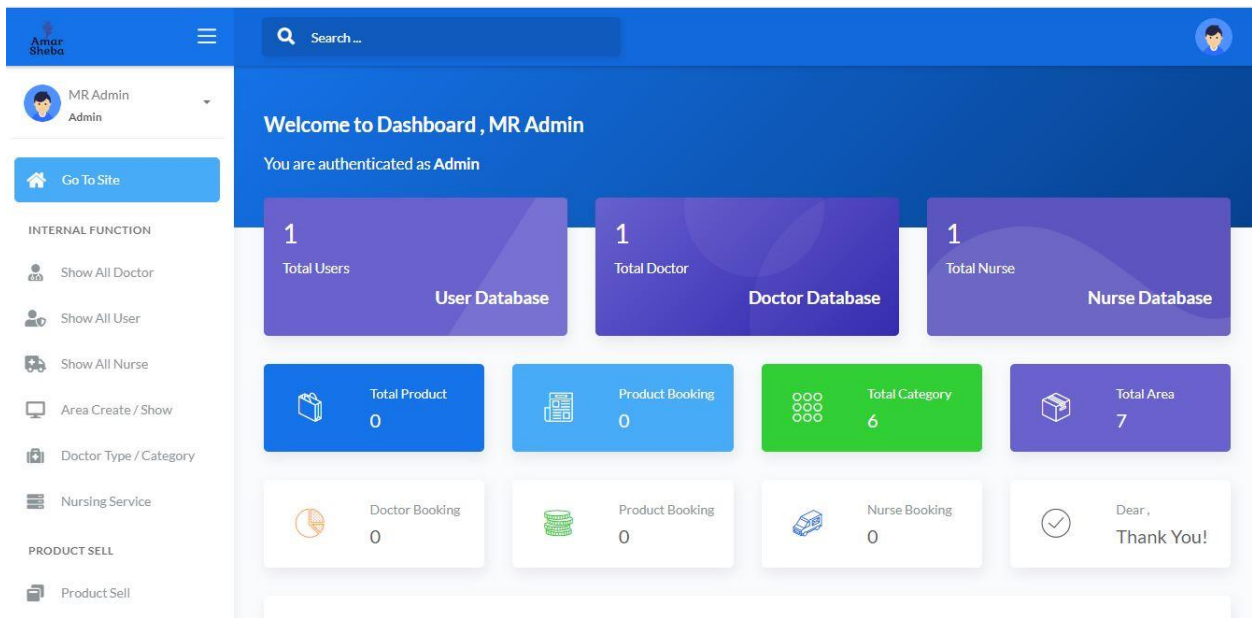
Fig 4.2.1: Back-end

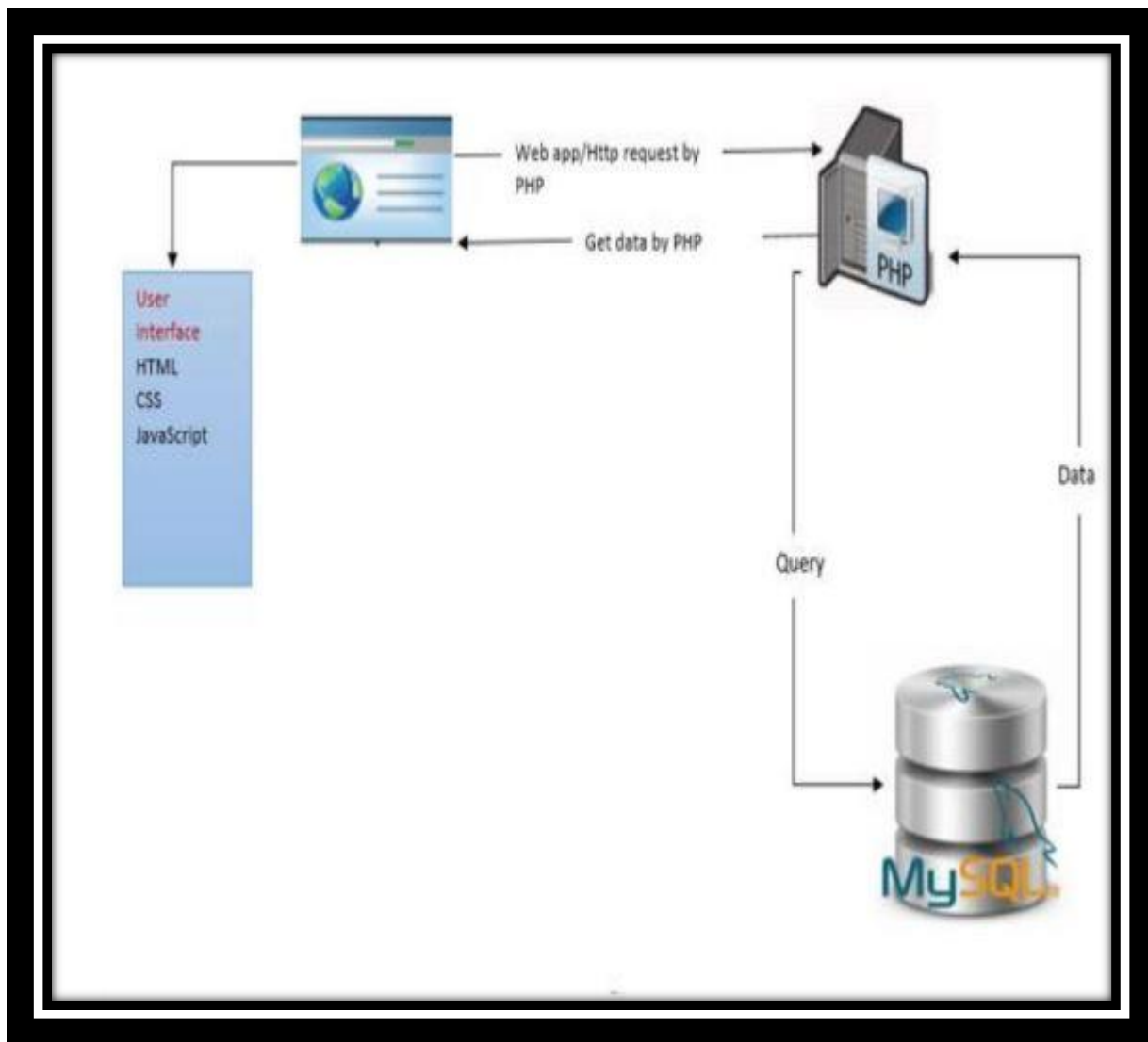## 4.3 Interaction Design and UX

Fig: Interaction Design

The activity of this art can be categorized with 2 sectors .We can see that a part of mirror is displayed in front od viewer and other one is in front of the official stuff. The layout of the user sides where the official's perspective area is created with some sort of backend code just like Laravel, MySQL. The site which is created by PHP is full of MYSQL DATA and its activity. The collapsing figures are describes the view of both customer and client side activity. We discussed it already at previous chapter (2).

Chapter-5

SOFTWARE TESTING AND SYSTEM IMPLEMENTATION

5.1 The Testing of this system

Project status assurance is very important, for this we should have a look the all activity that we worked for. This is the way we could easily find any kind of bug and invent blunder. Main motto of testing is to detect faults, discover blunders so that we can fix them. Testing is very much need to detect the faults so it is compulsory to do this. There are tons of way to detect. By dong it , we can easily sort out that what is we need to modify here's .We should go for a beta testing and take a look that what should we do if we find any kind of bug

Test case ID	Test case name	Precondition	Priority	Input test data	Steps to be executed	Expected Result	Successful or not
1	User_reg	no	high	Valid email address or correct national ID card no	Need to fill the registration form and submit	Registration successful	OK
				invalid email address or incorrect national		Error message	Error

				ID card no			
2	User_login	Must be registered earlier	high	Valid username and password	Enter username and password and submit	A successful login to the system	OK
				Invalid username or password		Login failed, and the system displays an error message	Error

5.2 UI

The virtual medical related help site is vastly use in Bangladesh, For this reason we should make a user friendly layout that can feel comfort by the people of Bangladesh. So that we developed a very easy and simple layout for this project. Thus the reason, people of Bangladesh can easily attracted on our project and they will find it very smooth while using. There is picture in below which portrays the layout of UI. The main feature of our project is shown in the fundamental main pages and where a people can tap the navigation bar and easily click the service what he wants. This section is designed by various kind of feature such as booking doctor at home, searching doctor, booking nurse, buying med tools. So that who ever visited on this project can easily understand the menu list what we want to serve. Here a guest user can select a area and can see the doctor who is available at that area. So a user can easily booked a doctor, find a doctor. On more thing that the doctor list will shown up with the category. And here is one more thing after doing that the admin panel can see the request and can set up a meeting with doctor. The same thing is also for the nurse. A user can easily book a doctor or nurse if he is unable to move from the home. After that, we can see a different section that is called "Diagnostic Product" and there a

facility to buy various kind of med products. But for the buying, you must need to log in. A doctor or nurse can join here by clicking the career in the menu bar
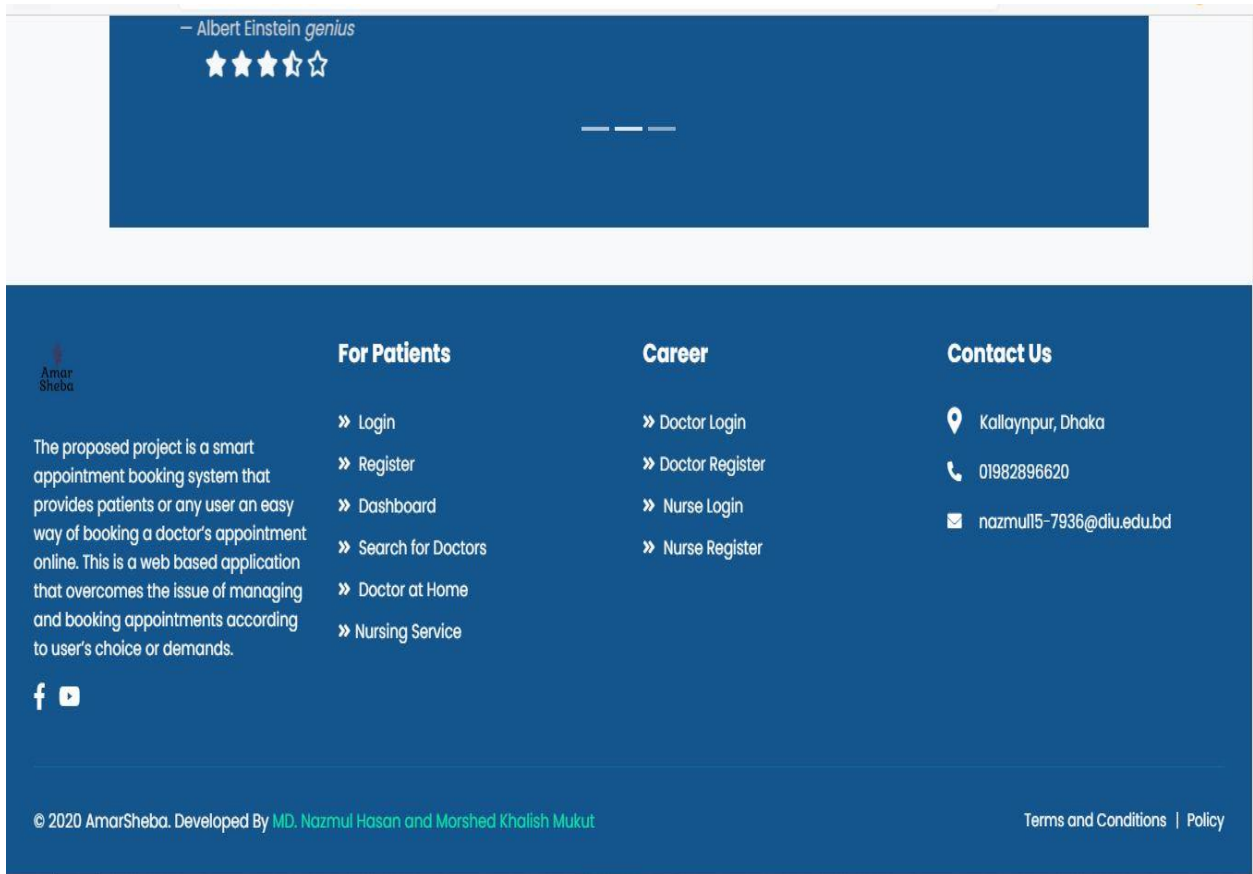
Fig 5.2.1:User Interface

Chapter 6

Conclusion and Future Scope

Online medical booking system is very common in this era, So we likewise chose to make a comparative application with extra feature for my nation. Of course, the platform of this sector that we made is enormous, So thought that we should make this similar project but adding some extra feature that isn't available in this country. Along these lines, we want to reach the urban people that's why our researching team developed a user friendly layout. We had implement some unique feature such as doctor booking at home, nurse booking at home in Bangladesh, the tough task was to build the user friendly layout and the collaboration of the huge data base. Thus, we made an effort not to besiege pages with a lot of stuff. Normally building up any framework contains three essential advances arranging, plan, and the testing stage. In the wake of finishing the fundamental prerequisites that ought to set in this framework, sometimes we were likewise essential for choosing the advancements which is appropriate for this project. So we study a lot from the open source site and prepare ourselves properly. ER Diagram, graph of use-case, and class designing are utilized for clarifying feature and activity of our project. Class graphs was attracted for clarifying the connection between the rectangular and the contents. Reason to give a shape of use case charts were for clarifying abilities as well as for recording all necessities for every client obviously. So, we had picked or took a shot at some fundamental functionalities like an on the web arrangement, online information base, and online specialist survey. Yet, for the future, we might want to stretch out my framework to the drug stores and research centers. For instance, unique drug stores and research centers can likewise be enrolled with the framework. Furthermore, when the specialist endorses some medication or thinks of certain tests, the patient can simply go to any enrolled drug store and get the medication subsequent to demonstrating his ID. Similarly, if a specialist thinks of certain tests, the patient can go to any enrolled lab. Enlisted drug stores and research facilities may be restricted admittance for the service taker information as recommended from specialist which could be written on service taker profile. Virtual regular check up component which we might want for better feature. Possibility of this component arise on our psyche on the grounds that which service taker patients stay another place spots need on numerous occasions "research facility diagnostic report" what's more, "specialists' recommendation/follow-up arrangement" in view of these parameters. Thus, by making research center reports and lab, service taker simply need a activity that he or she will take a appointment

in virtual, so web discussion with some less expenses can be completed by them. Online installment payment system is also in our mind that we would make it in future.

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DESIGN AND IMPLEMENTATION OF E-Medical Service

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