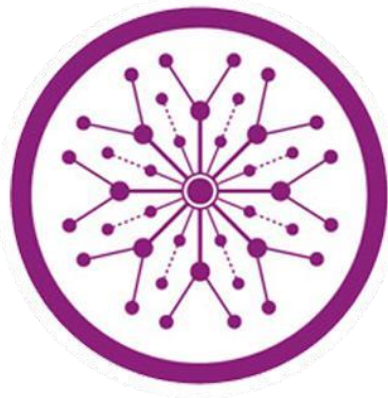


# SUPERIOR UNIVERSITY LAHORE



Faculty of Computer Science & IT

## Final Year Project PROJECT REPORT (Part-1 & 2)

**Dr\_Dentist**

Project ID: **FYP-MCSM-S20-003**

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**Mr. Javaid Iqbal**  
Lecturer

# Project Report

## Dr\_Dentist

### Change Record

Author(s)	Version	Date	Notes	Supervisor's Signature
Sadia, Bisal, Zarar	1.0	22 February, 2021	Original Draft	
Sadia, Bisal, Zarar	2.0	26 February, 2021	Correct Gantt Chart	
Sadia, Bisal, Zarar	3.0	1 March, 2021	Add Project Plan	
Sadia, Bisal, Zarar	4.0	19 March, 2021	Requirement's discussions	
Sadia, Bisal, Zarar	5.0	5 April, 2021	Project Demo	
Sadia, Bisal, Zarar	6.0	15 April, 2021	Activity Diagram discussions and ch 3	
Sadia, Bisal, Zarar	7.0	22 April, 2021	UML diagrams discussion	
Sadia, Bisal, Zarar	8.0	2 May, 2021	Project Template Discussion	
Sadia, Bisal, Zarar	9.0	29 May, 2021	Project Presentation	
Sadia, Bisal, Zarar	10.0	15 June, 2021	Project requirements checking	
Sadia, Bisal, Zarar	11.0	20 July, 2021	Properties add check	
Sadia, Bisal, Zarar	12.0	10 August, 2021	Search Filter Discussion	
Sadia, Bisal, Zarar	13.0	15 October, 2021	Admin Panel Discussion	
Sadia, Bisal, Zarar	14.0	25 Dec, 2021	Ch 6 7 Discussion	
Sadia, Bisal, Zarar	15.0	14 Jan, 2022	Final Project review	

## APPROVAL

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### PROJECT SUPERVISOR

Comments: \_\_\_\_\_

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Name: \_\_\_\_\_

Date: \_\_\_\_\_ Signature: \_\_\_\_\_

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### PROJECT MANAGER

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### HEAD OF THE DEPARTMENT

Comments: \_\_\_\_\_

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## **Dedication**

I dedicate this project to ALLAH Almighty my creator, my strong pillar, my source of inspiration, wisdom, knowledge, and understanding. He has been the source of my strength throughout this program and on His wings only have I soared. I also dedicate this work to my PARENTS; who always encouraged me all the way and whose encouragement has made sure that I give it all it takes to finish that which I have started. To my TEACHERS who have done all possible things to complete my project. Thank you. My love for you all can never be quantified. ALLAH bless you.

**"If you believe in yourself and have dedication and pride - And never quit, you'll be a winner.**

**The price of victory is high but so are the rewards". - Paul Bryant**

## **Acknowledgments**

Many people have provided their contributions towards the successful completion of this study and we would like to express our gratitude to them without forgetting the Almighty God for directing my life. We would like to express special thanks of gratitude to our supervisor Mr. Javaid Iqbal who allowed us to do this project. We are also thankful to our parents and friends who helped us. We are not making this project just for sake of marks but to also increase our knowledge

## **Executive Summary**

The world is advancing in new technology every day. Every business is becoming digital, more convenient, and user friendly. In Pakistan, the scope of the Dentist clinics is always at its peak and there are thousands of dentist doctors who are working in this field but they operate from their clinics and most of them do not have any knowledge about using a proper application related to their field. Every small business can benefit from having an app and online presence. This is no different for the real physical clinic.

So, our team came up with a solution in the form of Dr\_ Dentist (Online dentist App). Dr\_ Dentist is a cross-platform application that is specially designed for the patients and doctors related to dental problems and field. It is a generic application and can be used by patients, doctors, community, and many more uses regarding to this field. This app can have all other local clinics link to the it. It will be a great place to add 3d videos for patients and common people for their awareness and understanding about a disease and its treatment.

The objective of this project is to develop Decision Support System and online services for Dental Clinic and patients that provide awareness of dentist related diseases and the way to solve problem and treatment method as well as online appointment, the dentist profile, patient information includes patient personal detail, patient treatment, patient appointment and dental treatment and disease

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# Chapter 1

## **Introduction**

## Chapter 1: Introduction

We are intended to make an online Dr\_Dentist App that provides an effective solution for patients according to their different needs. Dr\_Dentist is a cross-platform application that is specially designed for the dental clinic market.

Dr\_Dentist will be the android based mobile application that would provide a platform for the users, where they don't have to go for a variety of applications for different purposes regarding dental care. The world is advancing in new technology every day. Every business is becoming digital, more convenient, and user friendly. In Pakistan, the scope of the Dentist clinics is always at its peak and there are thousands of dentist doctors who are working in this field but they operate from their clinics and most of them do not have any knowledge about using a proper application related to their field. Every small business can benefit from having an app and online presence. This is no different for the real physical clinic.

So, our team came up with a solution in the form of Dr\_Dentist (Online dentist App). Dr\_Dentist is a cross-platform application that is specially designed for the patients and doctors related to dental problems and field. It is a generic application and can be used by patients, doctors, community, and many more uses regarding to this field. This app can have all other local clinics linked with it. It will be a great place to add 3d videos for patients and common people for their awareness and understanding about a disease and its treatment.

The objective of this project is to develop an efficient app for Dental Clinic and patients that provide awareness of dentist related diseases and the way to solve problem and treatment method as well as online appointment, the dentist profile, patient information includes patient personal detail, patient treatment, and patient appointment, also provide awareness about dental treatment and disease.

During the system development, Android Studio is used to create interface and coding. This system gives advantages to all user's clinic staff and end-user especially patients, where the two users can access the system.

- The Main Challenges for the Dr\_Dentist application includes:
  - Creating the Dr\_Dentist app then focuses on Diseases shows the Disease name and their information.
  - Proper Treatment plans with 3d animation videos.
  - Can make online Appointment
  - Can do online search for nearby doctor and consult with him

## **1.1. Background**

Many dentists in Pakistan do not use a proper system. They operate from their clinics, and even most of them do not know about using a website or app related to their field. The world is becoming more and more digitalized each day, and every small business can benefit from having a website and online presence. This is no different for the dental clinics, so these are also need to become more advanced and stop using old-fashioned ways. For that, our team created Dr\_ Dentist App with generic features to ensure patients and community satisfaction.

## **1.2. Motivations and Challenges**

Our team analyzed the dental clinic market of Pakistan. It derived that they needed severe updating because they only operate from their clinics. Most of them do not know about using an app related to their field. They use old-fashioned ways to manage their other activities, which causes record data inconsistency, paper waste, trust issues for patients, health issues, and a lot of management problems. Hence, we decided to make a generic cross-platform application, especially for Pakistan's dental clinics market. The challenges we faced were collecting extensive data and filtering it efficiently for our users with a common feature every patient would want and how to motivate them enough to use this software.

## **1.3. Goals and Objectives**

Dr\_ Dentist is a one-stop-app for people seeking to consult or appoint a doctor according to their needs. This app can have all other local clinics link to the app. It will be a great place to come and consult a required doctor. With an app, our end users can have benefits like: Patients can search nearby doctors according to their requirements. Patients can consult a doctor online and in case make an appointment. It lets them search for doctor's name, clinic address, fees and rating. Moreover, people can watch 3d videos to get awareness about a disease and its treatment.

Dr\_ Dentist is developed keeping Pakistan's dental clinic market in mind because our main objective is to provide supreme patient satisfaction so that our application can reach as many patients, doctors and link multiple clinics as possible.

## 1.4. Literature Review/Existing Solutions

There have been many online dentist apps available on the internet like iDentist, My Dental Care, etc. Still, they are not designed user-friendly, and Pakistan's local dentist doctors and patients are unaware of such apps that provide dental services. Also, these sites have trust issues with patients and are costly.

OUR SOLUTION	PRE-EXISTING SOLUTION
We will do proper marketing of Dr_Dentist.	Those apps lack awareness in Pakistan.
Dr_Dentist is cheaper.	They charge a lot of money to consult a doctor and make appointment with him.
Dr_Dentist is trustworthy.	Existing solutions are in controversies due to bypassing the trust and confidentiality of data.

## 1.5. Gap Analysis

There have been many online dental apps available on the internet, like iDentist, My Dental Care, etc. Still, they are not designed user-friendly, and Pakistan's local community is unaware of these apps. Also, these sites have trust issues with customers and are costly plus, our Dr\_Dentist app will bring convenience to patients and exposure to doctors.

OUR SOLUTION	PRE-EXISTING SOLUTION
We will do proper marketing of Dr_Dentist.	Those apps lack awareness in Pakistan.
Dr_Dentist is cheaper.	They charge a lot of money to consult a doctor and make appointment with him.
Dr_Dentist is trustworthy.	Existing solutions are in controversies due to bypassing the trust and confidentiality of data.
Easy to use for everyone.	Not easy to use for a non-technical person.

## 1.6. Proposed Solution

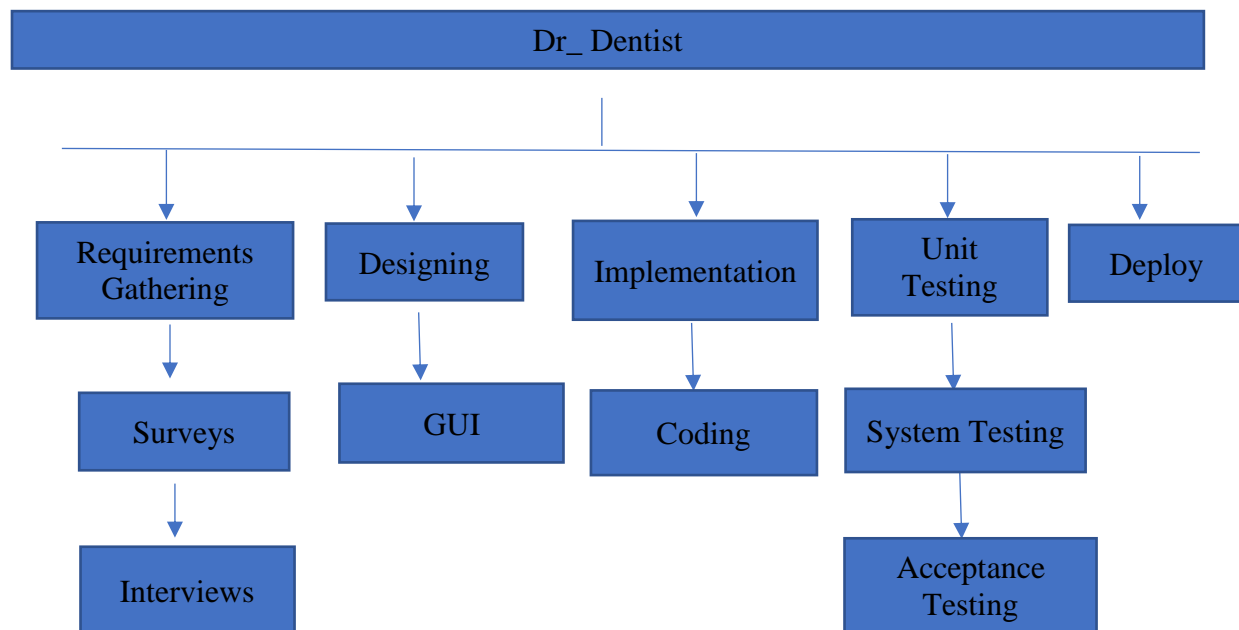
Dr\_Dentist will be the android based mobile application that would provide a platform for the users, where they don't have to go for a variety of applications for different purposes regarding dental care. By having the new Development of Dr\_Dentist app for Pakistan patients will be easy, have a free consultant with doctors and in case make an online appointment. The dentist can figure out the best treatment for the patient by viewing the past dental history that had been recorded before. Patients can search for nearby clinic and its address according to their requirements for better approach.

So, to organize, keep save patient's information, and provide the best, appropriate treatments to the patients there must be a database system that stores the right information for every patient. The patient could see the entire procedure which will be adopted for his/her treatment by viewing animated videos regarding his/her dental problem.

## 1.7. Project Plan

Our Plan is to use agile methodology because Dr\_Dentist will need to be updated later so that is why agile methodology will be our project plan.

### 1.7.1. Work Breakdown Structure

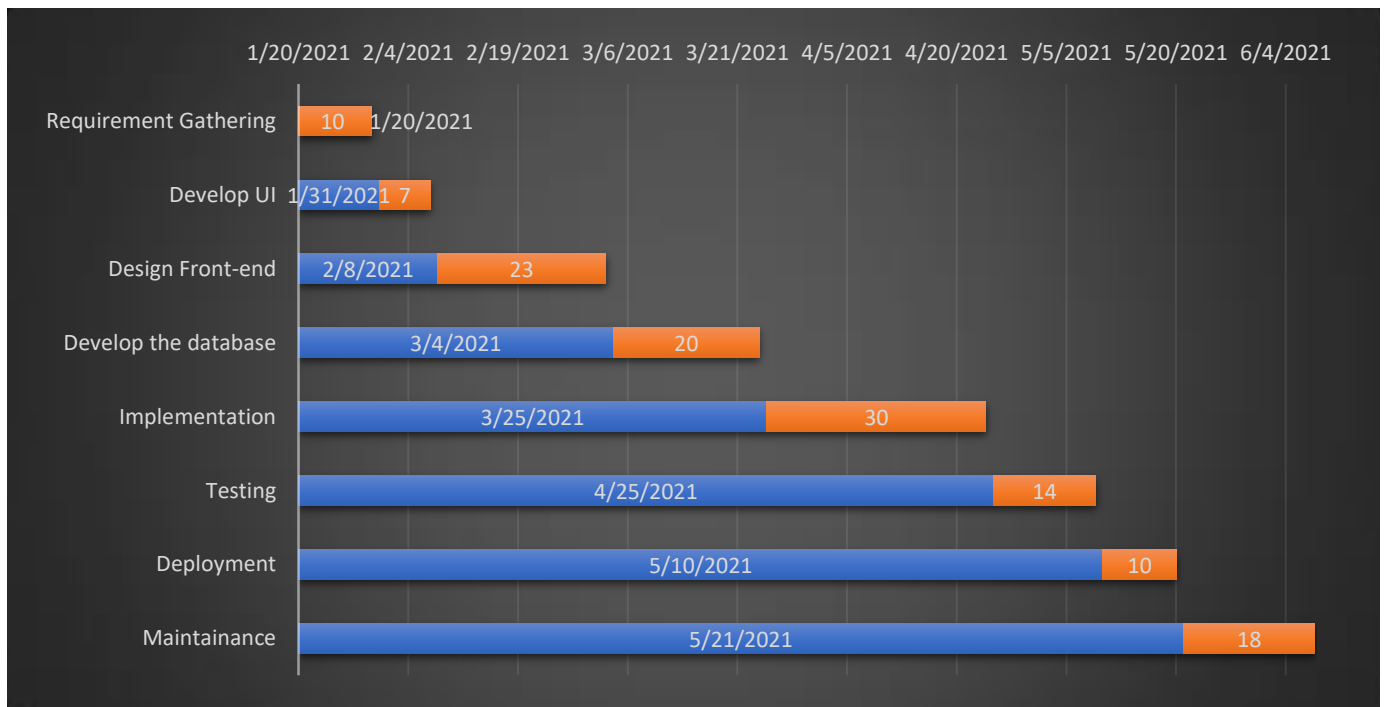


### 1.7.2. Roles & Responsibility Matrix

1	Requirements Gathering	1	Discovering the requirements of a system from users, doctors, customers, and Other stakeholders. Then analysis those requirements. Done Documentation.	30	Sadia Saif, Bisal Shoukat, Zarar Anwar
2	Designing Front-end	2	Design front-end, logo checking consistency, and information Architecture.	60	Sadia Saif, Bisal Shoukat, Zarar Anwar
3	Implementation	3	Do backend work, work on the database, code, etc.	60	Sadia Saif, Bisal Shoukat, Zarar Anwar
4	Testing	4	Unit testing, acceptance testing, and system testing.	90	Sadia Saif, Bisal Shoukat, Zarar Anwar
5	Deployment	5	Deploy the final project	10	Sadia Saif, Bisal Shoukat, Zarar Anwar

### 1.7.3. Gantt Chart

Task	Starting Date	Ending Date	Duration
Requirement Gathering	1/20/2021	1/30/2021	10
Develop UI	1/31/2021	2/7/2021	7
Design Front-end	2/8/2021	3/3/2021	23
Develop the database	3/4/2021	3/24/2021	20
Implementation	3/25/2021	4/24/2021	30
Testing	4/25/2021	5/9/2021	14
Deployment	5/10/2021	5/20/2021	10
maintenance	5/21/2021	6/8/2021	18



## **1.8. Report Outline**

Our team came up with a solution in the form of Dr\_ Dentist (Online Dental App). Dr\_ Dentist is a cross-platform application that is specially designed for the dental clinic market. It is a generic application and can be used by dentist doctors, patients, common people.

# Chapter 2

## Software Requirement Specifications

## Chapter 2: Software Requirement Specifications

### 2.1. Introduction

We are intended to make an online Dr\_Dentist App that provides an effective solution for patients according to their different needs. Dr\_Dentist is a cross-platform application that is specially designed for the dental clinic market.

Dr\_Dentist will be the android based mobile application that would provide a platform for the users, where they don't have to go for a variety of applications for different purposes regarding dental care. The world is advancing in new technology every day. Every business is becoming digital, more convenient, and user friendly. In Pakistan, the scope of the Dentist clinics is always at its peak and there are thousands of dentist doctors who are working in this field but they operate from their clinics and most of them do not have any knowledge about using a proper application related to their field. Every small business can benefit from having an app and online presence. This is no different for the real physical clinic.

So, our team came up with a solution in the form of Dr\_Dentist (Online dentist App). Dr\_Dentist is a cross-platform application that is specially designed for the patients and doctors related to dental problems and field. It is a generic application and can be used by patients, doctors, community, and many more uses regarding to this field. This app can have all other local clinics linked with it. It will be a great place to add 3d videos for patients and common people for their awareness and understanding about a disease and its treatment.

The objective of this project is to develop an efficient app for Dental Clinic and patients that provide awareness of dentist related diseases and the way to solve problem and treatment method as well as online appointment, the dentist profile, patient information includes patient personal detail, patient treatment, and patient appointment, also provide awareness about dental treatment and disease.

During the system development, Android Studio is used to create interface and coding. This system gives advantages to all user's clinic staff and end-user especially patients, where the two users can access the system.

- The Main Challenges for the Dr\_Dentist application includes:
  - Creating the Dr\_Dentist app then focuses on Diseases shows the Disease name and their information.
  - Proper Treatment plans with 3d animation videos.
  - Can make online Appointment
  - Can do online search for nearby doctor and consult with him

### **2.1.1. Purpose**

The main purpose of this project is to facilitate doctors and users/patients of the dental sector in a healthy environment. We are working on adding new modules/features in this app. These features would be like an Online doctor consultant where users/patients can consult with any doctor for dental disease. The feature Booking appointment, where users/patients can book an appointment for any dental disease, can also change and cancel appointments online. The feature Search for nearby doctors where people can make an appointment by search their nearest doctor online. The feature Awareness of disease treatment through 3d videos where people can inspire through videos for any dental treatment. Our dentists can offer feedback on a range of dental queries, from dental issues to cosmetic dentistry inquiries. Whether you're worried about a particular issue, or you're considering ways to improve your smile, our dentists can review pictures of your teeth and offer personalized advice.

### **2.1.2. Document Conventions**

In This SRS, we have used Font style Calibri with size 12 pixel for discussions and size 14 pixel and bold style for headings.

### **2.1.3. Intended Audience and Reading Suggestions**

The intended audience Dr\_Dentist is the dental market of Pakistan. It is specially designed for dentist doctors, clinics, patients, and common people in Pakistan.

### **2.1.4. Product Scope**

The real of World Wide Web has spread across millions of households, so naturally, the internet has become the best platform for real estate marketing today. Currently, when everything is online, how is it possible that Dental apps are left behind? Many dental apps are operating online, so the idea behind developing this application is that patients can consult doctors online using this. These applications are not widely popular, but they have a large scope of growth in the future. The App goals are to allow its members to reach the highest level of Dental care

while providing a safe and comfortable environment to live life to the fullest, healthiest potential.

With that goal in mind, we are determined to create a top-quality Dentist App. This application will provide every facility to their patients and help them to find information related to Dental care. The main purpose that mobile applications can serve as a valuable source of information about pre- and post-treatment. Patients get instructions via a smartphone on what they need to do before and after an appointment and how to ease a toothache. This way patients can contribute to more efficient dental care.

## **2.2. Overall Description**

Dr\_Dentist will be the android based mobile application that would provide a platform for the users, where they don't have to go for a variety of applications for different purposes regarding Dental care.

It also is worth noting that modern patients are more likely to give priority to those dental clinics that keep up to date with the latest technologies. Thus, if a dental office plans to become a technology leader and significantly enlarge its customer base, a mobile application is a must today.

### **2.2.1. Product Perspective**

Dr\_Dentist is a new, self-contained product.

### **2.2.2. Product Functions**

- 1. Our system must save time and money:** Accurate upfront software requirements definition helps ensure your team works on the business problems that matter most.
- 2. Reduce rework:** Early validation and agreement by stakeholders means development and quality teams spend less time rework.

3. **Improve requirement accuracy:** Industry-unique collaborative storyboarding improves accuracy by promoting effective communication.

### **2.2.3. User Classes and Characteristics**

#### **Qualification:**

He/ She should be at least matriculation and comfortable with English.

#### **Experience:**

He/ She should know the basics of the dental field.

#### **Technical Experience:**

He/ She should have Basic Knowledge of how to use a website.

### **2.2.4. Operating Environment**

#### **Operating System Requirements**

Windows 7, Windows 8, Windows 8.1, Windows 10.

### **2.2.5. Design and Implementation Constraints**

Our team needed to be able to identify the constraints involved in designing a dental application before diving into the few basic principles in page design that are common to most effective sites. The most fundamental of those constraints is that you can't fix where objects will appear on a viewer's screen.

### **2.2.6. User Documentation**

A complete guide on how to use Dr\_Dentist will be provided appropriately.

### **2.2.7. Assumptions and Dependencies**

#### **Assumptions:**

- The code should be free with compilation errors/syntax errors.
- The product must have an interface that is simple enough to understand.

**Dependencies:**

- All necessary hardware and software are available for implementing and use of the tool.
- The proposed system would be designed, developed, and implemented based on the software requirements specifications document.
- End users should have basic knowledge of computers, and we also assure that the users will be given software training documentation and reference material.

## 2.3. External Interface Requirements

### 2.3.1. User Interfaces

#### For Users

1. The users will be able to register to the system.
2. The user will be able to select his role (like doctor, patient etc.) during registration.
3. The user will be able to login into the system.
4. The doctor user will be able to post details for his service.
5. The doctor user will be able register his clinic to the app
6. The patient user will be able to browse nearby doctors, clinics using Advanced Search Options.
7. The patient user will be able to View doctor's detail for online consulting.
8. The doctor user will be able to contact the concerned patient regarding that specific disease.
9. The patient user will be able to make an appointment with doctor in case.
10. The user will be able to change the status of his appointment anytime.
11. The user will be able to watch 3d videos related to particular diseases and their treatments.

## For Admin

1. The admin will be able to login into the system.
2. The admin will be able to create a user login for the user.
3. The admin will be able to add 3d videos.
4. The admin will be able to delete videos.
5. The admin will be able to edit details.
6. The admin will be able to add new types and roles.
7. The admin will be able to contact the concerned doctors to add their clinics.
8. The admin will have access to the public data posted on the app.
9. The admin will be able to remove users

### 2.3.2. Hardware Interfaces

The application will be accessible through the touch screen on an Android/ IOS devices.

Users can use this application by using the android system with specifications of:

- Touch Screen- The app will access the touch screen of the device for taking inputs.
- Audio Jack- During the time of playlist while having the video where the user will be inspired, the audio jack will be used.
- OS: Android 4.1 and up
- Ram: Minimum 4GB
- Processor: Quad-core

If users will use better than that hardware system then they will get better performance.

### 2.3.3. Software Interfaces

#### Server Software Requirements:

- Android/IOS/Windows operating system

- 
- Firebase server
  - MySQL
  - A web browser (i.e., Mozilla Firefox)

**Client Software Requirements:**

- The client can use any kind of operating system because the Dr\_Dentist will be a cross-platform application, so it doesn't matter which operating system the client uses. So, the client's operating system can be Android/IOS or Windows and a web browser that could be Mozilla Firefox or Chrome.

### 2.3.4. Communications Interfaces

This application will not communicate with other users using the same application. This app however will communicate with the android device in ways like the time.

Communication between the different parts of the system is important since they depend on each other. However, in what way the communication is achieved is not important for the system and is therefore handled by the underlying operating systems for the app portal.

## 2.4. System Features

We are working on adding four major modules that are further subdivided according to the role of the user. These features are for users.

- Online doctor consultant
- Booking appointment
- Search for nearby doctors
- Awareness of disease treatment through 3d videos

## 2.4.1. Online Doctor Consultant

### Description and Priority

Online doctor consultant where users/patient can consult with any doctor online for any dental disease. Our online dental consultations let you get the answers you need from a professional and experienced dentist, without having to attend a physical appointment. Our dentists can offer feedback on a range of dental queries, from dental issues to cosmetic dentistry inquiries. Whether you're worried about a particular issue, or you're considering ways to improve your smile, our dentists can review pictures of your teeth and offer personalized advice.

### 2.4.1.1 Stimulus/Response Sequences

**Stimulus:** user requests to consult online.

**Response:** The system allows the user to input the requirement.

**Stimulus:** user requests to send pictures for the treatment

**Response:** The system allows the dentist can review pictures of your teeth and offer personalized advice.

### 2.4.1.2 Functional Requirements

**Functional Requirement 1:** Users can consult online for any dental disease.

**Functional Requirement 2:** Dentists give feedback without having attended a physical appointment.

## 2.4.2. Booking Appointment

### Description and Priority

The feature Booking appointment, where users/patients can book an appointment for any dental disease, can also change and cancel appointments online. The doctor can also view appointments.

### 2.4.2.1 Stimulus/Response Sequences

**Stimulus:** user requests to create a new appointment.

**Response:** The system provides a form to allow the user to input the requirement.

**Stimulus:** user requests to cancel an appointment.

**Response:** The system removes the appointment from the list of appointments.

**Stimulus:** user requests to change an appointment.

**Response:** The system changes the appointment from the list of appointments.

### **2.4.2.2 Functional Requirements**

**Functional Requirement 1:** Users can book an appointment online.

**Functional Requirement 2:** Users can cancel an appointment online.

**Functional Requirement 3:** Users can change appointments online.

**Functional Requirement 4:** Users can update appointments online.

## **2.5 Other Nonfunctional Requirements**

### **2.5.1 Performance Requirements**

The system can provide ease both at the admin level or local level and we as a team focus on program logic to do the required task in a systematic disciplined and quantifiable approach.

With a specific end goal to keep up a worthy speed at the most extreme number of transfers permitted from a specific patient will be any number of patients and can get to the framework whenever. Likewise, associations with the servers will be founded on the criteria of properties of the client like his area, and the server will work 24X 7 times.

### **2.5.2 Safety Requirements**

Select the best domain to save data in the database. The whole system is secured. Only Admin can access all the data.

### **2.5.3 Security Requirements**

Any adjustment (insert, update and delete) for the Database might be synchronized and done just by the Admin.

The System shall not disclose any personal information about the patients. The Application shall not grant access to an unauthorized user. The Application shall not communicate with any other devices or servers while in use by the user.

#### 2.5.4 Software Quality Attributes

In this, we check the quality of the software mean that the software performance and work properly for user and dentist.

- **Friendly:**

In this, we check the verifiable means that software should be user-friendly. The system becomes user-friendly when we add some extra function, drop down menu add some screen shot radio button and dialogue box and beautiful home page that become user friendly for our software.

- **Clearness:**

So, we will check the software clearness our software should be clear and concise mean that when we single click on our software or app it should be open in 5 sec, not more time exact time is only 5 sec that way our system is clear concise.

- **Accuracy:**

In this lack of requirement, accuracy is less than why because the all requirement is not so lengthy and a minimum one requirement is only one built. Complete information:

In this, we are giving all and complete information and requirement from a user and it in this user said when a client visits our application they do not work in this then automatically close after 5 sec.

- **Performance:**

In this, all performance of the software is exactly said to mean that App page is clicked single, not double, and tell all effect that we use in the software or app. Cut to cut talk any tell everything to the user about its software.

- **Simple:**

The SRS will be very simple anybody can read it and check how if they work that why we use tractability mean that we give all requirement to a unique number and that we find every requirement which we needed.

- **Bounded.**

In this will not be bound.

- **Efficiency:**

In this SRS all requirement is singly explained not talk about any efficiency of that software.

Not repeated requirements, again and again, will disturb the software maintenance.

- **Reliability**

Requirements about how often the software fails. The measurement is often expressed in MTBF (mean time between failures). The definition of failure must be clear. Also, don't confuse reliability with availability which is quite a different kind of requirement. Be sure to specify the consequences of software failure, how to protect from failure, a strategy for error detection, and a strategy for correction.

- **Useability**

Requirements about how difficult it will be to learn and operate the system. The requirements are often expressed in learning time or similar metrics.

- **Availability**

The framework is accessible within 24 hours of the day.

- **Maintainability**

The framework should give the ability to go down the Data.

- **Portability**

Patient/Users can sign into the framework whenever.

- **Privacy:**

Similar we will apply some term and condition and privacy for this application

### 2.5.5 Business Rules

If we do some work and start our business market have some rule and regulation in this the software also has some rule and regulation first the software is attached FTP and HTTPS to make

your software secure and not do any work that market fall butt your company up.

There are mostly two kinds of users utilizing the framework, for example,

- User
- Administrator

## 2.6 Other Requirements

- Operating System: Android 4.1 and iOS.
- System Software: Cross-platform app (iOS, Android, website), MYSQL, Adobe Photoshop, MS Word, MS Visio.
- Minimum Hardware: Processor Quad-core, 4 GB RAM.

# Chapter 3

## Use Case Analysis

## Chapter 3: System Analysis

A use case diagram describes how a system interacts with outside actors. It is a graphical representation of the interaction among the elements and system. Each use case represents a piece of functionality that a system provides to its user. Use case identifies the functionality of a system.

### 3.1. Use Case Model

#### Actor:

An actor is a person or external system that plays a role in one or more interaction with the system. And represented with:



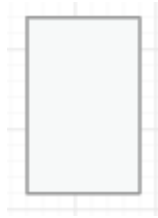
#### Use case:

Use case Describes a sequence of actions that provides something of measurable value to an actor and is drawn as a horizontal ellipse



#### System boundary

Indicates the scope of the system project. Anything within the box represents functionalities inside in scope.



### **Actor identification**

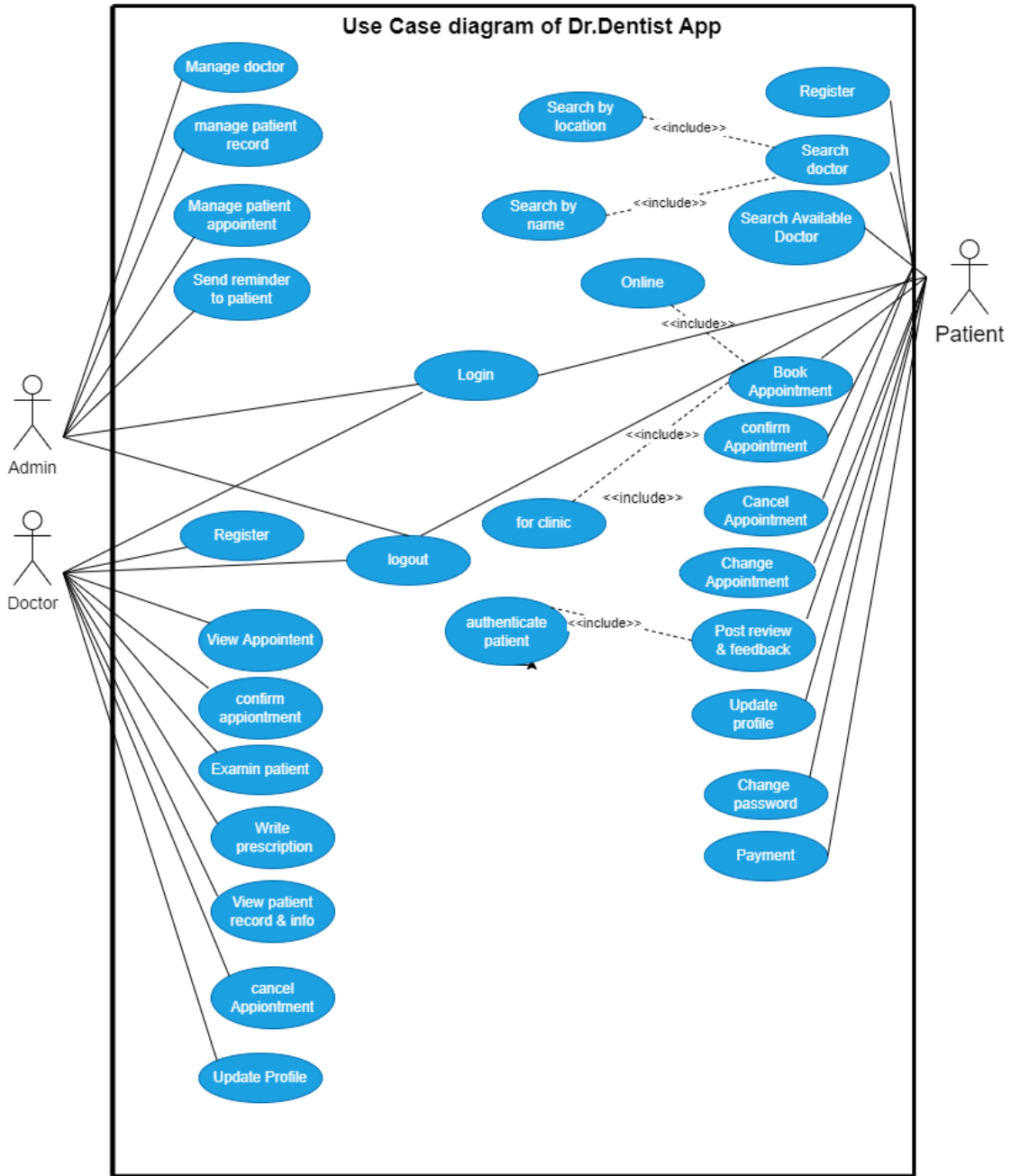
In the use cases, an actor interacts with the system to perform a piece of meaningful work that helps them to achieve a goal and has access to define their overall role in the system and the scope of their action. Depending on the above explanation actors in this system are the following:

**Admin:** The administrator manages the overall system

**patient:** The patient can search the nearest doctor and book an appointment, can also change appointment and view records.

**Dentist:** Dentist login throw ID and can view appointments and records of patients.

### 3.2. Fully Dressed Use Cases



## Use Case Description to create an account

Use Case Name	Create Account
Use Case ID	UC-01
Description	Used to create an Account for users of the system to log in to the system
Actor	Admin
Pre-condition	Admin should be filled the required form detail user
Basic course of action	<ol style="list-style-type: none"> <li>1. The admin select create account link</li> <li>2. System display create Account page</li> <li>3. System validates info</li> <li>4. Admin filled the required info and submit it</li> </ol>
Post-condition	The Account is Successfully created.

## Use Case Description for login

Use Case Name	Login
Use Case ID	UC-02
Description	Users need to login into the system to perform a task.
Actor	Admin, Patient, Dentist.
Pre-condition	The user should have an account to log in

### Use Case Description for add Dentist

Use Case Name	Add Dentist
Use Case ID	UC-03
Description	This use case is to allow a user to add a Dentist to the new system.
Actor	Admin
Pre-condition	The user should log in to the system to add a Dentist.
Basic course of action	<ol style="list-style-type: none"> <li>1. The user selects add Dentist link</li> <li>2. System display add new Dentist form</li> <li>3. User enter the detail of Dentist</li> <li>4. The system verifies the data that actor enter</li> <li>5. The system adds Dentist and updates the database successfully</li> </ol>
Post-condition	The new Dentist adds the system is successfully added

### Use Case Description to add payment

Use Case Name	Add Payment
Use Case ID	UC-04
Description	The use case allows users to add payment.
Actor	Admin, Dentist.
Pre-condition	user should log in to the system to add payment.
Basic course of action	<ol style="list-style-type: none"> <li>1. The user selects to add a payment link</li> <li>2. System display add a new payment form to the user</li> <li>3. User enter the detail of the payment</li> <li>4. The system verifies the data that actor enters</li> <li>5. System adds payment and update database successfully</li> </ol>
Post-condition	The new payment adds the system is successfully added

## Use Case Description for Appointment overview

Use Case Name	View Appointment
Use Case ID	UC-05
Description	The use case allows the admin to view the Appointment detail.
Actor	Admin.
Pre-condition	admin should log in to the system to view an overview of appointment detail.
Basic course of action	<ol style="list-style-type: none"> <li>1. The admin selects Appointment overview link</li> <li>2. System display Appointment overview form</li> <li>3. Admin enters the ranges of date and month that need to overview detail.</li> <li>4. The system will display several Dentists, number of incomes paid from a dentist in that rang</li> </ol>
Post-condition	The Appointment overview display successfully.

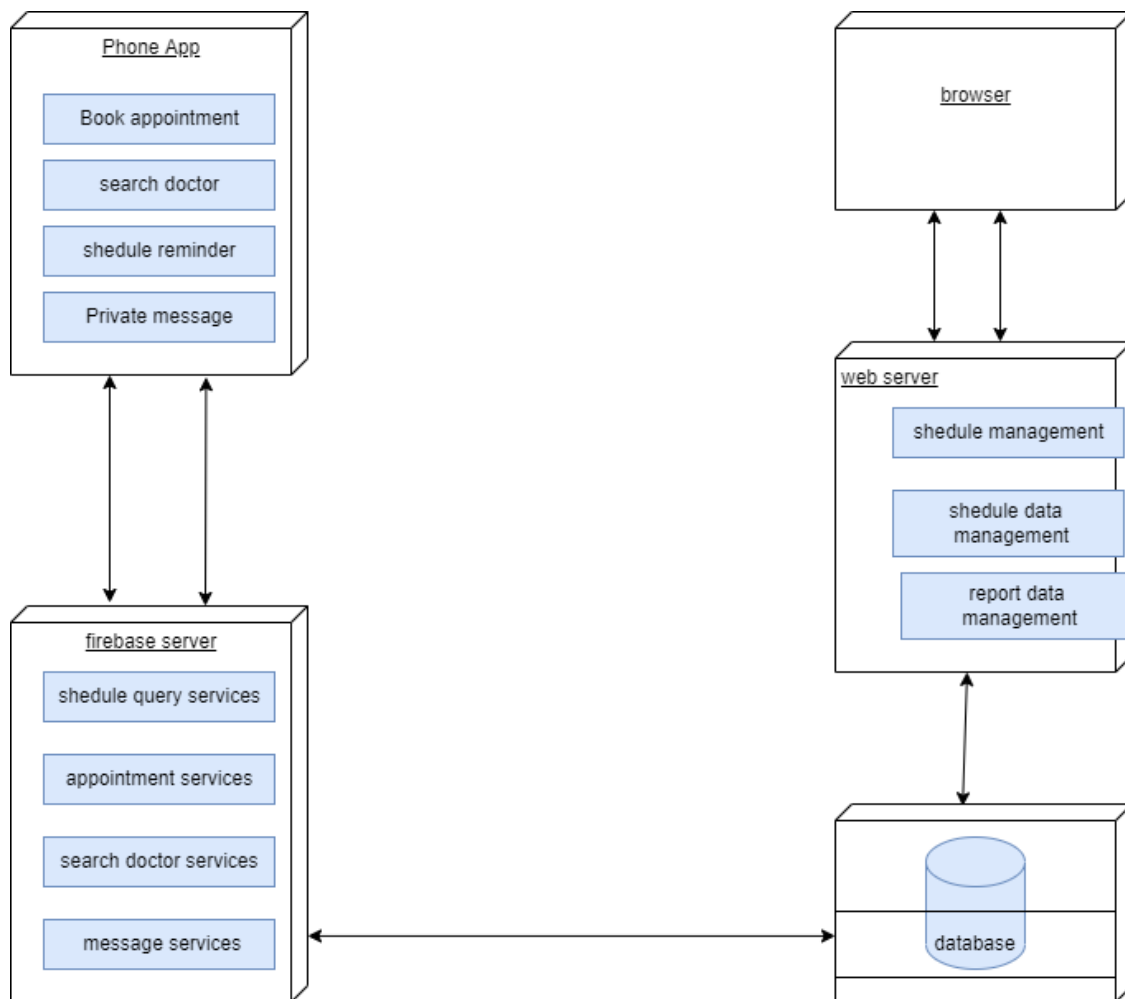
# Chapter 4

## System Design

## Chapter 4: System Design

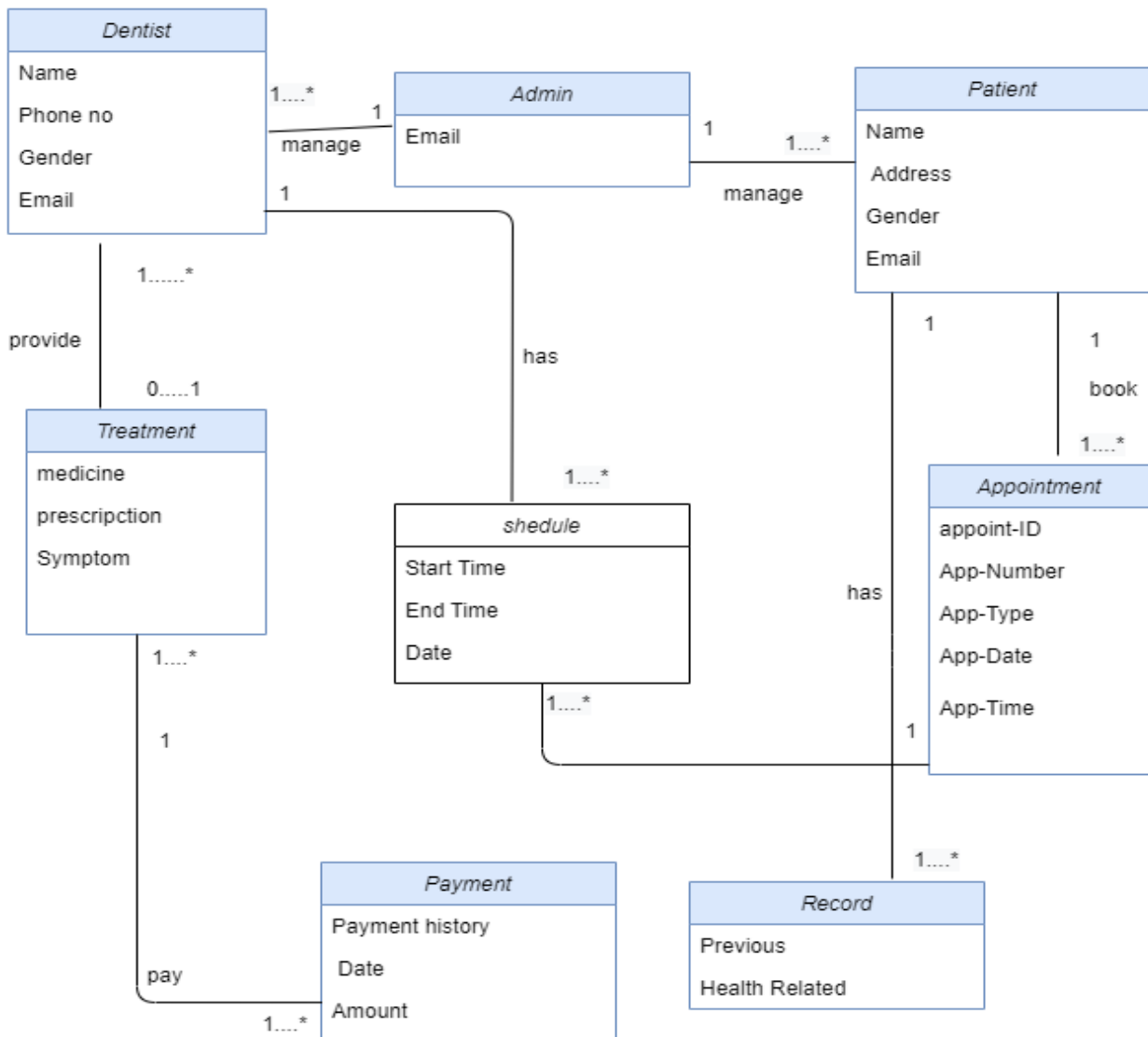
This chapter describes the system design. This will include the different types of diagrams. These are different types of diagrams that we are using for the detailed design of our project “Dr\_Dentist”.

### 4.1. Architecture Diagram

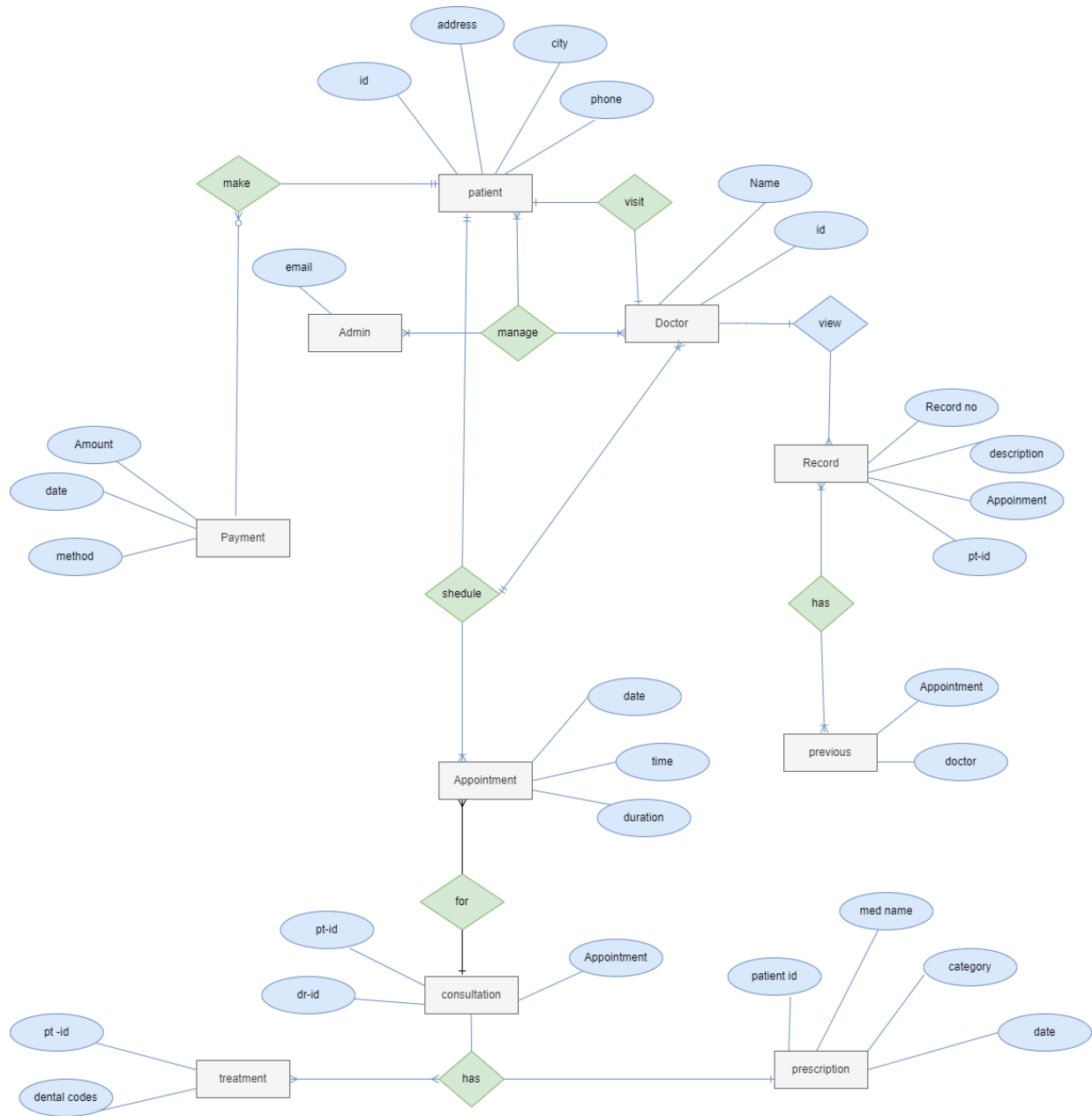


## 4.2. Domain Model

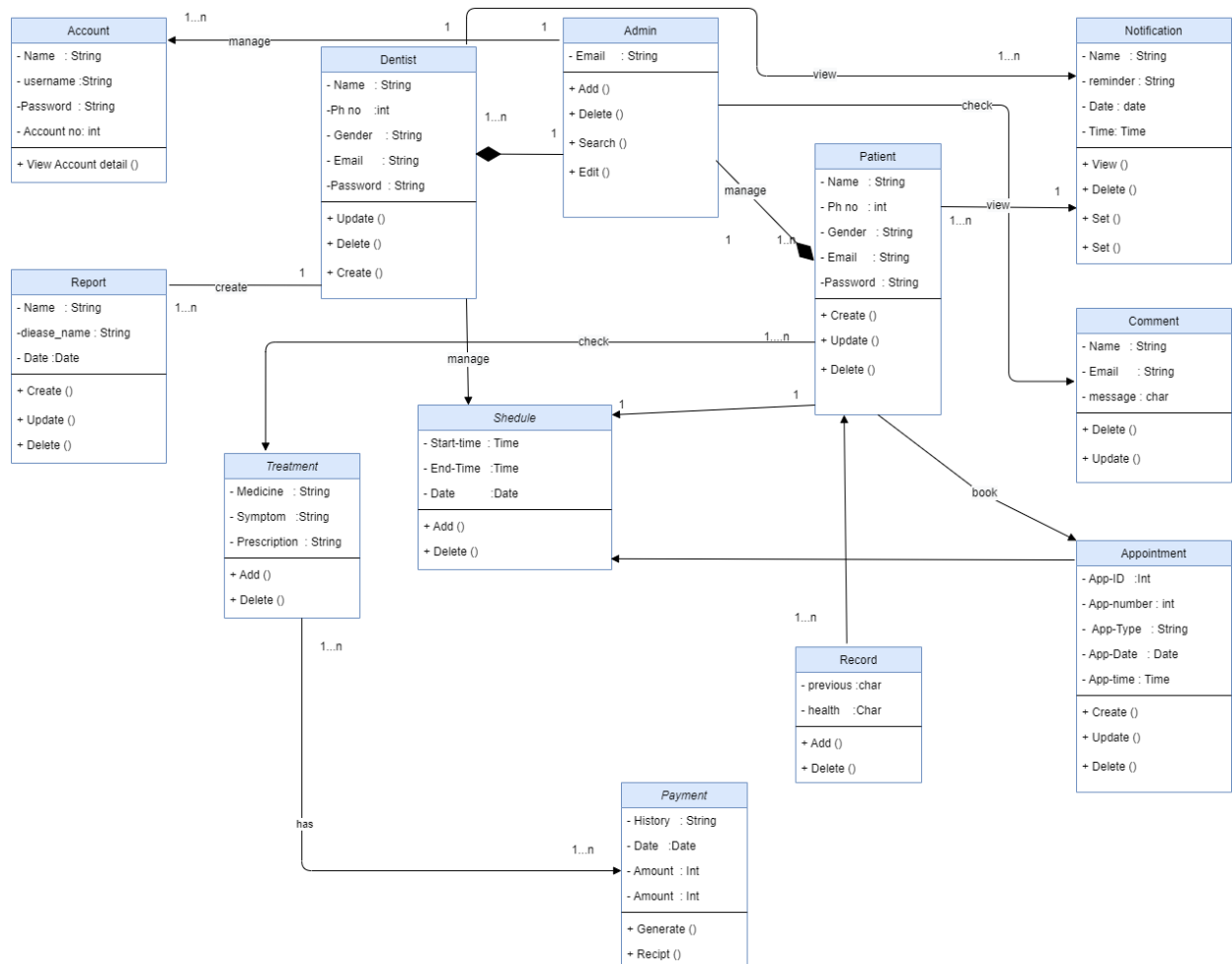
Domain model for Dr.dentist



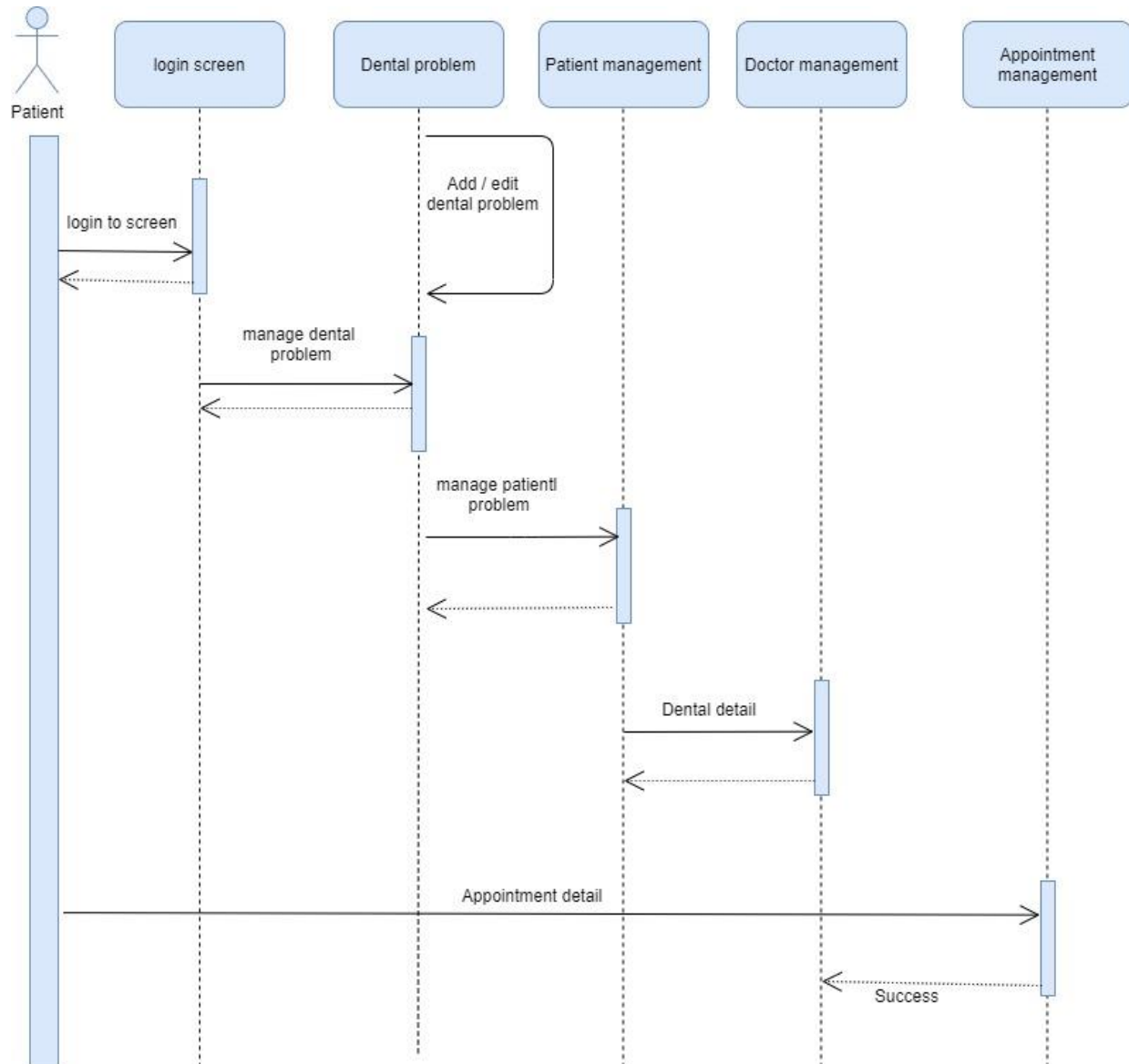
### 4.3. Entity Relationship Diagram with data dictionary



## 4.4. Class Diagram



## 4.5. Sequence / Collaboration Diagram



## 4.6. Operation contracts

### 1. Register

<u>Headings</u>	<u>Sub-Headings</u>	
Operations		Register( )
Cross-Reference	Use-Case	Registration, View Profile
	Scenario	Registration
Pre-Conditions		N/A
Post-Conditions	Instantiation	An instance "D" of Doctor was created. An instance "P" of Patient was created.
	Attribute Modification	A.Id becomes ID. A.Name becomes Name. R.CN becomes CN A.Address becomes Address. A.CNIC becomes CNIC.
	Association	A was associated with the Patient.

### 2. Login

<u>Headings</u>	<u>Sub-Headings</u>	
Operations		Login( )
Cross-Reference	Use-Case	Login, View Profile
	Scenario	Login
Pre-Conditions		N/A
Post-Conditions	Instantiation	An instance "D" of Doctor was created. An instance "P" of Patient was created. An instance "a" of Admin was created.
	Attribute Modification	A.Id becomes ID.
	Association	A was associated with Admin. A was associated with the Patient. A was associated with Doctor.

### 3. Search Nearby Doctor

<u>Headings</u>	<u>Sub-Headings</u>	
Operations		Search Doctor ()
Cross-Reference	Use-Case	View Doctor
	Scenario	View Location
Pre-Conditions		The patient should be logged into the system A patient must select a location name to be able to search for a doctor
Post-Conditions	Instantiation	An instance "Search" of Search was created. An instance "S" of Patient was created.
	Attribute Modification	N/A
	Association	A search was associated with the Patient.

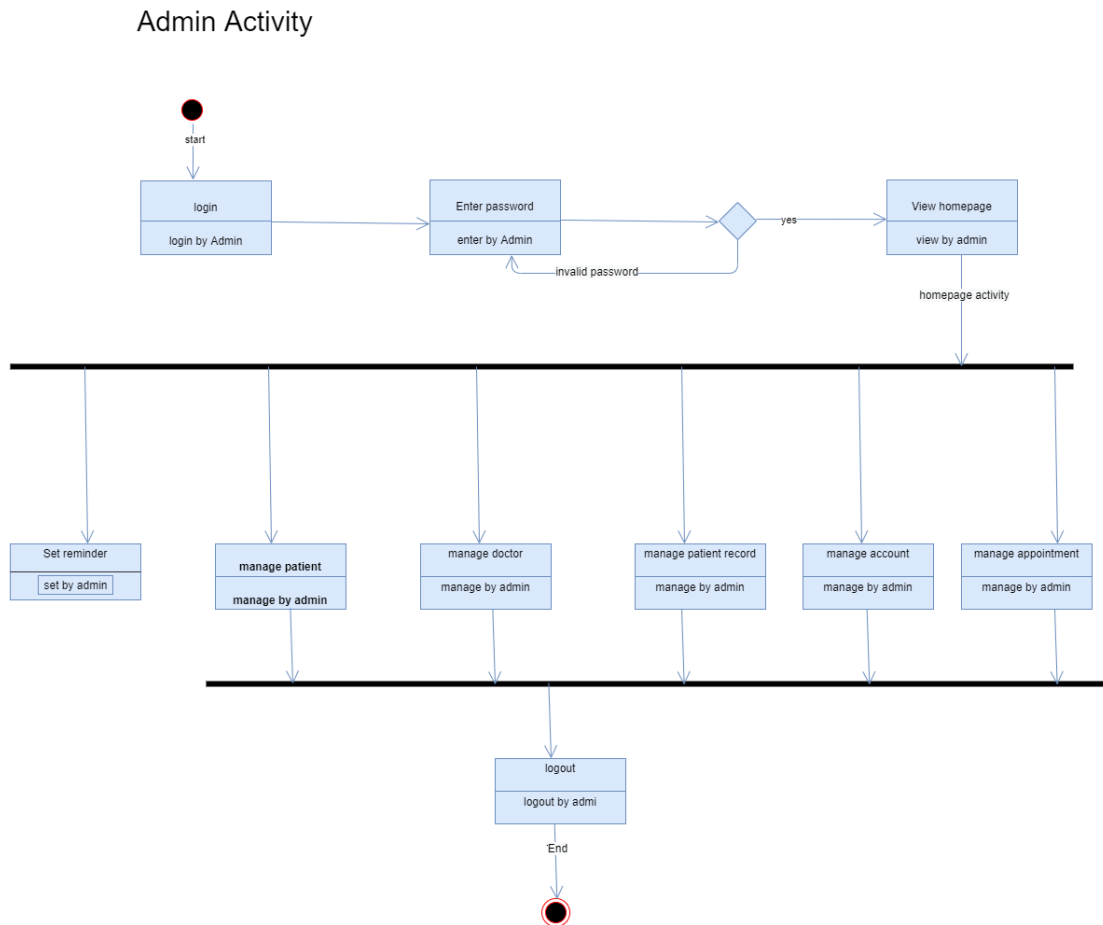
### 4. Confirm Appointment

Description	Sample Data	Expected Result	Actual Result	Status
Confirming Appointment				
Click Confirm Appointment option		Appointment Confirmed on the cart page		
Failure situation Click Confirm Appointment		Displays error An appointment is not confirmed		

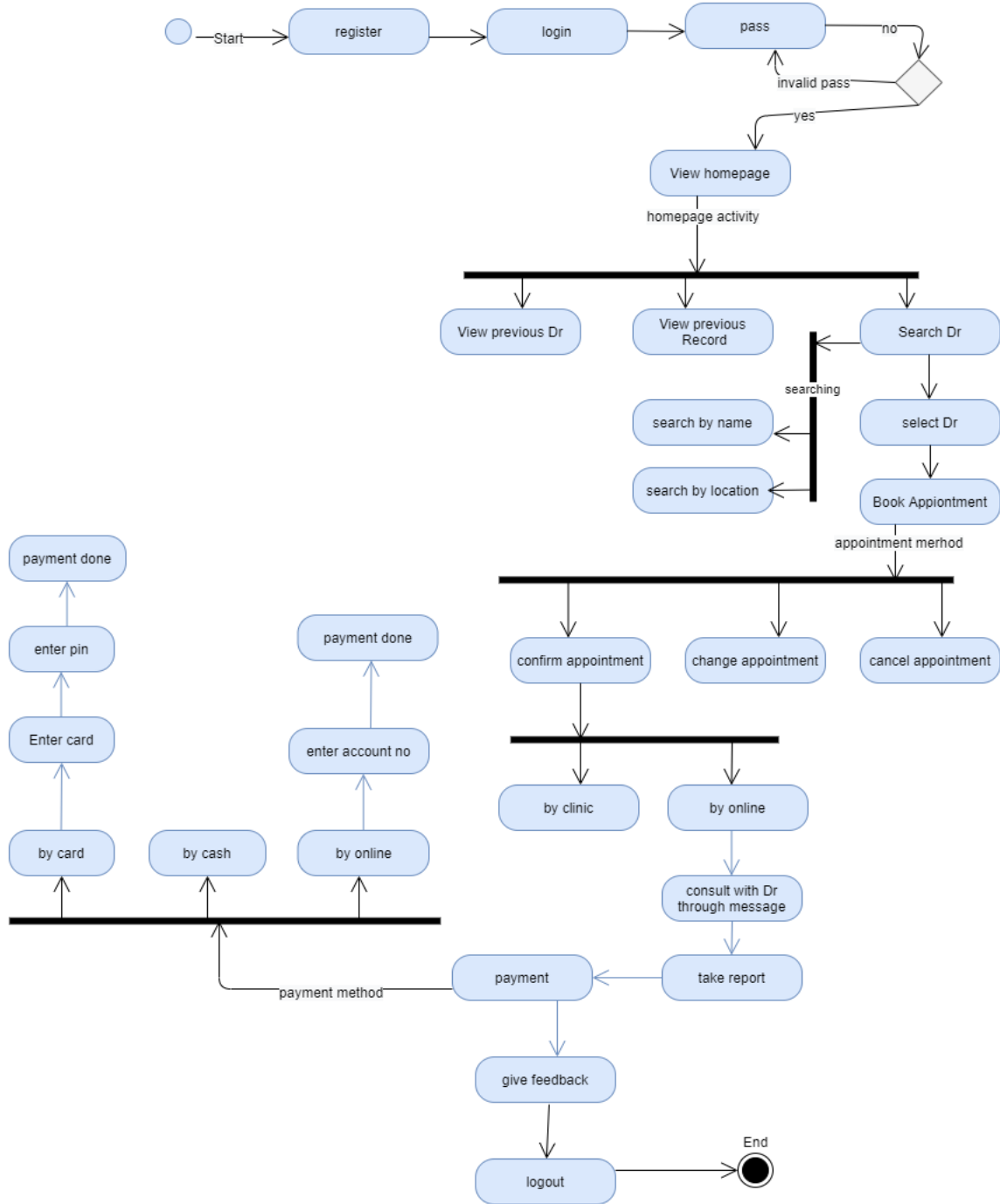
## 5. Permission

<u>Headings</u>	<u>Sub-Headings</u>	
Operations		Permission( )
Cross-Reference	Use-Case	Permission
	Scenario	Permission
Pre-Conditions		The manager should be logged into the system
Post-Conditions	Instantiation	An instance "Permission" of Permission was created. An instance "M" of Manager was created.
	Attribute Modification	Permission. Id becomes id.
	Association	Permission was associated with Admin.

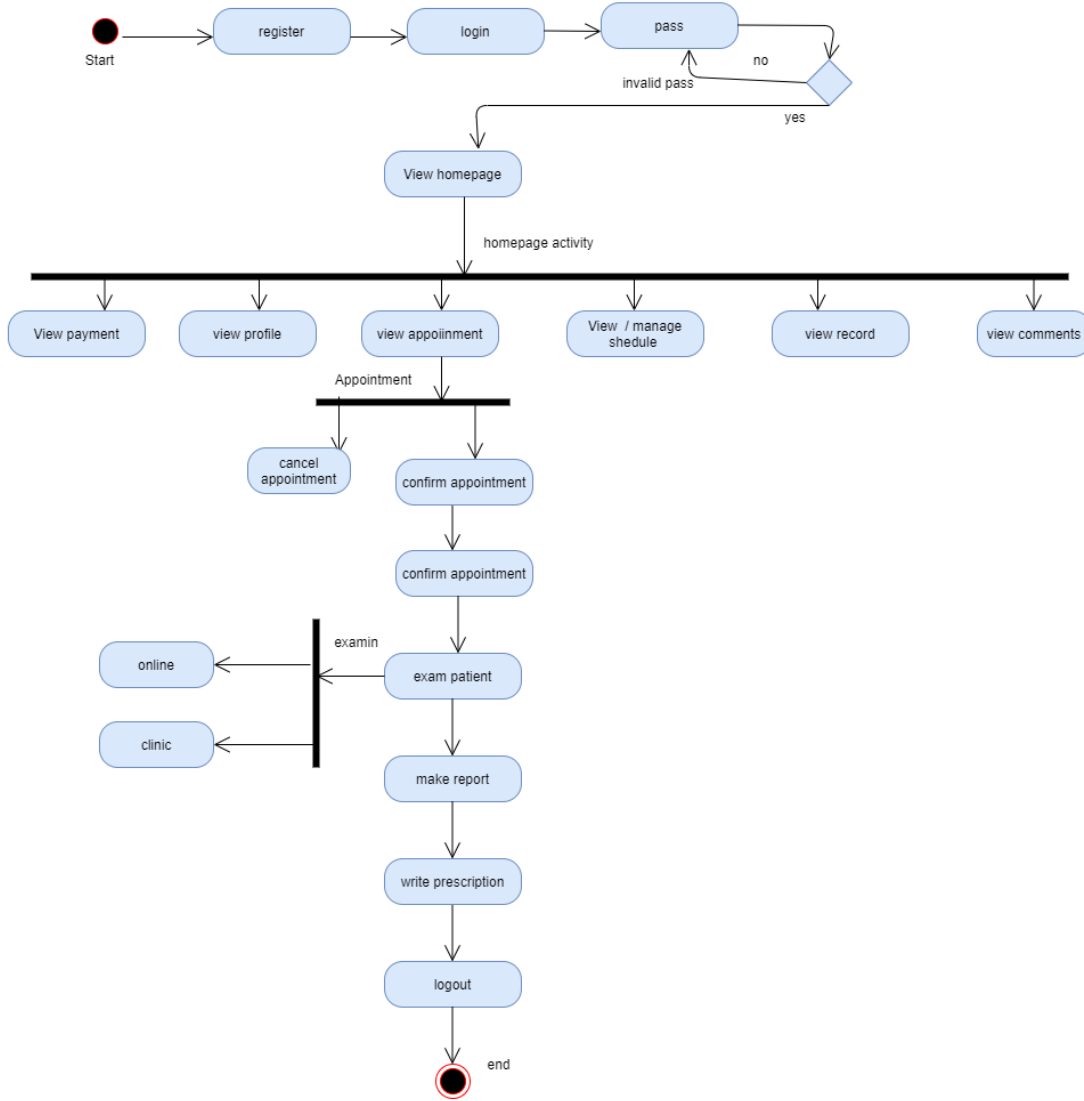
## 4.7. Activity Diagram



### Patient activity

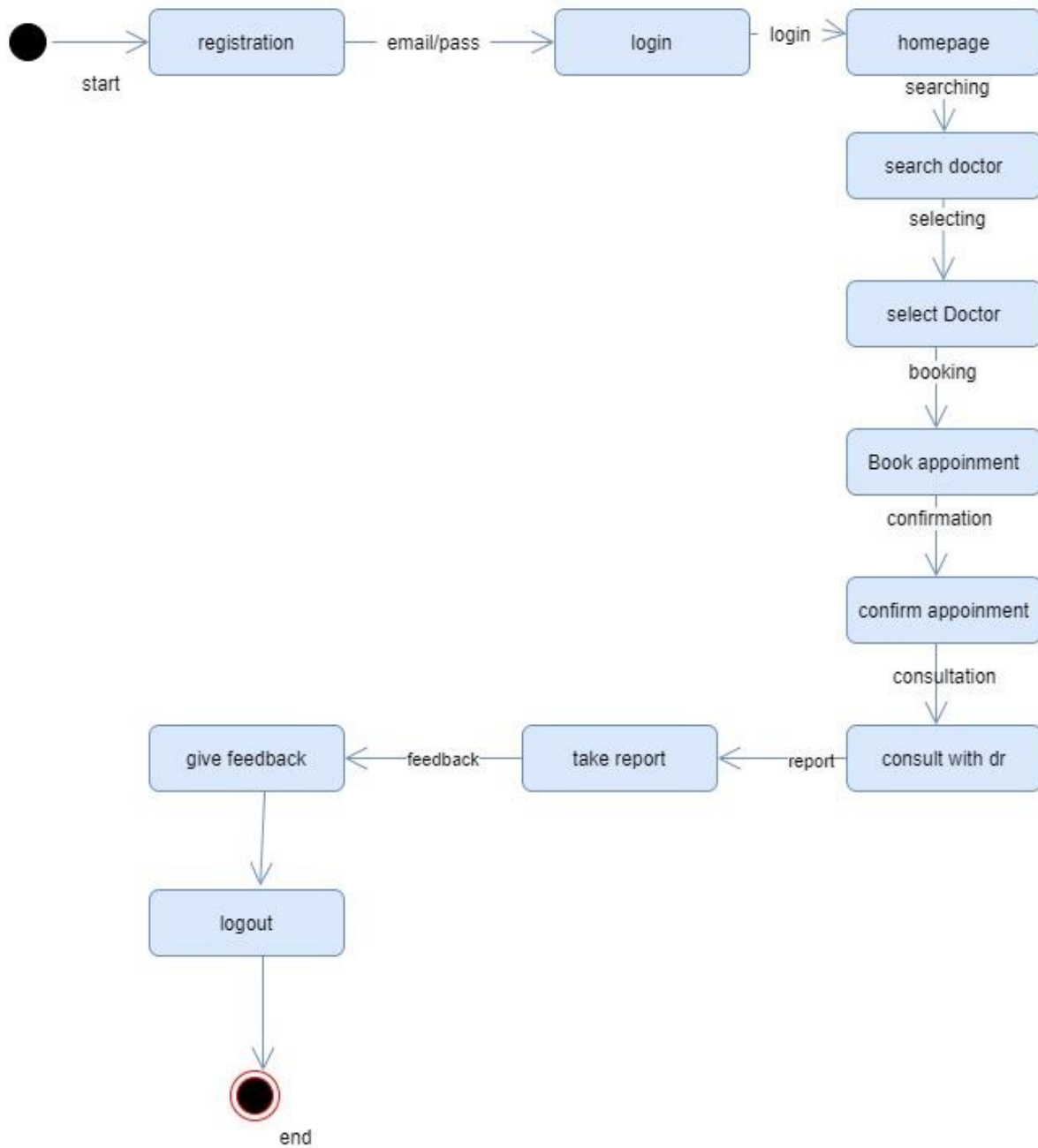


**Dentist activity**

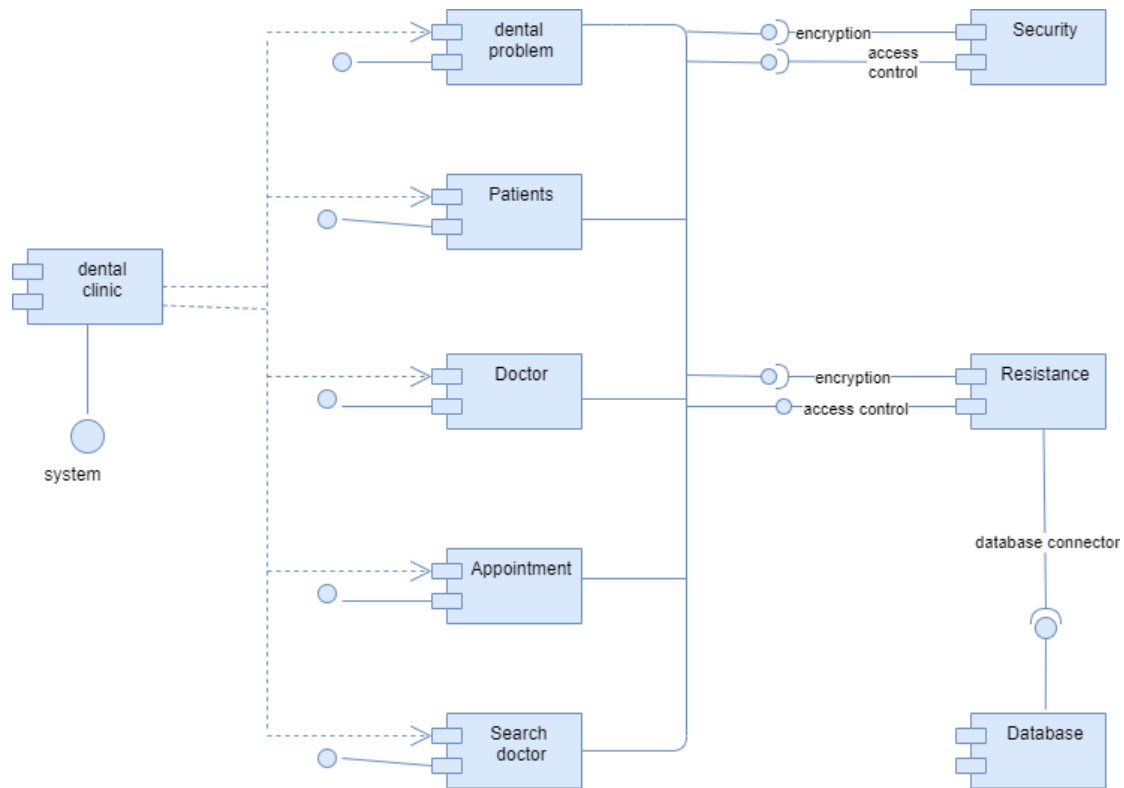


## 4.8. State Transition Diagram

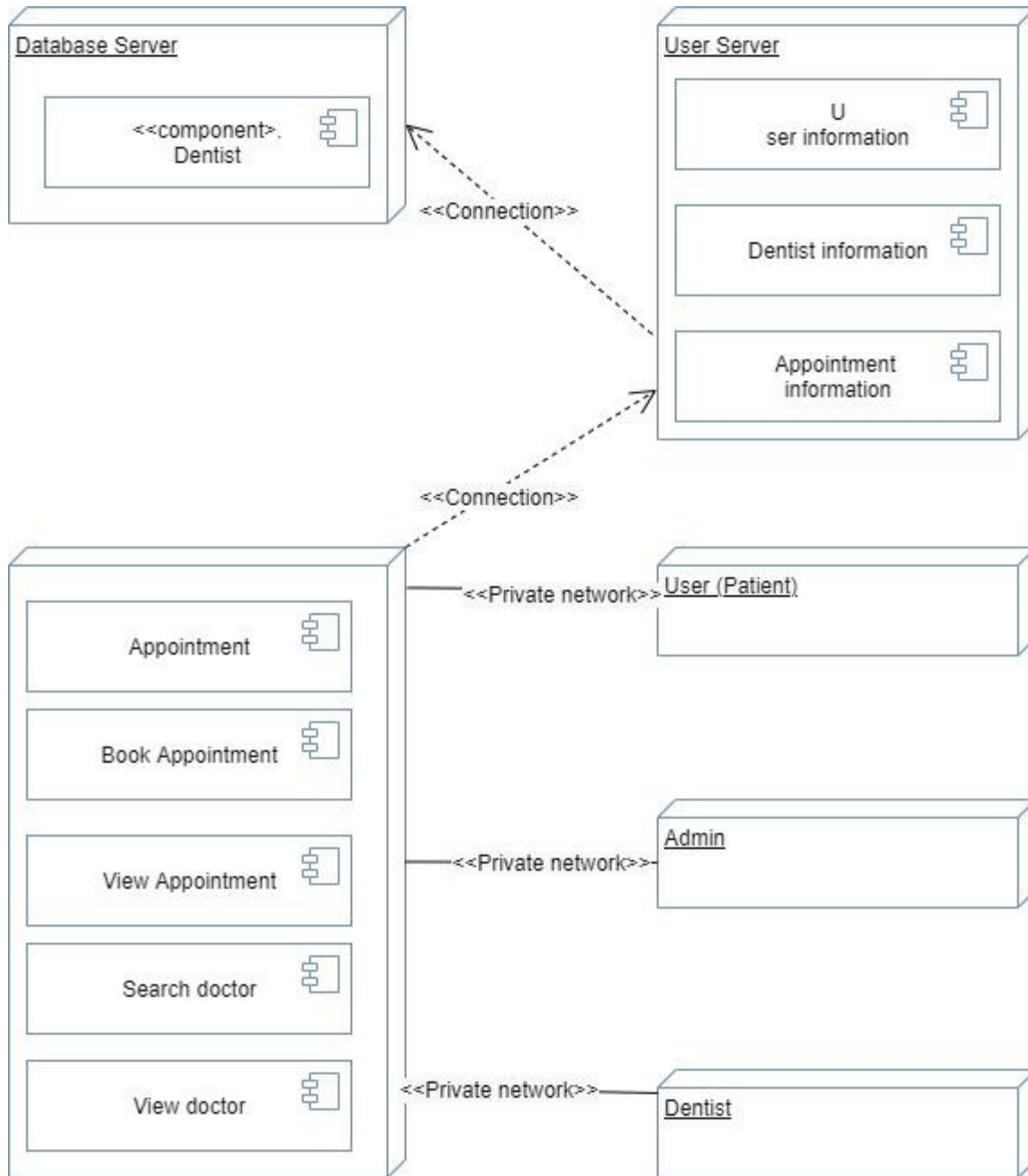
State machine



## 4.9. Component Diagram

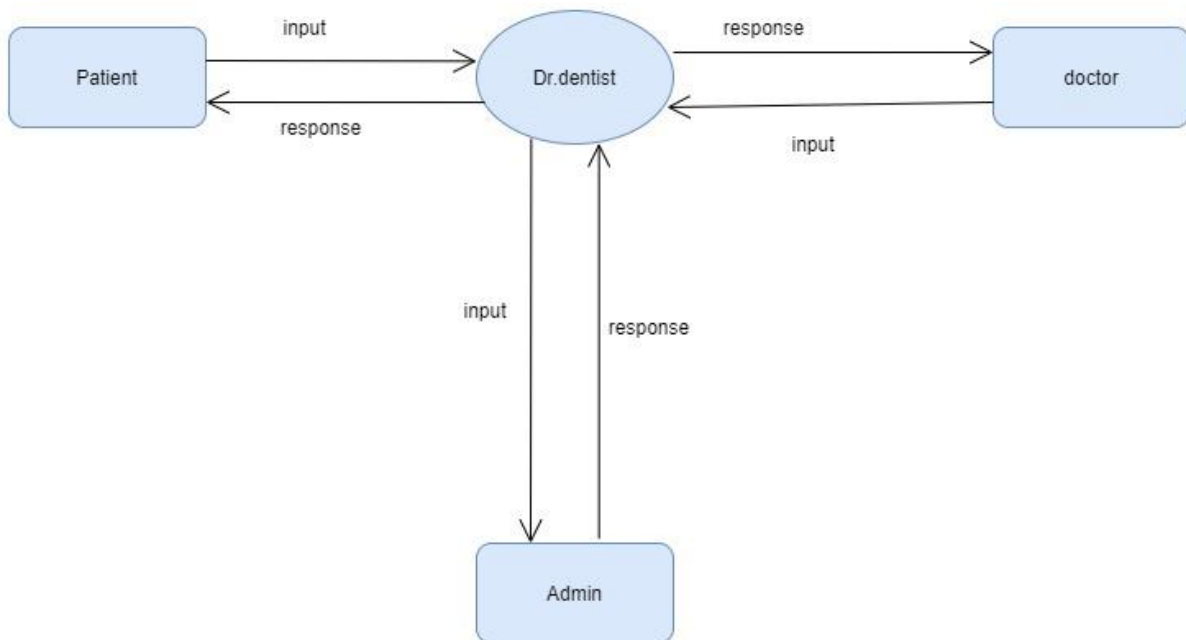


### 4.10. Deployment Diagram

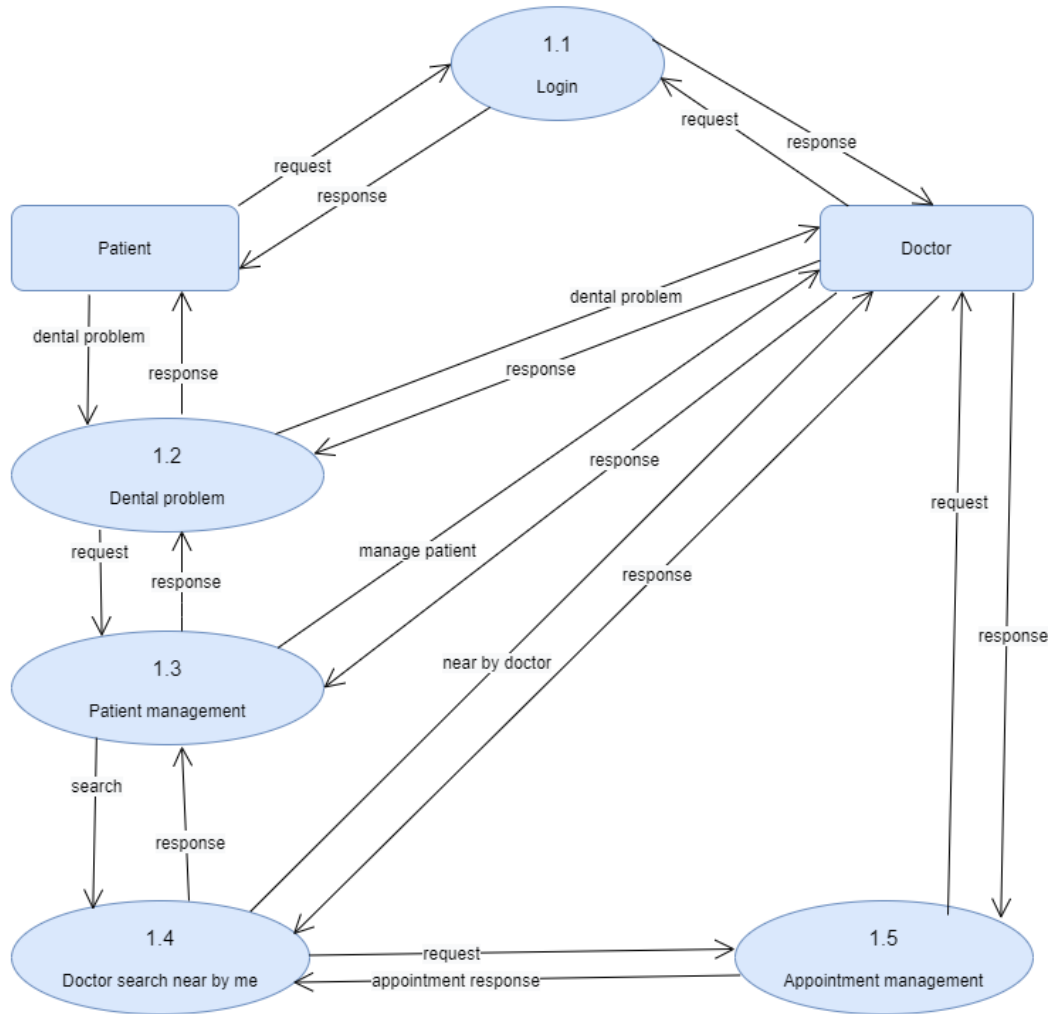


## 4.11. Data Flow diagram

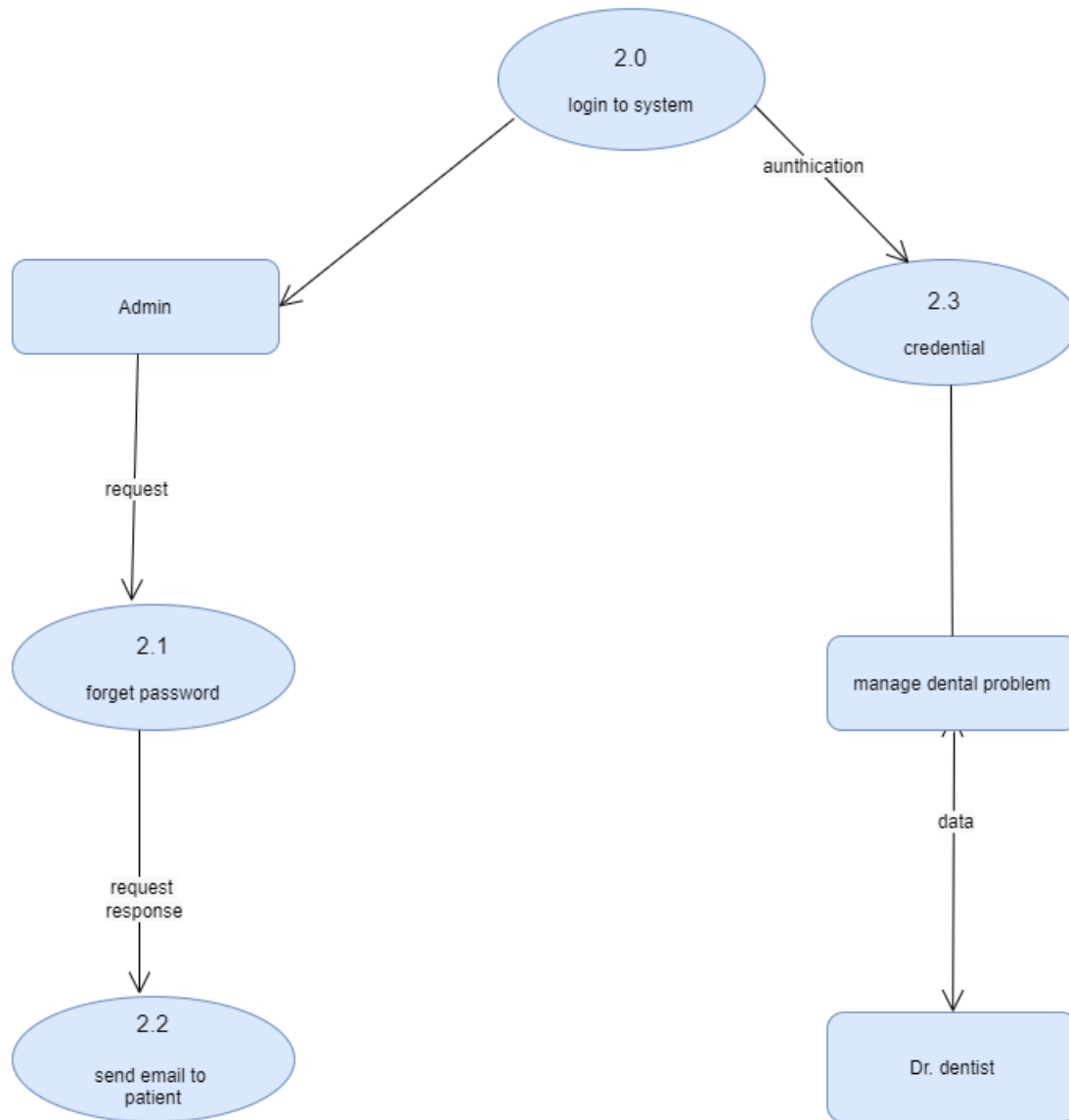
### Level 0



Level 1



## Level 2



# Chapter 5

## Implementation

## Chapter 5: Implementation

We use the Incremental method software engineering technique for developing our project.

### 5.1. Important Flow Control/Pseudo codes

Pseudo codes mean how over the project will work its complete flow we have described it in diagrams like UML diagram sequence diagrams etc. Pseudocode is simple. You just write out the steps to be taken to perform any task

### 5.2. Components, Libraries, Web Services, and stubs

#### User Interface UI

- Styling
- Screen flexibility
- Slider

#### Libraries:

An Android library is structurally the same as an Android app module. It can include everything needed to build an app, including source code, resource files, and an Android manifest. However, instead of compiling into an APK that runs on a device, an Android library compiles into an Android Archive (AAR) file that you can use as a dependency for an Android app module. Unlike JAR files, AAR files can contain Android resources and a manifest file, which allows you to bundle in shared resources like layouts and drawable in addition to Java classes and methods.

A library module is useful in the following situations:

- When you're building multiple apps that use some of the same components, such as activities, services, or UI layouts.

- When you're building an app that exists in multiple APK variations, such as a free and paid version and you need the same core components in both.

### **Stubs:**

The sync adapter framework is designed to work with device data managed by the flexible and highly secure content provider framework. For this reason, the sync adapter framework expects that an app that uses the framework has already defined a content provider for its local data. If the sync adapter framework tries to run your sync adapter, and your app doesn't have a content provider, your sync adapter crashes

## **5.3. Deployment Environment**

This application doesn't require any heavy system to develop any system It just requires hard work and a friendly environment to develop.

## **5.4. Tools and Techniques**

- Android Studio(3.5.3 with jdk13)
- Dart (Framework)
- Flutter (Layout and coding)
- MS-Visio / creatly (for Diagrams)
- Firebase

## **5.5. Best Practices / Coding Standards**

Write comments and documentation.

- Write readable yet efficient code
- Use helper methods.

- If avoidable, do NOT hard code!
- Write test cases.

## **5.6. Version Control**

We are using the latest versions of the tools which we are using in the development of this We will use an Android studio version control system where we can handle our project with speed and efficiency. We can easily manage and share our code with other team members

# Chapter 6

## Testing & Evaluation

## Chapter 6: Testing and Evaluation

In this chapter we will briefly describe all the phases of system testing and in the end we will evaluate the developed system according to the result obtained from the testing that will determine how much the system is useable and what are the faults and bugs that needs to be fixing before the deployment of the system.

### 6.1. Use Case Testing

<b>Test Case Name:</b>	User Can Sign in	<b>Use Case Reference:</b>	UC 1
<b>Test Case ID:</b>	TC-1	<b>QA Test Engineer</b>	Bisal Shoukat
<b>Version</b>	1.0	<b>Code Developer</b>	Sadia Saif
<b>Test Date</b>	15 Nov 2021	<b>Reviewed By</b>	Zarar Anwar
<b>Revision History</b>	None		
<b>Objective</b>	User can Sign in		
<b>Environment</b>	Android Mobile Phone		
<b>Assumptions</b>	User have stable internet and User will Enter valid details		
<b>Pre-requisites</b>	User should connect to Internet		
<b>S. #</b>	<b>Execution Description</b>	<b>Expected Output</b>	<b>Procedure Result</b>
1.	User Start the Application	System will display the Sign in Screen	Displayed
2.	User enter valid details and press enter	System will validate the details and Sign In the account.	Account Signed in
<b>Comments:</b>			
<b>Status</b>	<input checked="" type="radio"/> Pass <input type="radio"/> Fail <input type="radio"/> Not Executed		

<b>Test Case Name:</b>	Admin can view all user	<b>Use Case Reference:</b>	UC 2
<b>Test Case ID:</b>	TC-2	<b>QA Test Engineer</b>	Bial Shoukat
<b>Version</b>	1.0	<b>Code Developer</b>	Sadia Saif
<b>Test Date</b>	10 Nov 2021	<b>Reviewed By</b>	Zarar Anwar
<b>Revision History</b>	None		
<b>Objective</b>	Admin can view all users		
<b>Environment</b>	Android Mobile Phone		
<b>Assumptions</b>	Admin have stable internet		
<b>Pre-requisites</b>	Admin should connect to Internet Admin should login the System		
<b>S. #</b>	<b>Execution Description</b>	<b>Expected Output</b>	<b>Procedure Result</b>
1.	Admin will login with its credentials	System will display the main Dashboard	Displayed
2.	Admin will click on all users button	System will fetch and display all user list	Displayed
<b>Comments:</b>			
<b>Status</b>	<input checked="" type="radio"/> Pass <input type="radio"/> Fail <input type="radio"/> Not Executed		

<b>Test Case Name:</b>	Admin can delete users	<b>Use Case Reference:</b>	UC 2
<b>Test Case ID:</b>	TC-3	<b>QA Test Engineer</b>	Bisal Shoukat
<b>Version</b>	1.0	<b>Code Developer</b>	Sadia Saif
<b>Test Date</b>	10 Nov 2021	<b>Reviewed By</b>	Zarar Anwar

<b>Revision History</b>	None
<b>Objective</b>	Admin can delete users
<b>Environment</b>	Android Mobile Phone
<b>Assumptions</b>	Admin have stable internet

<b>Pre-requisites</b>	Admin should connect to Internet Admin should login the System		
<b>S. #</b>	<b>Execution Description</b>	<b>Expected Output</b>	<b>Procedure Result</b>
1.	Admin will click on users option	System will display the table of users	Displayed
2.	Admin will click on delete button	System will delete that user.	System updated
<b>Comments:</b>			
<b>Status</b>	<input checked="" type="radio"/> Pass <input type="radio"/> Fail <input type="radio"/> Not Executed		

<b>Test Case Name:</b>	Admin can view Appointments	<b>Use Case Reference:</b>	UC 2
<b>Test Case ID:</b>	TC-4	<b>QA Test Engineer</b>	Arman Ali
<b>Version</b>	1.0	<b>Code Developer</b>	Arman Ali
<b>Test Date</b>	10 Nov 2021	<b>Reviewed By</b>	Maham Zulfiqar
<b>Revision History</b>	None		
<b>Objective</b>	Admin can view properties.		
<b>Environment</b>	Website Chrome Browser		
<b>Assumptions</b>	Admin have stable internet		

<b>Pre-requisites</b>		Admin should connect to Internet Admin should login the System	
<b>S. #</b>	<b>Execution Description</b>	<b>Expected Output</b>	<b>Procedure Result</b>
1.	Admin will click on properties option	System will display the reports.	Displayed
2.	Properties Table will open	System will display the reports.	System updated
<b>Comments:</b>			
<b>Status</b>		✓ Pass    o Fail    o Not Executed	

<b>Test Case Name:</b>	users can book Appointments	<b>Use Case Reference:</b>	UC 1
<b>Test Case ID:</b>	TC-5	<b>QA Test Engineer</b>	Bisal Shoukat
<b>Version</b>	1.0	<b>Code Developer</b>	Sadia Saif
<b>Test Date</b>	15 Nov 2021	<b>Reviewed By</b>	Zarar Anwar
<b>Revision History</b>	None		
<b>Objective</b>	Book Appointments		
<b>Environment</b>	Android Mobile Phone		
<b>Assumptions</b>	Users have stable internet		
<b>Pre-requisites</b>	Users should connect to Internet Users should login the System		
<b>S. #</b>	<b>Execution Description</b>	<b>Expected Output</b>	<b>Procedure Result</b>
1.	users will click on book Appointment button.	System will display form.	Displayed
2.	users will add details	System will add new record	System updated

<b>Comments:</b>	
<b>Status</b>	✓ <b>Pass</b> <input type="radio"/> <b>Fail</b> <input type="radio"/> <b>Not Executed</b>

<b>Test Case Name:</b>	Users can change Appointments	<b>Use Case Reference:</b>	UC 1
<b>Test Case ID:</b>	TC-6	<b>QA Test Engineer</b>	Bisal Shoukat
<b>Version</b>	1.0	<b>Code Developer</b>	Sadia Saif
<b>Test Date</b>	15 Nov 2021	<b>Reviewed By</b>	Zarar Anwar
<b>Revision History</b>	None		

<b>Objective</b>	Change Appointments		
<b>Environment</b>	Android Mobile Phone		
<b>Assumptions</b>	User have stable internet		
<b>Pre-requisites</b>	User should connect to Internet User should login the System		
<b>S. #</b>	<b>Execution Description</b>	<b>Expected Output</b>	<b>Procedure Result</b>
1.	User will go to his book appointment list	System will display book Appointment.	Displayed
2.	User will click on change button.	System will change appointment	System updated
<b>Comments:</b>			
<b>Status</b>	✓ <b>Pass</b> <input type="radio"/> <b>Fail</b> <input type="radio"/> <b>Not Executed</b>		

<b>Test Case Name:</b>	User can search doctor	<b>Use Case Reference:</b>	UC 1
<b>Test Case ID:</b>	TC-7	<b>QA Test Engineer</b>	Bisal Shoukat
<b>Version</b>	1.0	<b>Code Developer</b>	Sadia Saif
<b>Test Date</b>	15 Nov 2021	<b>Reviewed By</b>	Zarar Anwar
<b>Revision History</b>	None		
<b>Objective</b>	User can search doctor		
<b>Environment</b>	Android Mobile Phone		
<b>Assumptions</b>	User have stable internet		
<b>Pre-requisites</b>	User should connect to Internet User should login the System		
<b>S. #</b>	<b>Execution Description</b>	<b>Expected Output</b>	<b>Procedure Result</b>

1.	User will click on search button	System will display specified doctors.	Displayed
2.	User will select different doctors	System will display searched doctors.	System updated
<b>Comments:</b>			
<b>Status</b>		<input checked="" type="radio"/> Pass <input type="radio"/> Fail <input type="radio"/> Not Executed	

<b>Test Case Name:</b>	Admin can manage doctor	<b>Use Case Reference:</b>	UC 2
<b>Test Case ID:</b>	TC-8	<b>QA Test Engineer</b>	Bisal Shoukat
<b>Version</b>	1.0	<b>Code Developer</b>	Sadia Saif
<b>Test Date</b>	15 Nov 2021	<b>Reviewed By</b>	Zarar Anwar

<b>Revision History</b>	None		
<b>Objective</b>	Admin can manage doctor		
<b>Environment</b>	Android Mobile Phone		
<b>Assumptions</b>	Admin have stable internet		
<b>Pre-requisites</b>	Admin should connect to Internet Admin should login the System		
<b>S. #</b>	<b>Execution Description</b>	<b>Expected Output</b>	<b>Procedure Result</b>
1.	Admin will click on edit property button.	System will display form.	Displayed
2.	Admin will click on update property button.	System will update specified property.	System updated
<b>Comments:</b>			
<b>Status</b>	<input checked="" type="checkbox"/> <b>Pass</b> <input type="checkbox"/> <b>Fail</b> <input type="checkbox"/> <b>Not Executed</b>		

## 6.2. Boundary value analysis

Boundary value analysis (BVA) is based on testing the boundary values of valid and invalid partitions. The Behavior at the edge of each equivalence partition is more likely to be incorrect than the behavior within the partition, so boundaries are an area where testing is likely to yield defects. Every partition has its maximum and minimum values, and these maximum and minimum values are the boundary values of a partition. A boundary value for a valid partition is a valid boundary value. Similarly, a boundary value for an invalid partition is an invalid boundary value. Tests can be designed to cover both valid and invalid boundary values. When designing test cases, a test for each boundary value is chosen.

### For user Sign-In

<b>Attributes</b>	<b>Invalid partition</b>	<b>Valid partition</b>	<b>Invalid partition</b>
E-mail	no @gmail.com	Must in @gmail.com	no @gmail.com

Password	Below 8 chars	Between 8 to 50 chars	Above 50 chars
----------	---------------	-----------------------	----------------

### For book Appointment

Attributes	Invalid partition	Valid partition	Invalid partition
Name	Below 4 chars	Between 4 to 50 chars	Above 20 chars
Type	Not selecting Anything	Selecting from given options	Not selecting Anything
Appointment-Type	Not selecting Anything	Selecting from given options	Not selecting Anything
City	Not selecting Anything	Selecting from given options	Not selecting Anything
Address	wrong keywords	Entering valid location	Above 5 chars
Email	Below 8 chars	Between 8 to 50 chars	Above 50 chars
Contact Info	Below 11 numbers	Only 11 numbers	Above 11 numbers

### 6.3. Data flow testing

Modules no:	Module's description	Expected result	Actual result	Status
01	User Sign in	Validate data from server	Data validate	Pass
02	Book Appointment	Data must be stored in data base	Data stored	Pass

03	Confirm Appointment	Data fetch from the server	Data Fetched	Pass
04	Cancel Appointment	Data deleted from database	Data Deleted	Pass
05	Add User By admin	Data must be stored in data base	Data stored	Pass
06	Manage Users By admin	Data fetch from the server	Data Fetched	Pass
07	Add user by Admin	Data must be stored in data base	Data stored	Pass
08	Search doctor	Data fetch from the server	Data Fetched	Pass
09	Change Appointment	Data must be edited in data base	Data updated	Pass
10	Edit Profile	Data must be edited in data base	Data Updated	Pass
11	Payment Method	Data must be stored in data base	Data stored	Pass
12	Manage Appointments By admin	Data fetch from the server	Data Fetched	Pass

13	Delete user By admin	Data must be deleted from data base	Data Deleted	Pass
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## 6.4. Unit testing

### App:

Test Case	Step Details	Test Data	Expected Result	Actual Result	Pass / Fail
<b>Sign Up</b>	<ul style="list-style-type: none"> <li>Open application</li> <li>Go to Sign Up Page</li> <li>Add details</li> <li>Login Page will open</li> </ul>	Email: <a href="mailto:Bisaal123@gmail.com">Bisaal123@gmail.com</a> Password: 12345678 Role: Admin Confirm Password: 12345678	User will be registered successfully	User registered	Pass
<b>Sign In</b>	<ul style="list-style-type: none"> <li>Open application</li> <li>Go to login page.</li> <li>Enter username and password</li> </ul>	Email: <a href="mailto:Sadiasaif.official@gmail.com">Sadiasaif.official@gmail.com</a> Password: 12345678	User will be logged in successfully	User logged in	Pass
<b>User can Search Doctor</b>	<ul style="list-style-type: none"> <li>Open Application.</li> <li>Login</li> <li>Add details about what you want to search</li> <li>Click search.</li> <li>Results will appear if data exists</li> </ul>	Search Doctor = "Doctor for online treatment or in a clinic"	Search query will be generated successfully.	Search results generated.	Pass

<b>User can Book Appointment</b>	<ul style="list-style-type: none"> <li>• Open Application. Login</li> <li>• Select doctor and book Appointment then confirm Appointment</li> </ul>	Appointments Displayed = "All Appointments"	Appointments will be displayed.	Appointments Displayed	Pass
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<b>User can View his book Appointments</b>	<ul style="list-style-type: none"> <li>☐ Open Application. Login.</li> <li>☐ Click on Profile option</li> <li>☐ Click on Appointments Option</li> </ul>	Appointments Displayed = "All Appointments"	Appointments will be displayed.	Appointments Displayed	Pass
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<b>User can Cancel his Appointments</b>	<ul style="list-style-type: none"> <li>☐ Open application</li> <li>☐ Login.</li> <li>☐ Click on profile option.</li> <li>☐ Click on Appointments option</li> <li>☐ Appointments Table will be open</li> <li>☐ Click on cancel Button on which</li> <li>☐ Appointment you want to cancel Property will be cancel</li> </ul>	Appointment Cancel	Property will be deleted Successfully.	Property Deleted.	Pass
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<b>User can update his Profile</b>	<ul style="list-style-type: none"> <li>❑ Open application</li> <li>❑ Login.</li> <li>❑ Click on profile option.</li> <li>❑ Click on update profile option</li> </ul>	Profile Updated =“for Appointments”	Profile will be updated successfully	Profile approved and Updated.	Pass
	<ul style="list-style-type: none"> <li>❑ Table will open</li> <li>❑ Click on Edit Button</li> <li>❑ Form will open</li> <li>❑ Add details Profile will be updated</li> </ul>				

**Admin Panel:**

<b>Admin can view users.</b>	<ul style="list-style-type: none"> <li>❑ Open Admin Panel. Login.</li> <li>❑ Click on Users option.</li> <li>❑ User Table will open</li> </ul>	User Displayed = “All”	Users Data will be displayed Successfully.	Users Data Displayed.	Pass
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<p><b>Admin can approve users.</b></p>	<ul style="list-style-type: none"> <li>❓ Open Admin Panel.</li> <li>❓ Login.</li> <li>❓ Click on Users option.</li> <li>❓ User request will open</li> <li>❓ Click on approve Button</li> </ul>	<p>User Added = "Kamran"</p>	<p>User's Data will be added Successfully.</p>	<p>User's Data Added.</p>	<p>Pass</p>
<p><b>Admin can delete users.</b></p>	<ul style="list-style-type: none"> <li>❓ Open Admin Panel.</li> <li>❓ Login.</li> <li>❓ Click on Users option.</li> <li>❓ User Table will open</li> <li>❓ Click on Delete Button</li> <li>❓ User will be deleted</li> </ul>	<p>User Deleted = "Dr. Kamran"</p>	<p>User will be deleted Successfully.</p>	<p>User Deleted.</p>	<p>Pass</p>
<p><b>Admin can View Appointments</b></p>	<ul style="list-style-type: none"> <li>❓ Open Admin Panel.</li> <li>❓ Login.</li> <li>❓ Click on Appointments</li> </ul>	<p>Appointments Displayed = All Appointments</p>	<p>Appointments will be displayed.</p>	<p>Appointments Displayed</p>	<p>Pass</p>

## 6.5. Performance testing

- ✓ Maximum Response time is less 10 sec.
- ✓ Average response time 5 sec.
- ✓ Peak number of requests 10000.

<b>Constraints</b>	<b>Response Time</b>
Application Startup	Less than 5 sec (Sometimes depend on internet Speed)
Data fetching	Less than 2 sec (Sometimes depend on internet Speed)
Application state update	Less than 1 sec
Transition in application	0.5 sec
Redirecting between inner pages of app	Less than 3 sec

# **Chapter 7**

## **Summary, Conclusion and Future Enhancements**

## **Chapter 7:**

### **Summary, Conclusion & Future Enhancements**

#### **7.1. Project Summary**

Many doctors in Pakistan do not use a proper app for dealing patients. They operate from their clinics, and most do not know about using a app. The world is becoming more and more digitalized each day, and every small business can benefit from having an app and online presence. This is no different for the Doctors, so the Doctors also needs to become more advanced and stop using old-fashioned ways. For that, our team created DR. Dentist App with generic features to ensure customer satisfaction.

#### **7.2. Achievements and Improvements**

DR. Dentist App is a one-stop-shop for people seeking to deal with any dental problem solution. This App can be the center of marketing and have all other legal doctors link to the app. It will be a great place to add doctors and patients for routine and any dental checkup. With app, our end users can have benefits like: appointment booking, routine checkup and any dental problem solution, preview hundreds of patients within a few hours from the comfort of their couch. Patients can also chat with doctors and get prescriptions any time of day and day out. It lets you search for doctors and nearby clinics. patients receive notifications of doctors.

#### **7.3. Achievements and Improvements**

Dr\_Dentist is a one-stop-app for people seeking to consult or appoint a doctor according to their needs. This app can have all other local clinics link to the app. It will be a great place to come and consult a required doctor. With an app, our end users can have benefits like: Patients can search nearby doctors according to their requirements. Patients can consult a doctor online

and in case make an appointment. It lets them search for doctor's name, clinic address, fees and rating. Moreover, people can watch 3d videos to get awareness about a disease and its treatment

#### **7.4. Lessons Learnt**

The project has been a very good learning opportunity for all of us. We have gained experience on how to work on real time projects under the supervision of industry. We have learned the complexity of a Dr. Dentist with respect to new trend in market. We have completed All basic functionalities for patient and doctor. The overall learning experience was good as we collaborated with each other. Overall, all learning curve was easy, and we are used to with tools and technology.

#### **7.5. Future Enhancements/Recommendations**

In future, more advanced and modified modules would be added to this application. For future we have a new module in mind that we want to implement like My Dental Clinic App. Which will be done on these after completing the modules mentioned in the project's scope.

# Appendices

## Appendix A:

### User Manual

This section provides application guideline for the convenient of our users.

#### A.1. Splash Screen



*Figure logo page View*

## A.2. login Screen

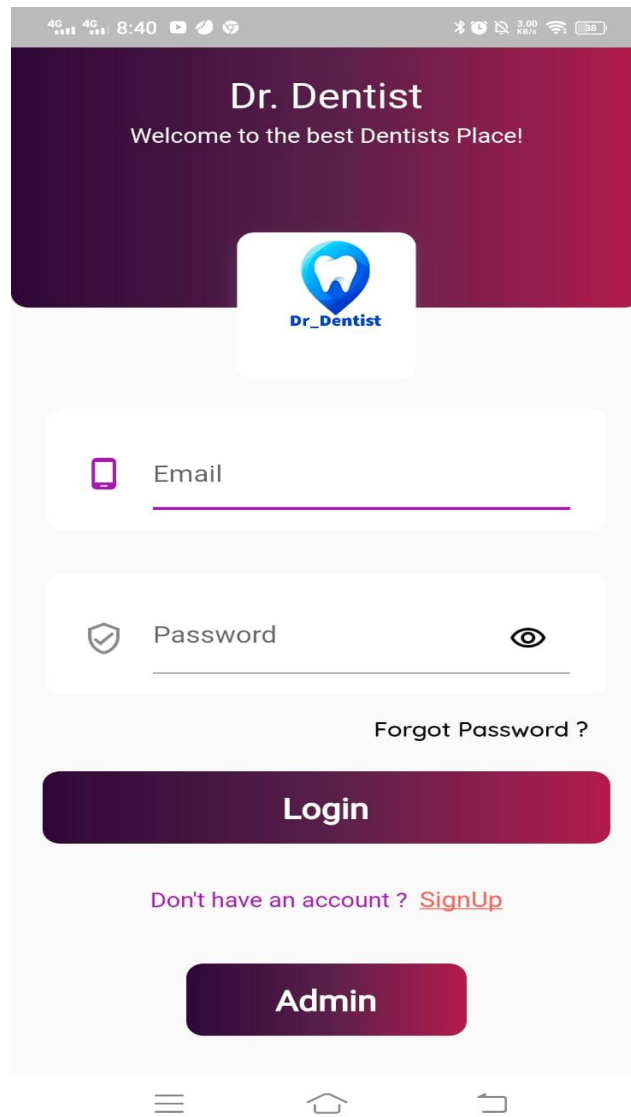


Figure login Screen View

### A.3. Registration Screen

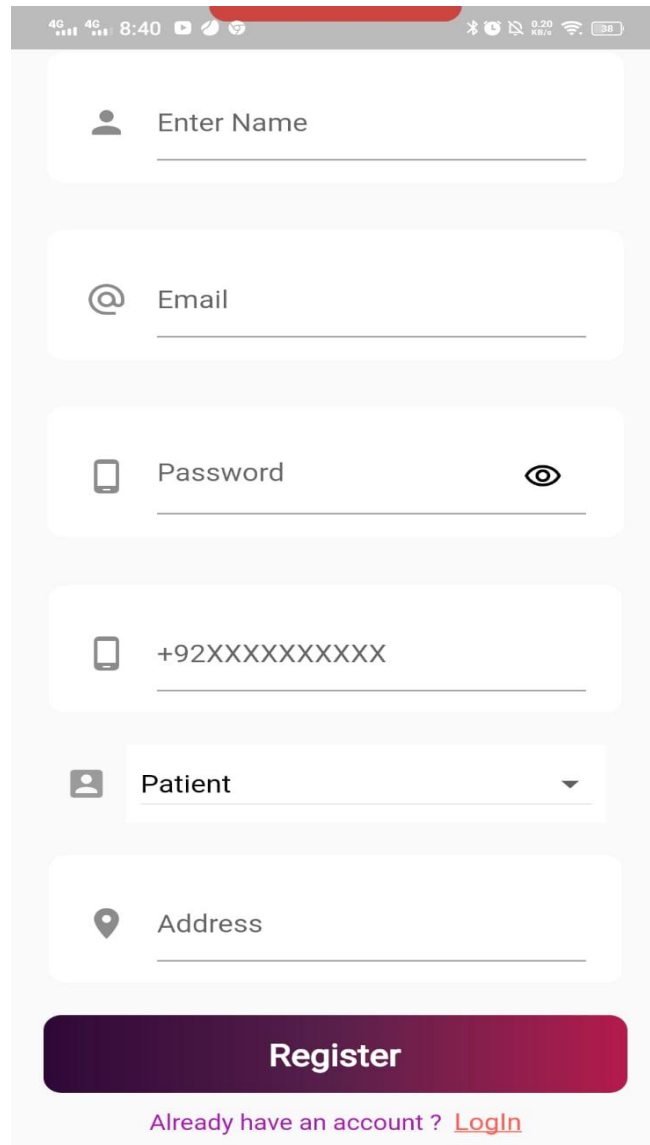


Figure Register Screen View

## A.4. Appointment Doctor Screen

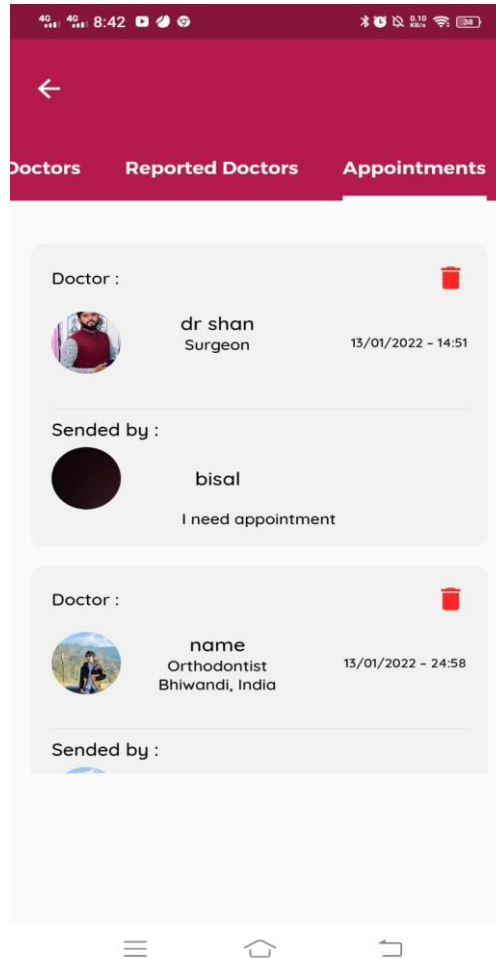


Figure Appointment Doctor Screen View

## A.5. Add Doctor Screen

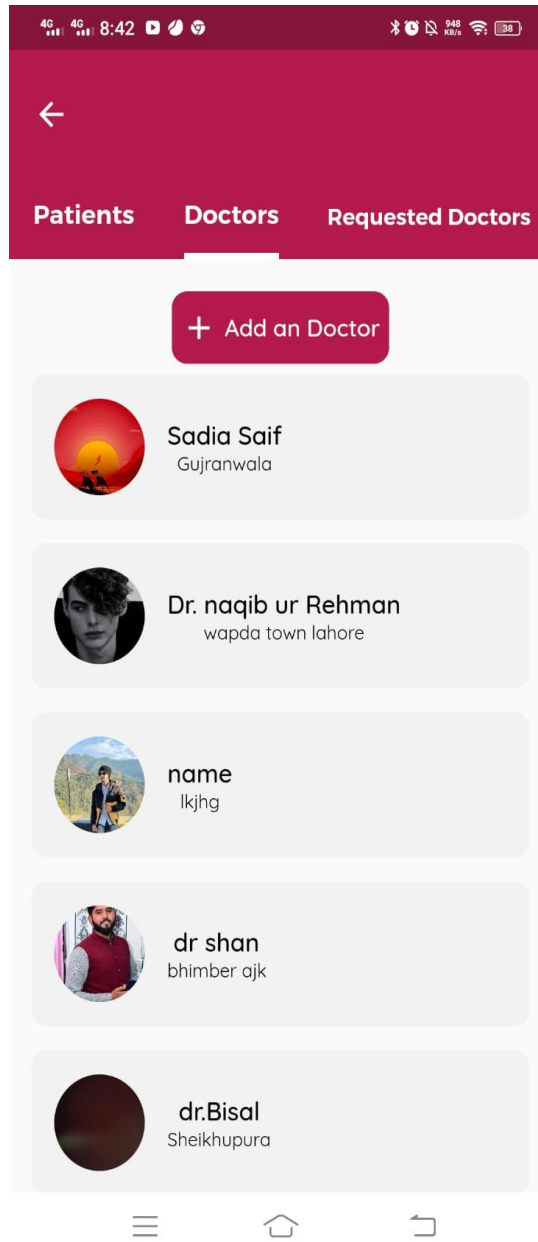
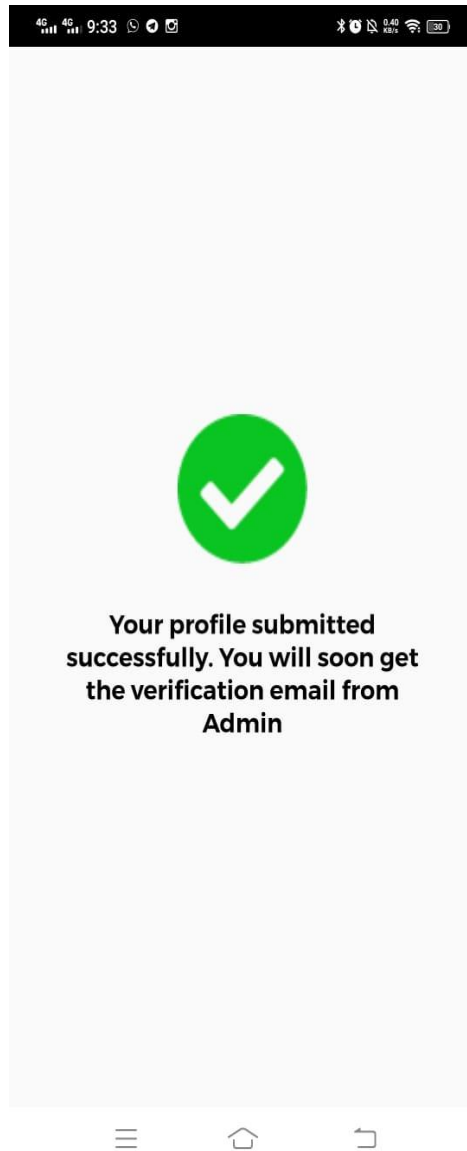


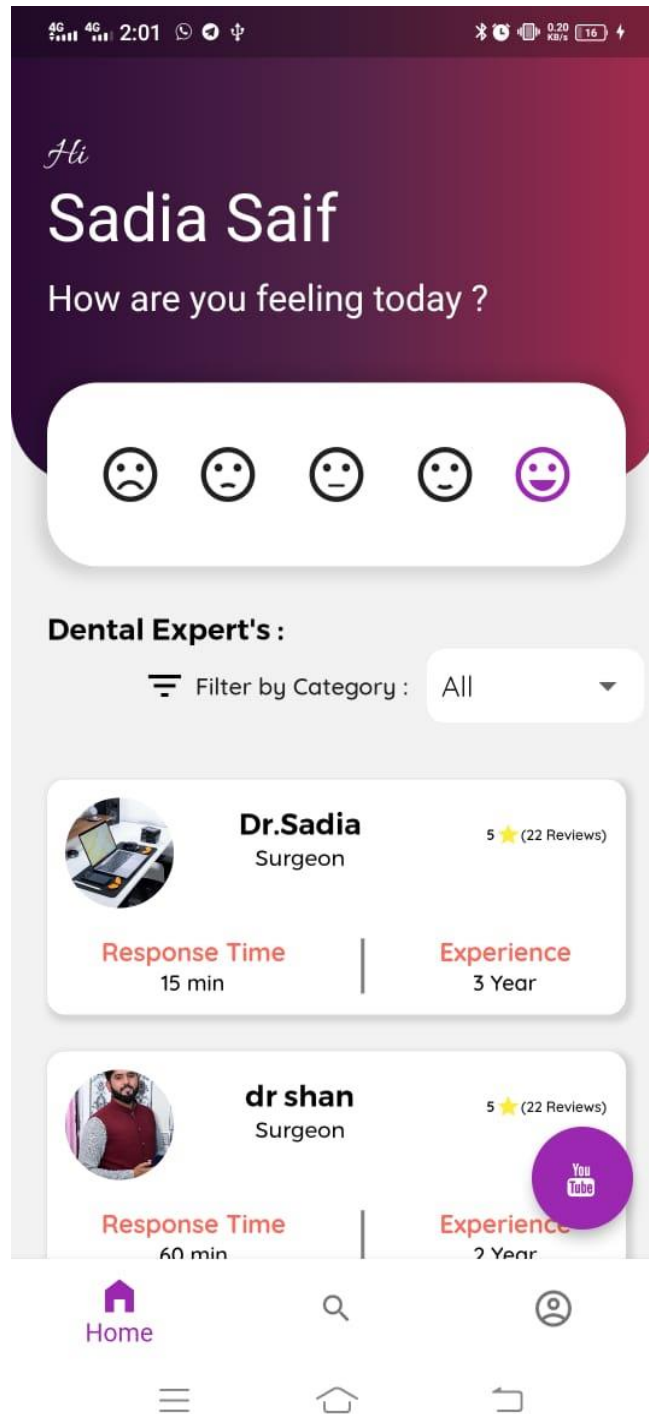
Figure Add Doctor Screen View

## A.6. Verification Doctor Screen



*Figure Verification Doctor Screen View*

## A.7. Patient's Home screen



## A.8. Patient's profile Screen

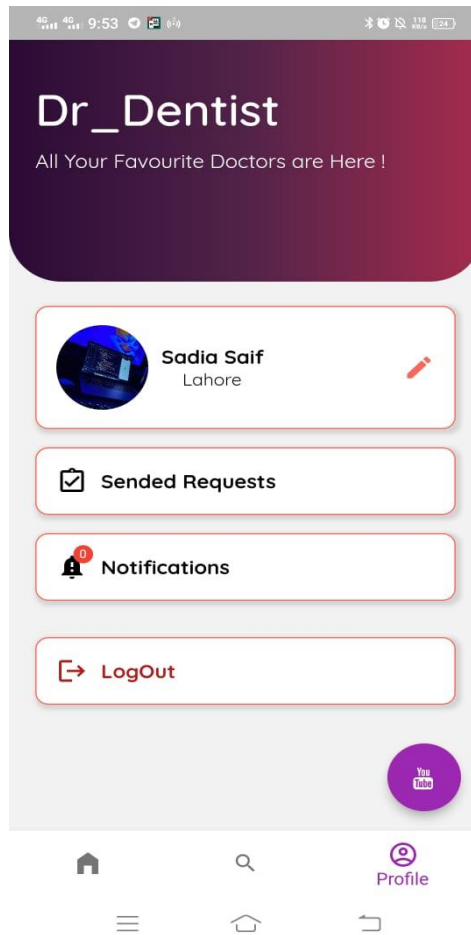


Figure Patient's profile Screen View

## A.9. 3d videos Screen

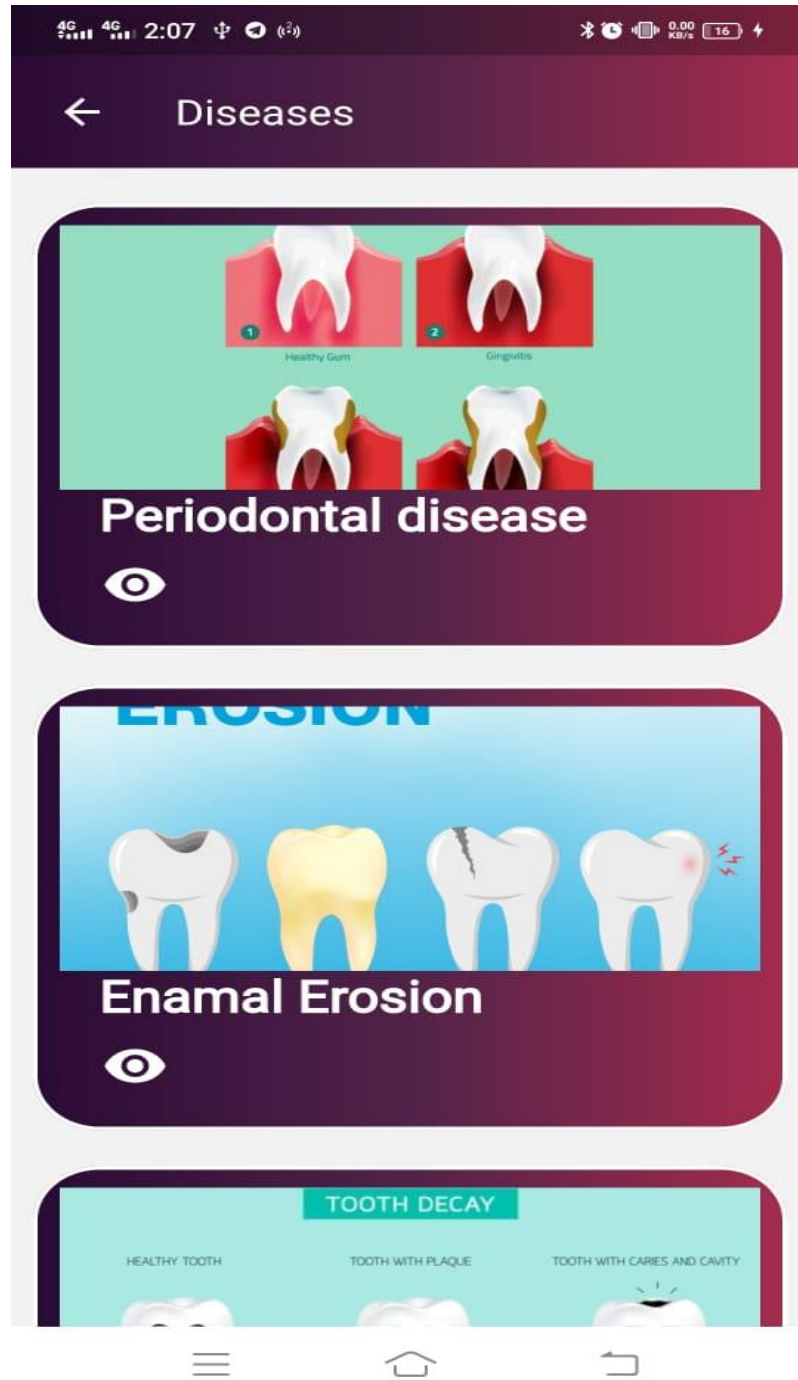


Figure 3d videos Screen View

## A.10. Doctor search by location Screen

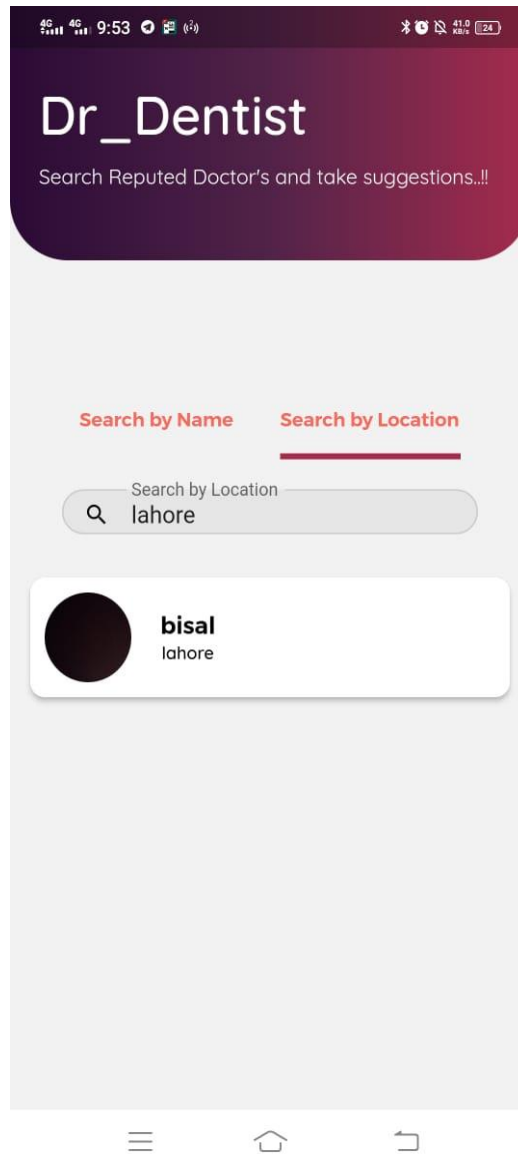


Figure Doctor search by location Page View

## A.11. Doctor's Information screen

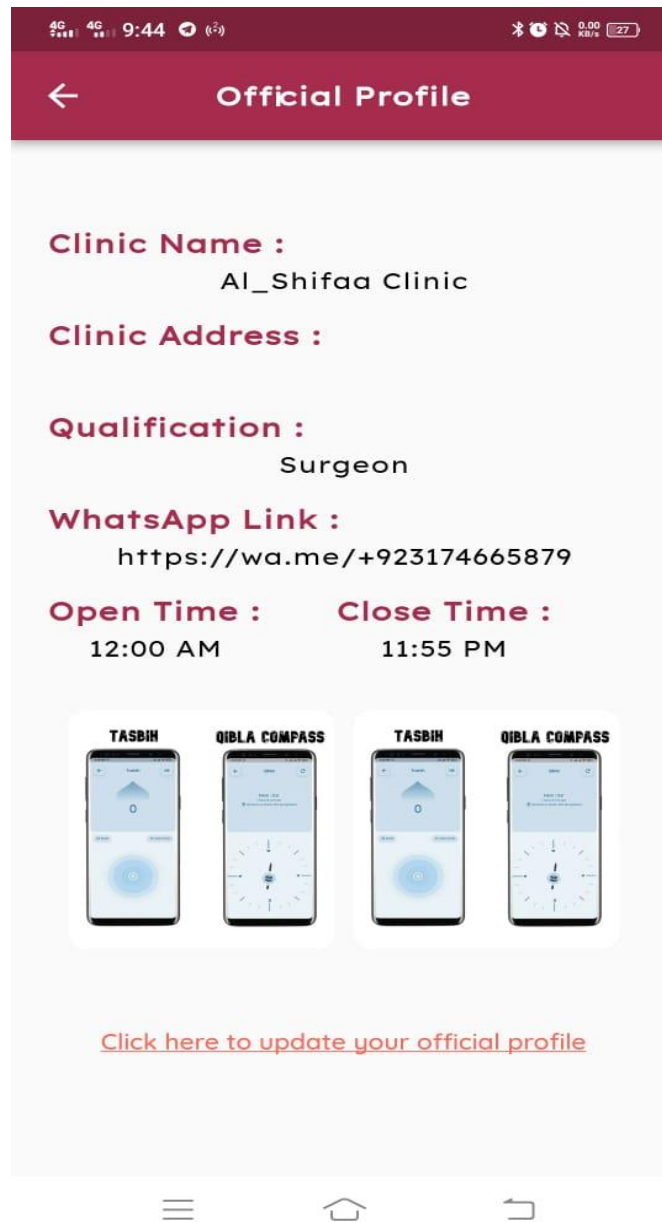


Figure Doctor's Information Screen View

## A.12. Doctor's Appointment Screen

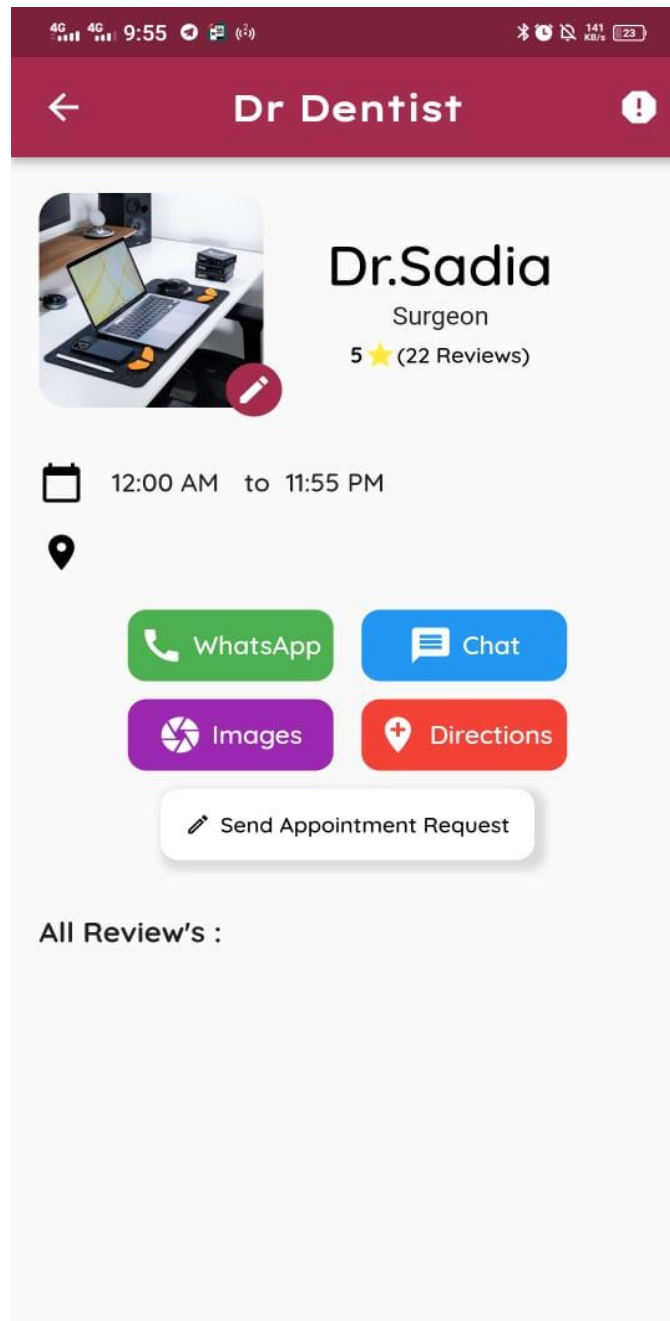


Figure Doctor's appointment page View

## A.13. Payment Confirmation Screen

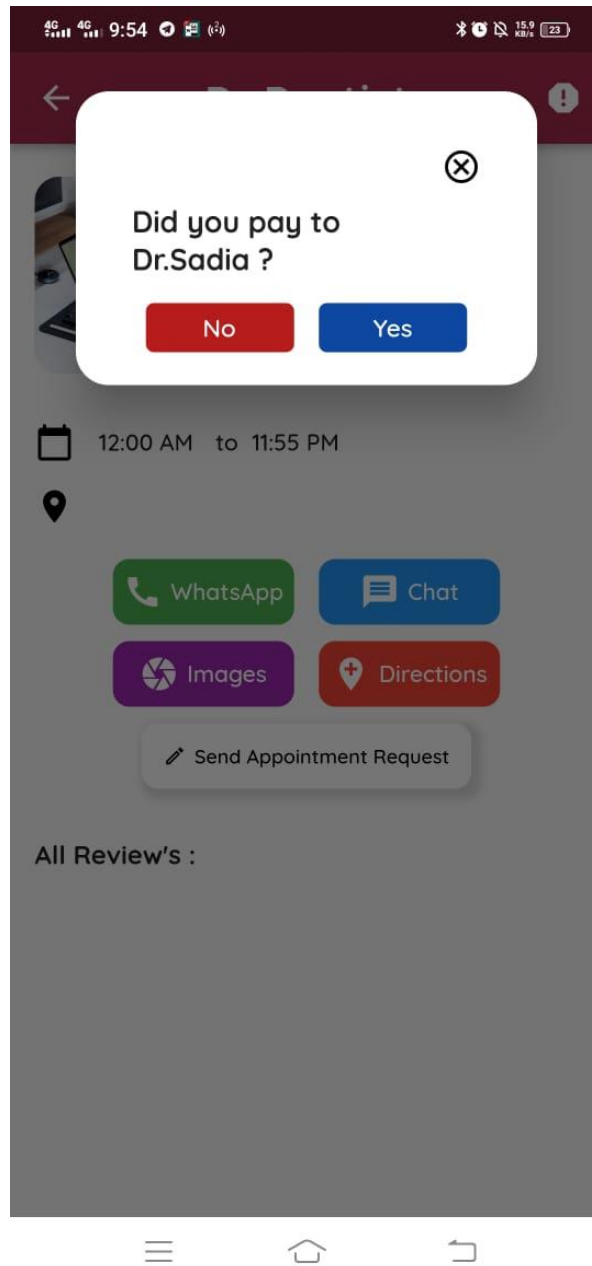


Figure Payment confirmation Screen View

## A.14. Appointment Request Screen

4G 4G 9:55 34.5 KB/s 23

← Dr Dentist

Your request only received to Dr.Sadia when you pay. Write info about the number/ account from where you send payment to Dr.Sadia :

I send payment from account...  
I have sent payment

Write appointment request to Dr.Sadia :

I need appointment on...  
wanna discuss a dental problem for treatment

Submit Request

Figure Appointment Request Screen View

## A.15. Doctor's Home screen

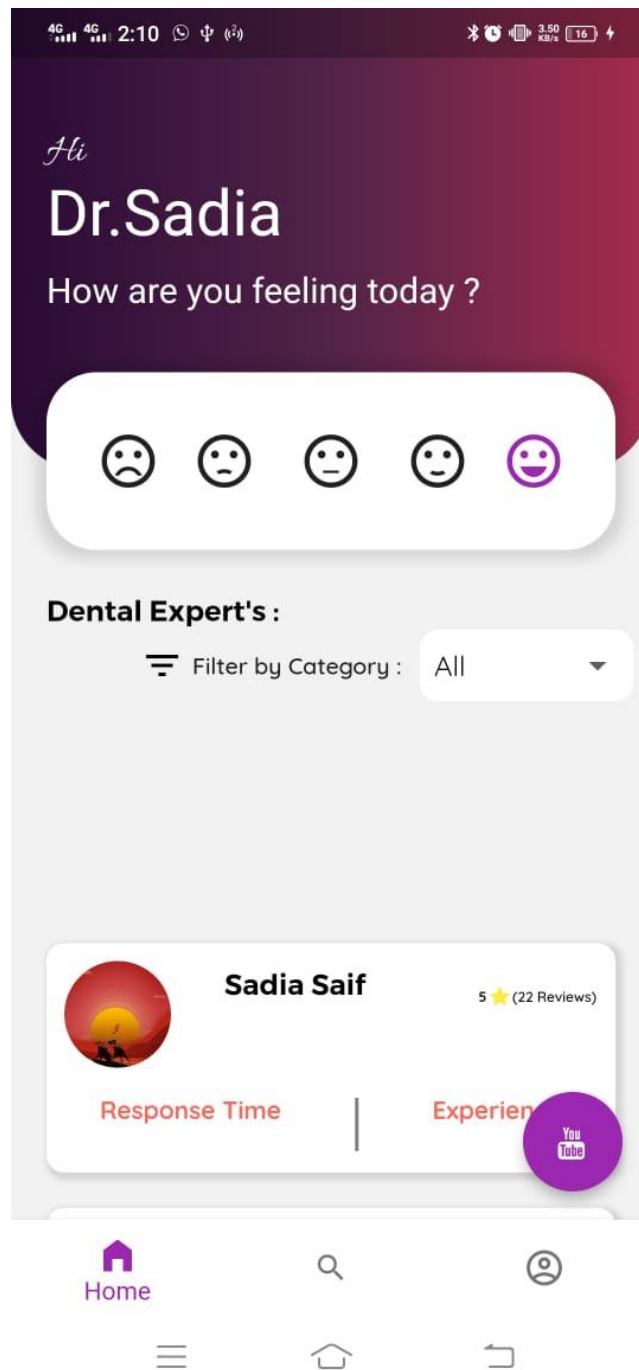


Figure Doctor's Home Screen View

## A.16. Doctor's Profile screen

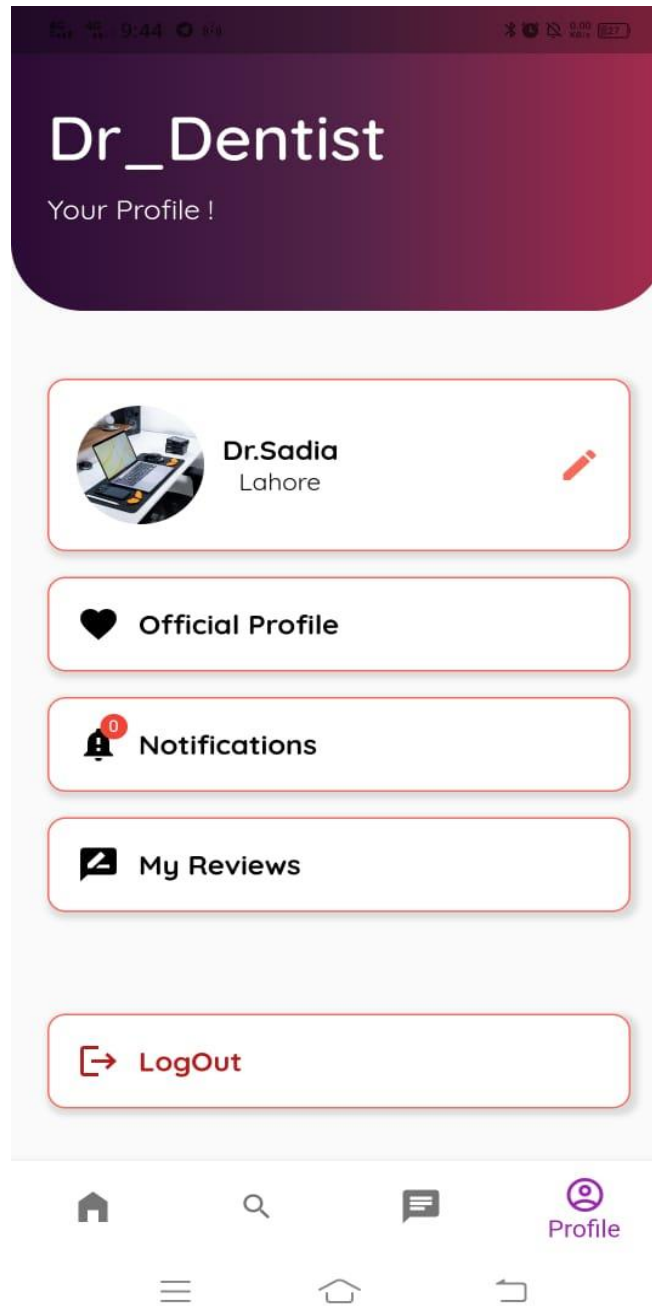


Figure Doctor's profile Screen View

## A.17. Patient, doctor's discussion screen

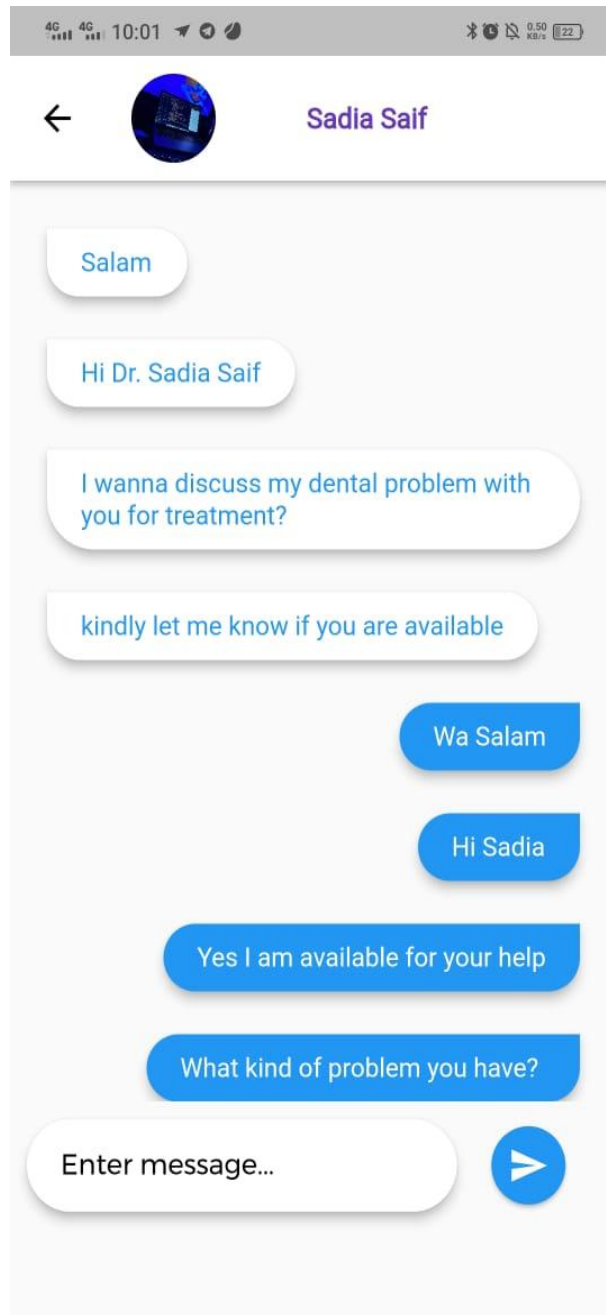


Figure Patient Doctor's discussion Screen View

# Reference and Bibliography

## Reference and Bibliography

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- [2] <https://www.perfectsmile.pk/>