ONLINE DOCTOR APPOINTMENT

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

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APPROVAL

This Project titled "Online Doctor Appointment" submitted by Md. Rashedul Islam, ID No: 163-15-8373, Samali Akter, ID No: 163-15-8425 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 13/09/2019.

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DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Mr. Raja Tariqul Hasan Tusher, Senior 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.
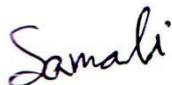
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ABSTRACT

Online Doctor Appointment is a android apps. Its services in doctor to patient or user to easily appointment systems and an important direction in the online appointment and real time fire-base including apps systems. There have been done many hospital in the doctor of online appointment and many of them have been successfully implemented in the real world. In this project, a model of real-time interactive doctor appointment has been proposed that provides real-time interactive appointment with the collaboration of doctor and user or patient under one roof. It allows some responsive and co-operative features that will help doctor and student to interact easily whether they are very far from each other. Online Doctor Appointment has been designed to focus on individual patient or user and doctor so that they can improve themselves. One of the main project goals is to provide the effective doctor and services system where the distances between doctor and patient or user can be reduced. Moreover, this makes easily to appointment patient to doctor, reduced time, minimize harassment and effectiveness of Online Doctor Appointment.

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CHAPTER 1

Introduction

1.1 Introduction

An interactive android based mobile application "Online Doctor Appointment" can be defined as an online doctor and appointment portal like the environment of physical Appointment in doctor. Here the word interactive and defines face to face communication which is commonly seen in the physical chamber. Android based virtual appointment is very common to this modern era. Many developed countries are using virtual appointment to provide online visit to the patient. As the world is being developed with the new technologies, discovering and manipulating new ideas and concepts is not stopped. There have been many researches in the area of online appointment many of them have been successful to implement. Now patient are being benefited by enrolling themselves in appointment service. Some of the online appointment are getting good feedback for providing well service. Still now researchers are trying to explore the concepts to provide effective online appointment.

Normally, if a doctor wants to visited for his/her patient, He/she has to appointment it in a chamber, get appointment, give serial it to his/her patient. This process is organized with online doctor appointment for service because doctor simply get visit digitally, look after disease activities of patient easily and consult with patient easily.

Online Doctor Appointment will be a great platform for the doctor and the patient. Doctor can easily open their account, update their account and also can delete their account. Doctor can update their visiting system. They can easily give announcement about their visit and can see their patient"s disease reviews. They can easily share their thought of their own problem. Doctor can update their counseling hour, evaluate their patient"s performance, add patient and take thought. Give feedback of the performance of the application.

For patient Online Doctor Appointment will be an enormous platform. Patient can easily discover their schedule of registered appointed. Patient can easily see the approval of appointment request, approve appointment or reject appointment. By giving self-quality in online doctor appointment can judge their own skills. Patient can look though doctor evaluation, doctor visiting hours, noticeboard, service shared by their doctor feedback's of doctor and patient.

In today,,s online environment most of the helpful are patient. This means that different means of instruction are required to impact patient service. Different together of service should be taken into consideration for patient so that they are allowed to show disease   in a plethora of ways. In this 21st century this apps will help patient to increase their service, online world applications, and social networking sites. It is important to not only note the history and statistics of online chamber, but also become knowledgeable of some of the best service in the Online Doctor Appointment.

1.2 Motivation

We believe that online doctor appointment will be fastest and easiest android base mobile application for doctor and also for patient. Here we are attempting to approximate the shared and supportive environment of a real world system. But online doctor appointment makes a huge difference in patient motivation and service. Offering an online solution to patient to get connected with doctor will enable easy interactive, efficient communication from both end and it will develop the process of service. Doctor can provide service that will help patient to gain more well. So it is a better doctor appointment service environment for doctor and patients.

1.3 Aims and Objectives

Online Doctor Appointment is a service environment created in the online space. The objectives of a online doctor appointment are to improve advanced visiting experiences by allowing patient and doctors to participate in remote appointment communities by using personal mobile phones. To improve the position and effectiveness of disease by using the mobile to support a collaborative appointment process. The explosion of the disease age has changed the context of what is service and how it is service – the concept of online doctor appointment is a manifestation of this disease weal.

1.3.1 Aims of the Project

The main aims of this project are as follows

- Exposure to an online service platform
- Make easy to use information technology
- Spread your service with patient
- Is willing to try new technology
- Is comfortable with his visit service
- Engaged in the service process

1.3.2 Objectives of the Project

The main objectives of this project are as follows:

Table 1.1: Specific options for doctor and patient

Doctor	Patient
- Can create, delete, update profile - Give appointment - Confirmation appointment approval - Announcement - Doctor self-evaluation test - Can accept appointment - Can view notice board another doctor - Can view patient problems - Give appointment time - Can visit patient evaluations - Can update visiting hours - Can give feedback	- Can create, delete, update profile - See appointment and give appointment - Can approve / reject appointment - Can view notice board - Gets service - Patient self-evaluation test - Remarks - Can share problems - File attachment - Can service doctor visiting hours - Can give feedback

1.4 Feasibility Study

Probability is the test of approach. It supports composing whether it is stable enough to go through the project. The feasibility study studies the method and informs whether the method has to be developed. In layman's terms, this can be described as a test of procedure, and if the method passes the test, the project is stable to develop otherwise, or we can test the feasibility study to see if the project is possible?.

Feasibility has four strong dimensions:

- Technology"s
- Finance

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- Time and
- Resources

The feasibility of the "online doctor appointment" approach is seen with these four dimensions.

Technology: The method development of Online Doctor Appointment is purposed with uses simplest & easily obtainable technology. This method is founded on android like mobile interface, which is very easy to usage. This method developed by Programming language Java. Fire-base for Database and XML for design.

Finance: It measures the method in terms of money or we can refer to funds. This measure checks whether the required amount of power is consumed in the system or if it will be wasted. This project has no money issues as it uses simple technology, which is very easy to install. This method is designed for a standalone computer so the hardware requirements for this method are very minimal. For this method we need to develop and install properly, we need very readily available technology and very basic hardware and all these requirements do not cost too much.

Time: This particular dimension measures valuable methods with respect over time, which is one of the most important factors to consider. Factor is very important during this project This method is scheduled during the timely installation. This method is not very large and therefore can be done in approximately the time required. Time should be considered a final point so we can say that this method can be developed within the required time.

Resources: This dimension calculates the resources needed to develop the method. The resources required for this particular system are nominal enough to be filled, the resources required for this method are basic hardware, an operating system that is compatible.

With the help of this entire dimension we can measure the feasibility of the method & can fix whether to go far with the project or not. By take in count the dimension & their

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role in this particular method we can say that this method is possible from all these dimension point of view and it is stable to go through the project.

1.5 Expected Outcome

The main outcome of this project creates a better service visiting time for doctor and patient. Doctor can update visiting hour, share any announcements, view appointment and get another doctor appointment, accept appointment or reject appointment, can easily update their profile portal, haw patient to be visit in this time. Patient register appointment easily, view service visiting hour, get notification appointment accept or reject, submit their problem and find out notice from noticeboard. Doctor and patient can give instant feedback. The output for this project is the maintained records, service details & report generated through any android device. The reports will be produce with the help of the data in the database.

1.6 Report Layout

Report layout describes a summary of all the chapters. A brief summary of all chapters is given below:

- **Chapter 1:** Describes an introduction of the online doctor appointment, Motivation, Aims and Objectives, Feasibility study, Expected Outcome and the Reportlayout.
- **Chapter 2:** Describes the background, the related works, Comparativeappointment and Challenges of the online doctor appointment.
- **Chapter 3:** Describes the Android Studio, System requirements, Googlefire-base database, Sublime Text.
- **Chapter 4**: Describes the Block diagram, Description of application, Usecase modeling and description, System architecture, E-R diagram anddescription.
- **Chapter 5:** Describes the Implementation of Front-end design, Back-end design,

Data table name, Data type architecture, Google fire-base database, Database table structure, Testing methodology, Functional testing, Unit test, Compatibility test and result.

- **Chapter 6:** Describes the conclusion where the goal, limitation and future scopehave been described.

CHAPTER 2

Background

2.1 Introduction

Though many projects have been done to explore the effective way of online appointment, but very few of them have been conducted in the context of Bangladesh. There are several organizations which are trying to research and develop the online appointment system in Bangladesh, Such as – A large publishing company of OployeeLabs Ltd. and

appointment (References [7]), another site (References [8])
an online appointment system. In third world countries like Bangladesh, Internet Bandwidth is still now costly. Some existing appointment deals with service streaming appointment where high bandwidth is needed, But we need very little internet data in this system. That would be very useful in every user.

An extensive project has been done in the area of online appointment to contribute in the context of Bangladesh.

2.2 Related works

In this Section we discussed the recent project and related works evolving this area.
1. DOCTOR AT HOME: Here you can talk to doctors over the phone. You can bring home medical care. An in-home doctor service does exactly the same. Only, you don't have to go anywhere. The doctor will visit and treat you in the comfort of your

Home. [2]
2 CALL A DOCTOR BD-PATIENT APP: CallaDoctorBD.com is a privately owned healthcare provider based in Dhaka, Bangladesh. They offer doctor house visits for non-emergency related patients. Currently they serve parts of North Dhaka City Corporation. Caladoctor is owned by BD.com and is owned by XS Care Pvt.

References [9] ,A part form these, there are several other applications:- References [10] , References [11] ,References [12] . Our apps Relative Special apps Sebaghar , Here is the link you can get help :

https://www.google.com/search?ei=f5hBXdreForIvgS0tr2QCw&q=online+doctor+appoi ntment+bd+apps&oq=online+doctor+appointment+bd+apps&gs_l=psy-ab.3...3328.5182.. 5803...0.0..0.233.843.0j3j2......0....1..gws-wiz.......0i71j0i22i30j33i22i29i30j33i160.76U9 a0BFjNY&ved=0ahUKEwiamrbJot_jAhUKpI8KHTRbD7IQ4dUDCAo&uact=5

2.3 Comparative Studies

Sebaghar is the first Doctor appointments online system in Bangladesh is similar with others websites and android applications (DOCTOR AT HOME, CALL A DOCTOR BD-PATIENT APP, BD DOCTOR, HELLO DOCTOR). Our application is similar with log in and log off, sign in and sign off, showing profiles, updating profiles.

Our apps has some of these additional benefits, such as: visiting a hospital map location, seeing what hospitals are nearby with important maps, weather forecasts, and database instant updates data in real time. In addition, the doctors will make payment confirmation during the appointment, see the notification in the beautiful environment as well as save the history.

2.4 Scope of the Problem

As we consider that Online Doctor Appointment will be fastest and easiest android base mobile application for doctor and also for patient but possibility of the problem for patient and doctor who use iOS and Microsoft operated mobile phones. So they are deprived to using this application. For being internet based application a class of people are also deprived to using this application. Must needs internet connection to use this application. Responses to user"s fault and unwanted condition have been caught taking care of to confirm that the method manage without halting. Accurate fault handling codes are set with the codes.

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2.5 Challenges

With new platforms, changing roles and evolving user‟s demands, maintaining an effective social service across the internet is never easy.

2.5.1 What are we thinking?

The first challenge was faced after submitting the first wonder documentation of this project with our ideas about how we want to create a online appointment system. The receiving data from database and the interaction with database was challenging. The most critical part of this system was the assumptions that we choose for our system. We had claimed that most of patient‟s or user own smart phones and also the claimed the majority of patient‟s or user are android users. There are existing many surveys that shows us the rate of smart phones and simple phone, and also some which shows Android as the dominant operative system in the smart phone market source, but we decided to run our local survey to have our own appointment. Exactly the target group we focus on Android users. This resulted in our group getting involved in both qualitative and quantitative information gathering methods, to understand the target user‟s needs and statistical data to back our assumptions.

2.5.2 Young Researchers

We believe that this process and the challenges we faced, we have become two young engineer that have learn how to

- Have an idea
- Think about it
- Research around the concept
- Not to be afraid to confess about being wrong
- Do what it takes to finish the job

This process made us to go through android articles, discussing Mobile information systems and their development tools, and take part about the future of Application

developing and opportunities. All these we have learn t so much about the mobile computing and the future of it from expert‟s point of view.

2.5.3 Time

The Last, but least of all it could be called our biggest challenge was because of time because we are all working well and studying next to it.. To agree on appointments and meet up was one of the most challenging parts of the job, as the project itself was a very interesting subject and it was fun to get the job done, but we learn t quite a lot from this process to be well structured and well planned.

2.6 Summary

In this chapter several related works of Online Doctor Appointment have been described. From the above content. It is clear that online appointment is being spread all over the world and patient are being more engaged in online appointment. Although more and more research and project are being done in this area of appointment, However, People are trying to find out more easy process of online service.

CHAPTER 3

Requirement Specification

3.1 Android Studio

Android Studio is the official integrated development environment (IDE) for Google's Android working framework, built on JetBrains IntelliJ IDEA software and designed specifically for Android development. It is accessible for download on Windows, macOS and Linux based working frameworks. It is a substitution for the Eclipse Android Development Tools (ADT) as essential IDE for local Android application advancement.

Android Studio was declared on May 16, 2013 at the Google I/O conference. It was in early access see organize beginning from variant 0.1 in May 2013, at that point entered beta stage beginning from adaptation 0.8 which was discharged in June 2014. The principal stable form was discharged in December 2014, beginning from rendition 1.0. The present stable rendition is 3.0 discharged in October 2017.

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Android software development is the procedure by which new applications are made for the Android working framework. Applications are typically created in the Java programming dialect utilizing the Android Software Development Kit. ADT (Android Development Tools) is the product used to create android applications. It fundamentally encases Eclipse IDE, which is a multi-dialect Integrated advancement condition (IDE) containing a base workspace and an extensible module framework for tweaking the earth.

The most recent rendition accompanies ADT module preinstalled and packaged to the IDE. This is the manner by which the IDE looks like with the essential components checked.

Application programming interface (API) determines how some product segments ought to communicate with each other. In most of the cases an API is a library that as a rule incorporates particular for schedules, information structures, question classes, and factors. An API detail can take numerous structures, including an International Standard such as POSIX, seller documentation, the Microsoft Windows API, the libraries of a programming dialect, Standard Template Library in C++ or Java API.

Google APIs can be downloaded from Google Code, Google's website for engineer instruments, APIs and specialized assets. The Google Data API enable software engineers to make applications that read and compose information from Google administrations. Right now, include these for Google Apps, Google Analytics, Blogger, Google Base, Google Book Search, Google Calendar, Google Code, Search, Google Earth, Google Spreadsheets, Google Notebook, and Picasa Web Albums..
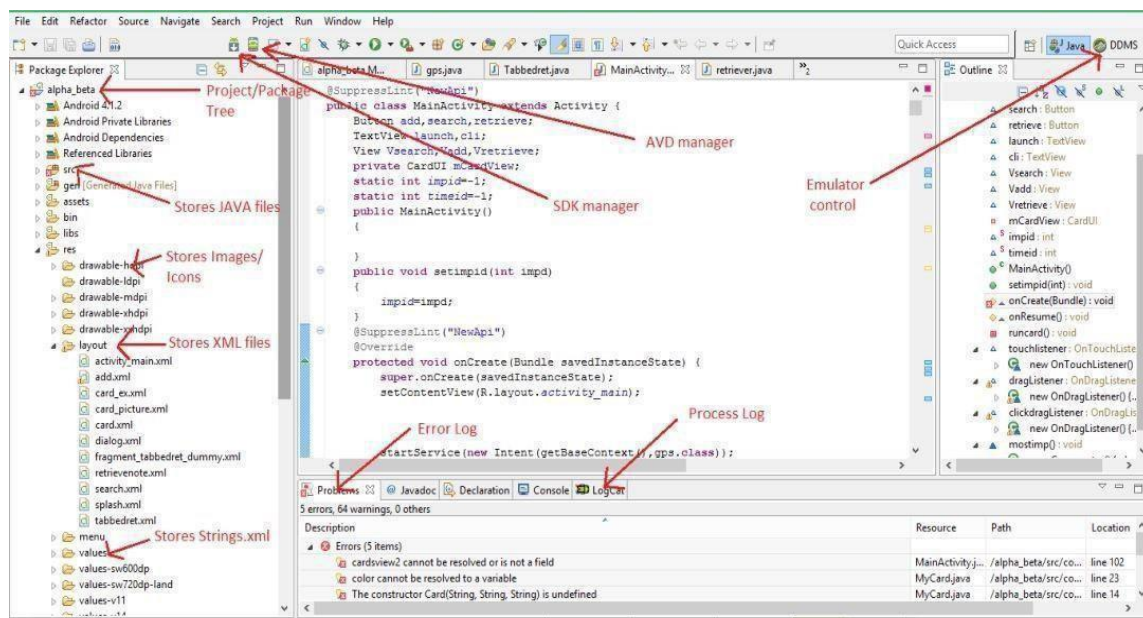

Figure 3.1: Interface of Android Studio

SDK (Software Development Kit or "Devkit") is normally an arrangement of programming improvement apparatuses that takes into account the production of uses for a specific programming bundle, programming structure, equipment stage, PC framework, computer game comfort, working framework, or comparable advancement stage.

It might be something as straight forward as an application programming interface (API) as a few records to interface to a specific programming dialect or incorporate modern equipment to speak with a specific inserted framework. Basic instruments incorporate investigating helps and different utilities frequently displayed in a coordinated advancement condition (IDE).

In the most recent variant of ADT, the android SDK includes to the IDE consequently when you unfasten and stack the IDE.

SDK Manager empowers us to download Google APIs and utilize them in our code.
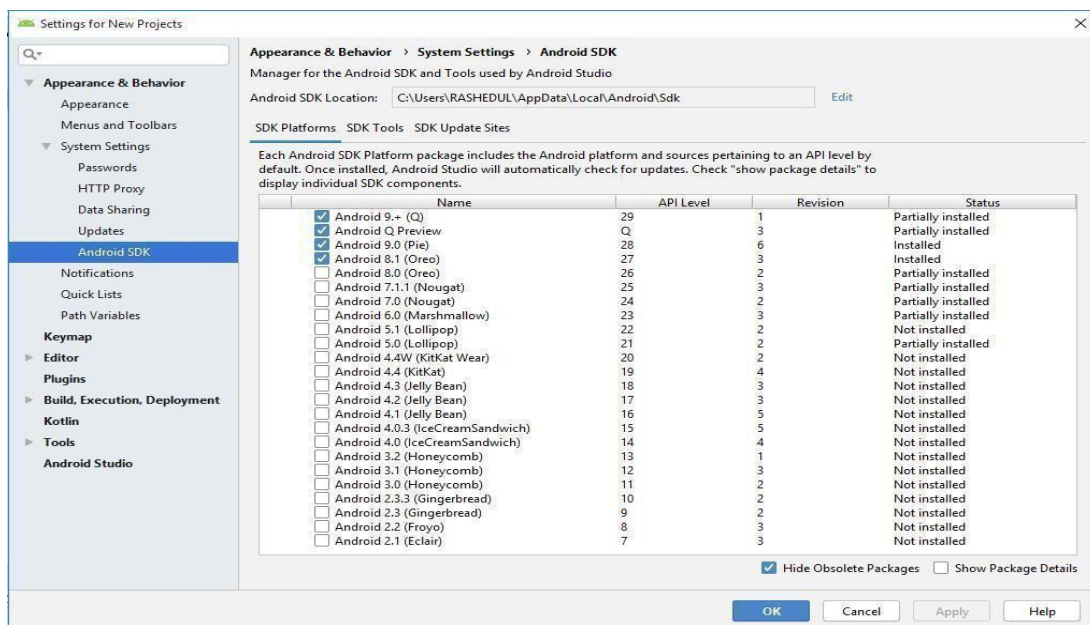
Figure 3.2: Android Studio SDK Manager

3.1.1 System Requirements

Table 3.1: Version 3.x

Criterion	Description
OS version	Microsoft® Windows® 7/8/10 (32-bit or 64-bit) Mac® OS X® 10.10 (Yosemite) or higher, up to 10.13 (macOS High Sierra) GNOME or KDE desktop Linux (64 bit capable of running 32-bit applications)(GNU C Library (glibc) 2.19+)
RAM	3 GB RAM minimum, 8 GB RAM recommended; plus 1 GB for the Android Emulator
Disk space	2 GB of available disk space minimum, 4 GB recommended (500 MB for IDE + 1.5 GB for Android SDK and emulator system image)
Java version	Java Development Kit (JDK) 8
Screen resolution	1280×800 minimum screen resolution

Table 3.2: Version 2.x

Criterion	Description

OS version	Windows 7 or later Mac OS X 10.9.5 or later GNOME or KDE desktop Linux
RAM	8 GB RAM recommended; plus 1 GB for the Android Emulator
Disk space	500 MB disk space for Android Studio, at least 1.5 GB for Android SDK, emulator system images, and caches
Java version	Java Development Kit (JDK) 8
Screen resolution	1280×800 minimum screen resolution.

Table 3.3: Version 1.x

Criterion	Description
OS version	Mac OS X 10.8.5 or later GNOME, KDE or Unity desktop on Ubuntu or Fedora or GNU/Linux Debian
RAM	3 GB RAM minimum, 4 GB RAM recommended

Disk space	500 MB disk space
Space for Android SDK	At least 1 GB for Android SDK, emulator system images, and caches
JDK version	Java Development Kit (JDK) 7 or higher
Screen resolution	1280×800 minimum screen resolution

3.2 Fire-base

Fire-base, born pre-birth, created by James Tamplin and Andrew Lee, provided native developers with an API that qualified to integrate online chat functionality on their website. After the release of the chat service. Developers were using their users to sync application data such as game state in real time. Tamplin and Lee decided that the chat system and the real-time artwork it implemented would set them apart. They created Fire- base as a separate company on September 23 and launched it to the public in April 2012.

3.2.1 Usage

Fire-base's first product was the Fire-base Real-Time Database, an API that synchronizes application data between iOS, Android and Web devices and stands above Fire-base's cloud. Action helps software developers create real-time, collaborative applications.
Services: - Fire-Base Cloud Messaging, Fire-Base Authors, Fire-Base Real-Time Database, Fire-Base Cloud Fire-Store, Fire-Base Storage, Fire-Base Hosting etc.

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3.3 Sublime Text

Sublime Text is an exclusive cross-stage source code manager with a Python application programming interface (API). It locally underpins numerous programming dialects and markup dialects, and capacities can be included by clients with modules, ordinarily group assembled and kept up under free-programming licenses.

3.3.1 Features:

The following is a list of features of Sublime Text:

- "Goto Anything" speedy route to records, symbols, or lines
- "Command palette" utilizes versatile coordinating for speedy console summonof self-assertive charges
- Simultaneous altering: at the same time roll out the same intuitiveimprovements to numerous chose territories
- Project-particular inclinations
- Extensive adaptability by means of JSON settings documents, includingventure particular and stage particular settings
- Cross-stage (Windows, macOS, and Linux) and Supportive Plugins forcross-stage.
- Compatible with numerous dialect syntax from text-mate.
- Auto save, macros and repeat the last action.

Proposed Model and Design

4.1 Block Diagram

The block diagram provides a top level appointment of and basic interaction of applications. Here is the block diagram. The figure is given bellow:
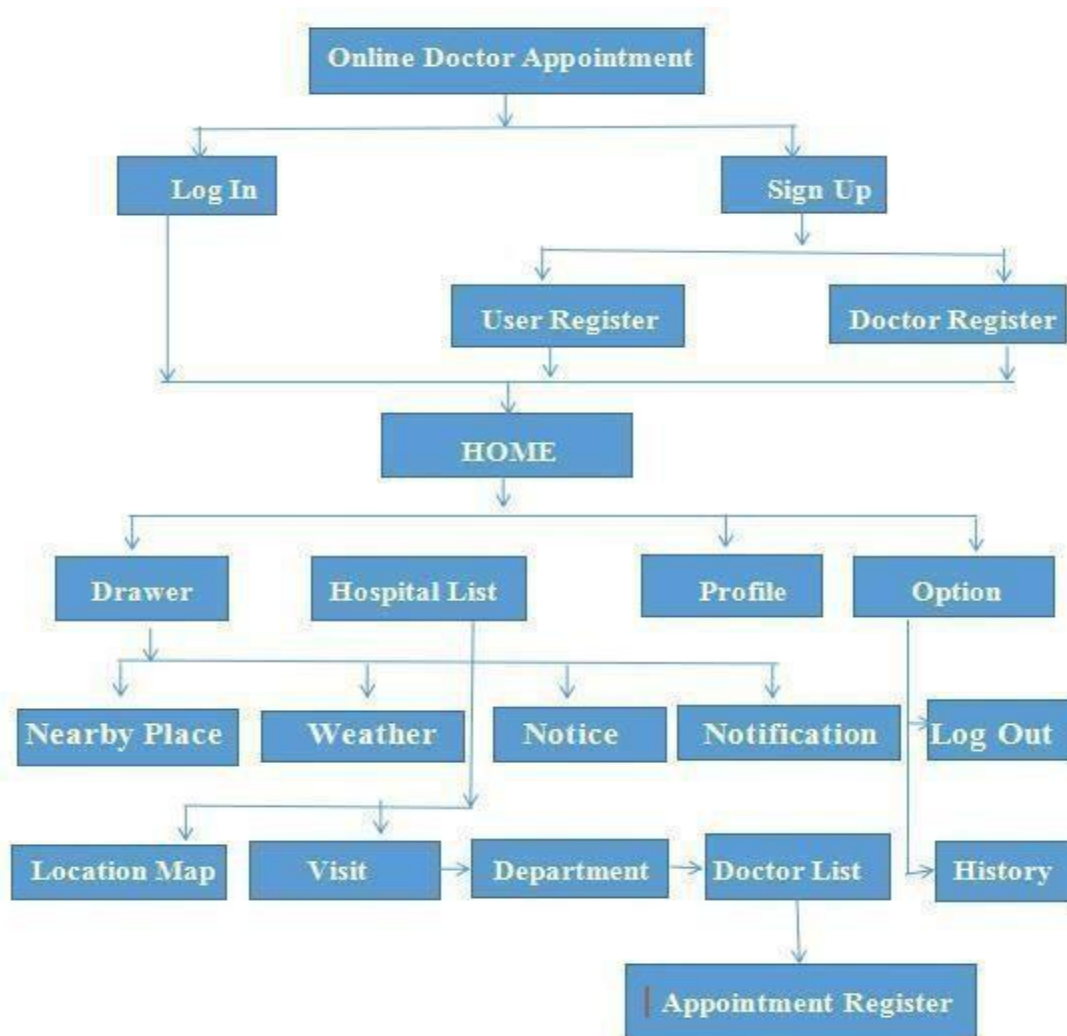
Figure 4.1: Block Diagram

4.2 Description of Application

Log In: Logging in is the process by which an individual user(Doctor, Patient) access to our application by identifying and authenticating themselves.

Sign Up: Sign up for an account and give some basic information about user (Doctor, Patient). Which will be stored in database.

Profile: A full description of Doctor.They can update and delete their profile.

Hospital List: Here is a list of all the hospitals. If you want to see the hospital map by clicking on the location button. Clicking the Visit button will show how many sections the hospital has. The name and address of each hospital will be mentioned.

Department list: You will see it when you click on the Hospital Visits button. Here you will see every department of that hospital. Click on the Go button inside the department The department will see the doctors.

Doctor List: Here each department-based doctor will have all the information (name, surname, contact number, visit amount, patient visit time) and more. Clicking on the appointment button will take you to the appointment register page.

Notification: See doctor and appointment. And the message of accepting or canceling the appointment of patients will be seen.

Appointment Register: If you wish to make an appointment, a small appointment registration form with the name must be filled out.
Noticeboard: Doctor and Hospital Admin can get any departmental notice

History: Every user (doctor, patient) can be given appointments, excluded and reject. If you want the user to delete them or you can see that row information.

Nearby Hospital: Here you can see the location of nearby hospitals through Google Map.

Weather: Weather news can be seen here.
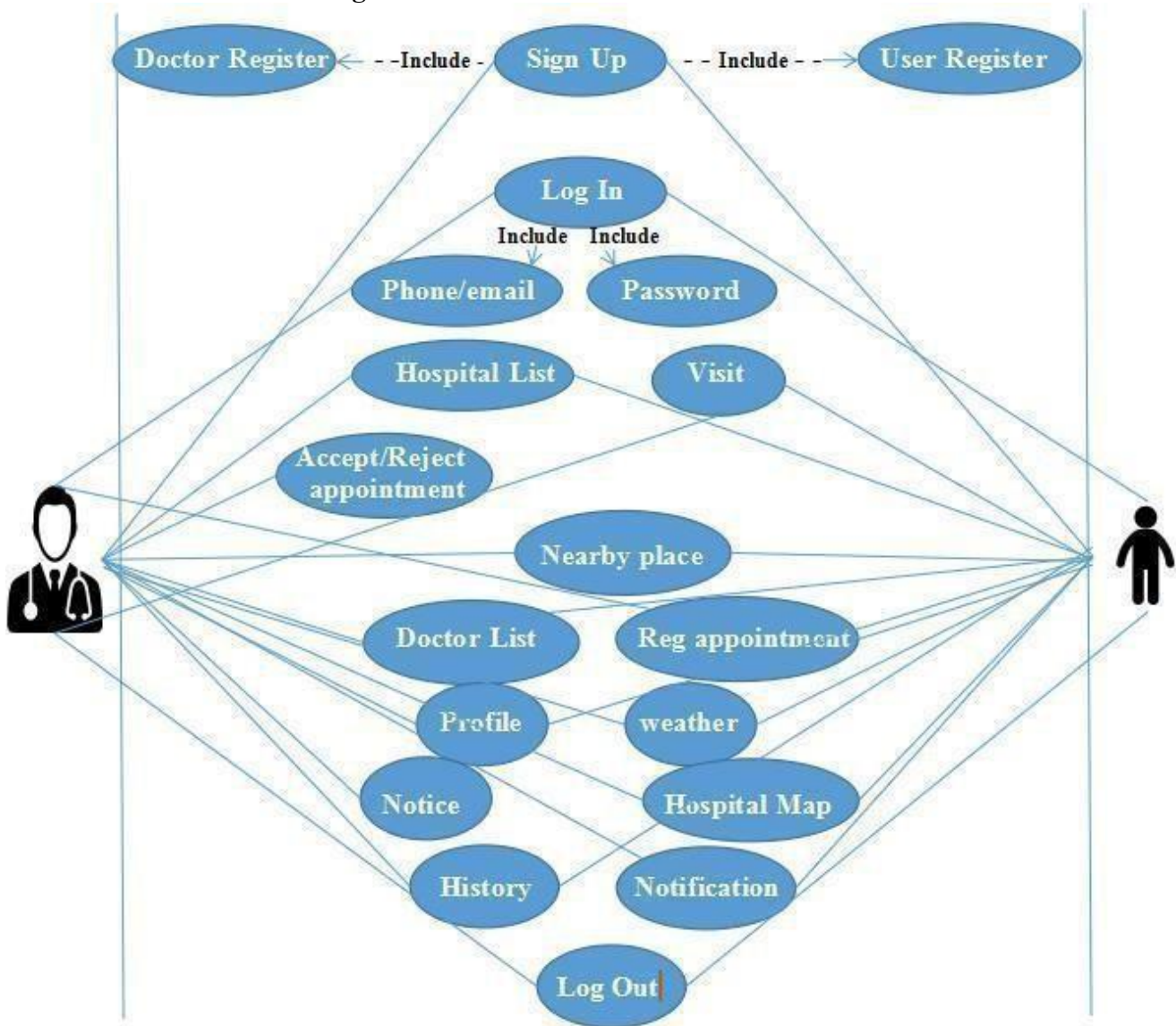

4.3 Use Case Modeling

Figure 4.2: Use Case Diagram

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Table 4.1 Use Case Analysis

Use Case: Sign Up
Actors: Doctor and   Patient.
Type: Primary
Description: If doctor or patient want to access this application. They must provide pertinent information to sign up.
Uses: Log in
Extended by: None
Extends: None

Use Case: Log In
Actors: Doctor, patient
Type: Primary
Description: If doctor or patient want to log in this application. They must enter valid email or phone Number, password and profession to log in.
Uses: Profile
Extended by: None
Extends: None

Use Case: Profile
Actors: Doctor, patient
Type: Primary
Description: Every doctor or patient have their own profile. They can update and delete their   profile.
Uses: see own profile
Extended by: None
Extends: Update, Delete and Log out

Use Case: Notice
Actors: Doctor
Type: Primary

Description: Doctor can post any Notice.

Uses: Patient gets Notice.

Extended by: None

Extends: None

Use Case: Confirmation

Actors: Doctor can Confirmation appointment accept or reject and appointment date..

Type: Primary

Description: Doctor update patient visiting date,.

Uses: Patient gets confirmation.

Extended by: None

Extends: Update confirmation

Use Case: hospital list

Actors: Doctor, Patient

Type: Primary

Description: All hospitals can see it as well as visit the hospital.

Uses: Doctor, Patient

Extended by: None

Extends: hospital map location, visit.

Use Case:Doctor List

Actors: Doctor, Patient.

Type: Primary

Description: Each hospital can see a list of doctors according to its category.

Uses: Doctor, Patient

Extended by: None

Extends: contact, appointing.

Use Case: Weather

Actors: Doctor, Patient.

Type: Primary

Description: Easiest way to news of weather.

Uses: For meeting with teachers

Extended by: None

Extends: None

Use Case: Noticeboard

Actors: Doctor , Patient

Type: Primary

Description: Easiest way to find out any Doctor notice.

Uses: check impotent news.

Extended by: None

Extends: None

Use Case: Taken Serial.

Actors: Doctor

Type: Primary

Description: Check patient appointed here.

Uses: For patient appointment

Extended by: None

Extends: None

Use Case: Near By Place.

Actors: Doctor, Patient

Type: Primary

Description: Hospitals nearby can be seen on the map.

Uses: For nearby hospital.

Extended by: None

Extends: None.

Use Case: History.

Actors: Doctor, Patient

Type: Primary

Description: The user will see the history of his appointment and the flood of appointment appointment rejects with the doctor..

Uses: For history.

Extended by: None

Extends: None.

Use Case: hospital map.

Actors: Doctor, Patient

Type: Primary

Description: Each hospital will see its location.

Uses: For own hospital map.

Extended by: None

Extends: None.

Use Case: Register Appointment.

Actors: Doctor, Patient

Type: Primary

Description:You have to register to make an appointment.

Uses: For appointment.

Extended by: None

Extends: None.

Use Case: Register Appointment.

Actors: Doctor, Patient

Type: Primary

Description:Patients will be able to see or accept the appointment at the time the appointment is made, the user will see the appointment date of his appointment.

Uses: For notification.

Extended by: None

Extends: None.

4.4 System Architecture
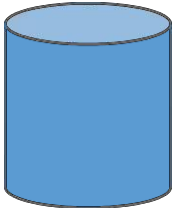
User Interface	● Sign Up ● Log In ● Profile ● Notice ● Hospital List ● Doctor List ● Register appointment ● Notification ● Hospital Map ● Near By Hospital Map ● Weather ● History
Login Access (Application Layer)	✓ Record inserting process ✓ Record retrieving process ✓ Report generating process
Server	➢ Doctor And Patient registry ➢ Doctor details ➢ User Info ➢ Patient Info ➢ Notification ➢ History ➢ Notice

Figure 4.3: System Architecture

4.5 E-R Diagram and Description

Online Doctor Appointment database has eight tables. There are doctor_info, patient_info, user_info, notification_user, notification_doctor, history_user, history_doctor, notice_board_info.

In doctor_info table there are twenty five fields. Which are id, doctor_profile, first_name, last_name, permanent_address, present_address, date_of_birth, gender, designation_info, email, password, phone_no_one, phone_no_two, mobile_number, department_name, chamber_location, hospital_name, hot_line, serial_number, start_time, end_time, start_time_picker, end_time_picker, close_day, visit_amount, . id is the primary key. Shown in figure 4.4.

In user_info table there are six fields. There are id, first_name, last_name, gender, phone_number, password. id is the primary key. Shown in figure 4.4.

In patient_info table there are ten fields. There are id, first_name, last_name, mobile_no, age, gander, payment_confirm_no, position, registration_date, briefly_describe. Patient_id is the primary key. Shown in figure 4.4.

In notification_user table has eight fields. There are id, doctor_id, doctor_ name, doctor_profile, doctor_message, accepted_confirm, n_user_time, n_user_date. id is the primary key. Shown in figure 4.4.

notification_doctor table has five fields. There are id, n_doctor_patient_name, n_patient_message, n_patient_time, n_patient_date. id is the primary key. Shown in figure 4.4.

history_user table has six fields. There are id, h_user_d_profile, h_user_d_name, h_user_confirm, h_user_time, h_user_date. id is the primary key. Shown in figure 4.4.

history_doctor table has five fields. There are id, h_patient_name, h_patient_action, h_doctor_date, h_doctor_time. id is the primary key. Shown in figure 4.4

notice_board_info table has five fields. There are id, notice_title, notice_description, notice_time, notice_date. id is the primary key. Shown in figure 4.4.
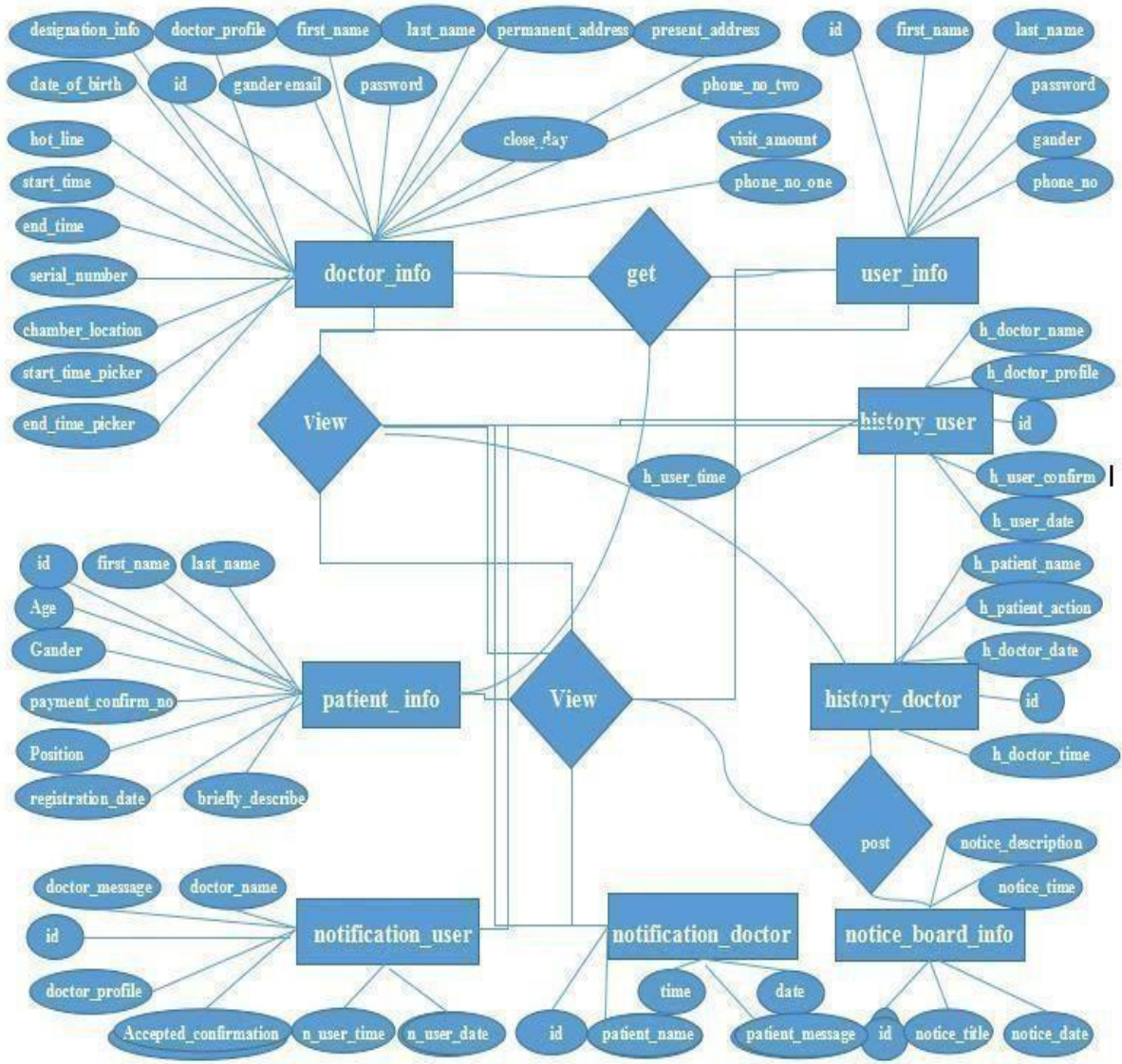

Figure 4.4: E-R Diagram

CHAPTER 5

Implementation and Testing

It needs to be made clear that this project was fully designed and developed based on collecting information from existing systems, concepts and imaginary situations. To remind readers of this report, there are many developers who are still arguing for the core idea of   the different elements of the Android-based education system. Their opinion is that we are trying to implement the new system.

5.1 Implementation of Front-End Design

The screen shots below show the main project view. Capture an image of what you see on your mobile screen and how use it.

Log In Activity: In the Online Doctor Appointment (My Doctor) This is Launcher activity.

Figure 5.1: My Doctor Log In Activity

Sign Up verification code send and Received Activity: In the Online Doctor Appointment (My Doctor) Number verification send Activity and   Number verification Received Activity.
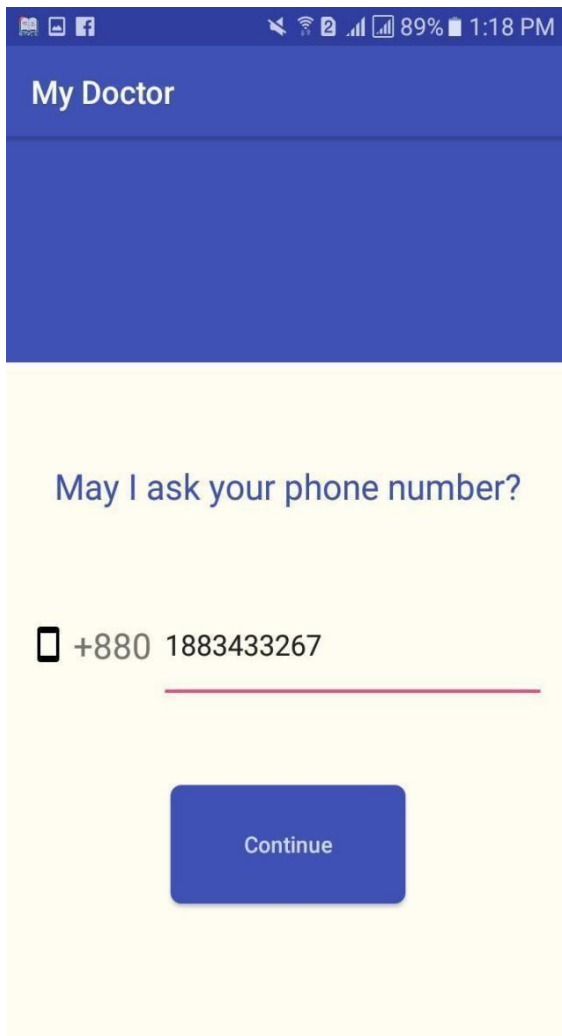
Figure 5.2: verify send code Activity   Figure 5.2: verify received code Activity
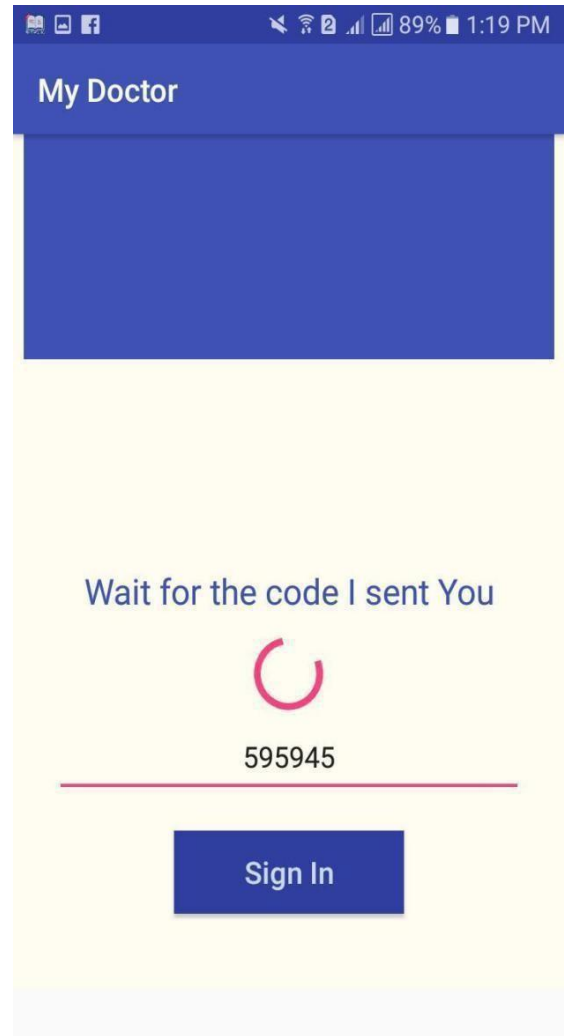
Sign Up Activity: In the Online Doctor Appointment (My Doctor) Sign Up Activity.

If the doctor wants to Sign up do so, he will kick in the check box.

Figure 5.3: My Doctor Sign Up Activity.

Doctor Sign Up Activity: In the Online Doctor Appointment (My Doctor) doctor

Sign Up Activity.

Figure 5.4: Doctor Sign Up Register Activity.

Home Activity: Home activity . Special drawer layout, profile, option menu.
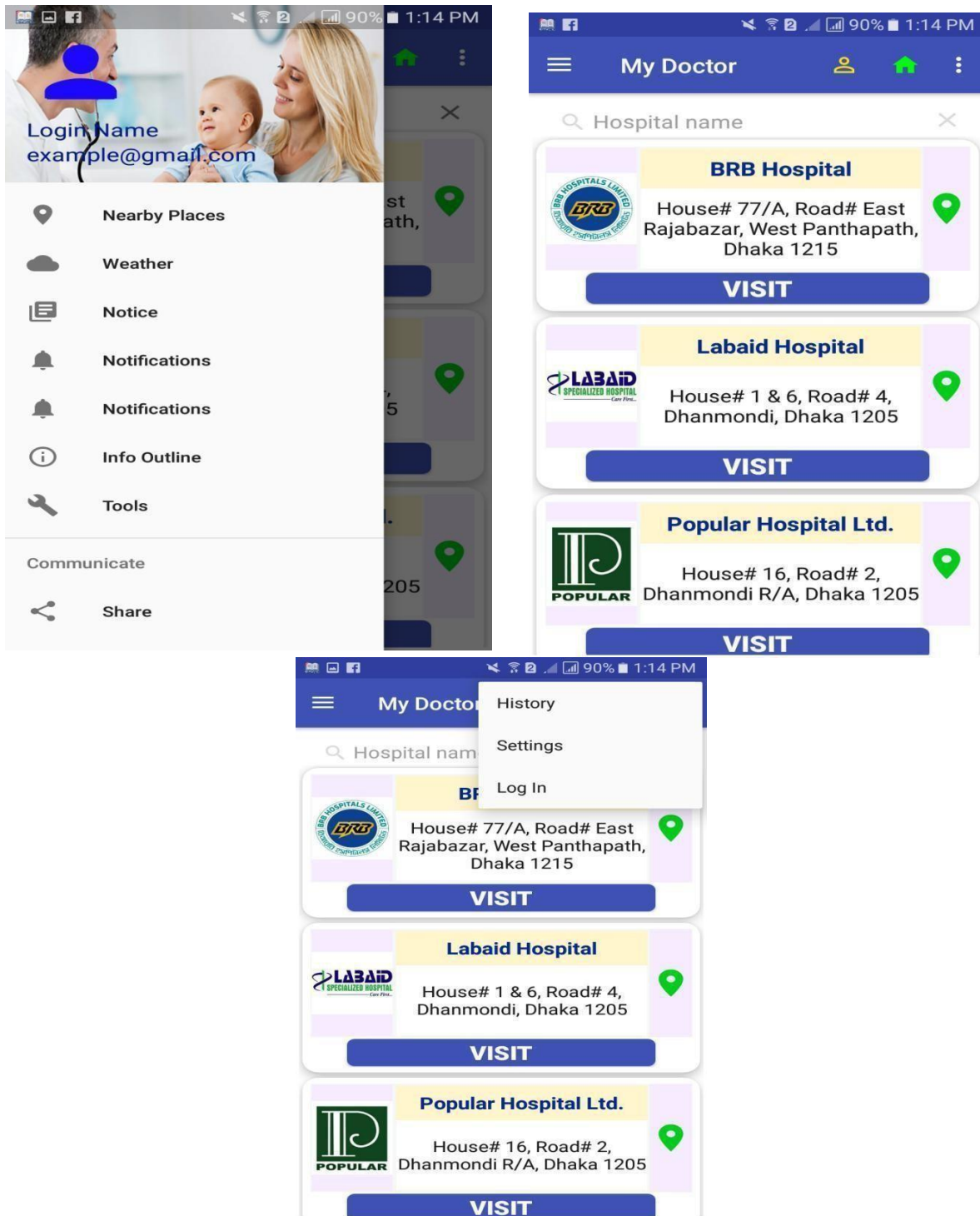

Figure 5.3: My Doctor Home Activity.

Hospital Map: Each hospital will have a different map location, Hospital Map Activity.
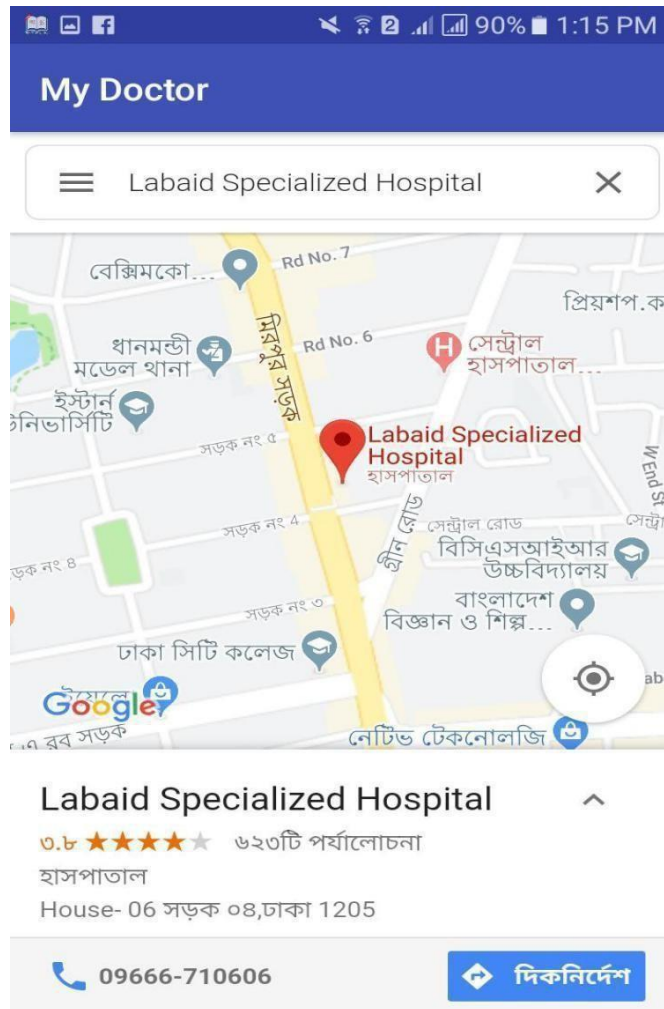

Figure 5.6: Hospital Location Map.

Department list: Each department can be seen according to the   hospital (My Doctor) Department List Activity.
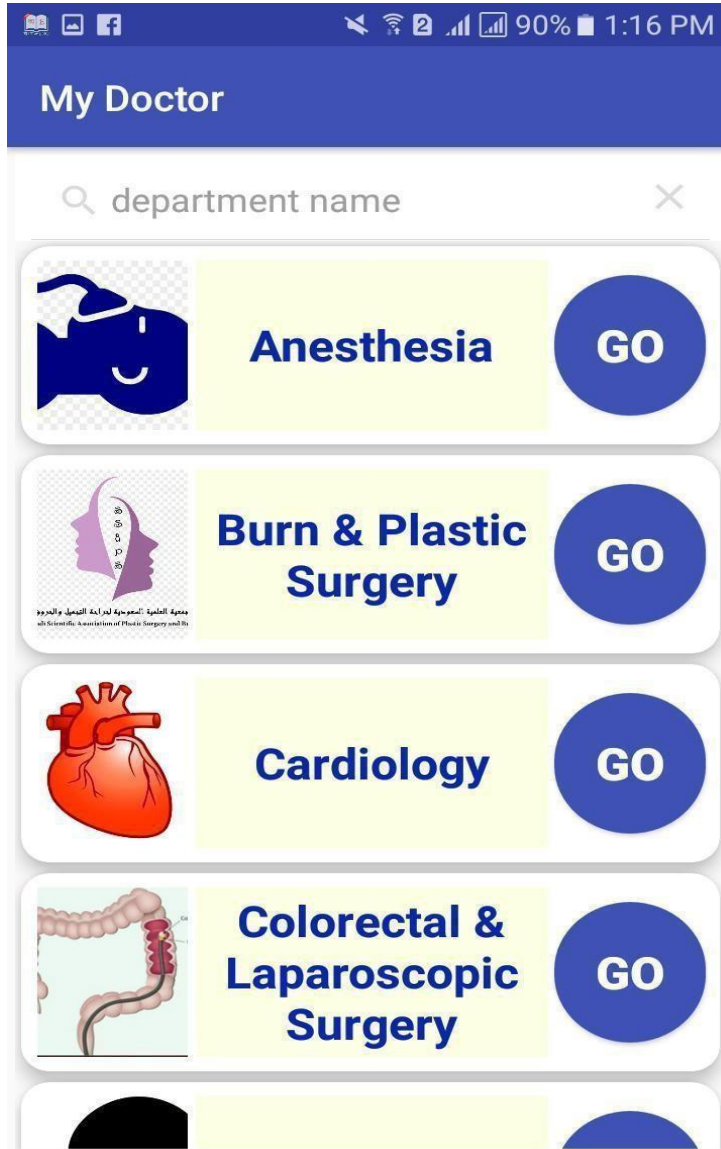

Figure 5.7: Doctor Department List Activity

Doctor List: Doctor List Activity,From here you will see the necessary

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information from the doctors, dial the phone number and dial the email. An appointment can be made by clicking the appointment button .

Figure 5.8: Doctor List Activity.

Apply appointment :   Apply Appointment Activity fill up all field andclick apply button for appointment .

Figure 5.9: Apply appointment Activity

History: After the appointment, it will be saved in the history if you want to delete the edit.
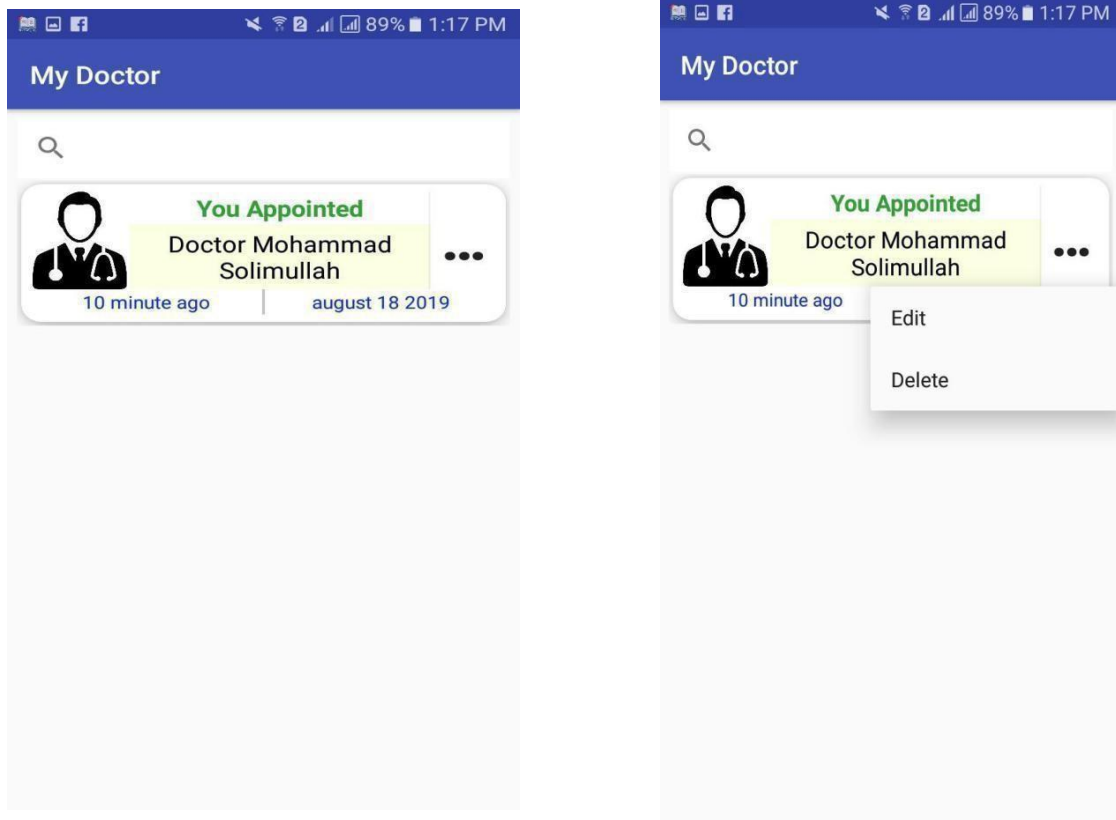
Figure 5.10: History Activity, seen edit, delete, search.

Notification Doctor : Notification Doctor Activity. After the appointment the doctor will come to the notification, the doctor will be able to delete and edit and accept or reject appointment there.

Figure 5.11: Notification Doctor Activity.

Notification User: Notification User Activity. The user will be able to see the details of his appointment and delete it, to see the specific queue doctor profile.

Figure 5.12: Notification User Activity, seen profile, delete

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5.2 Implementation of Back-End Design

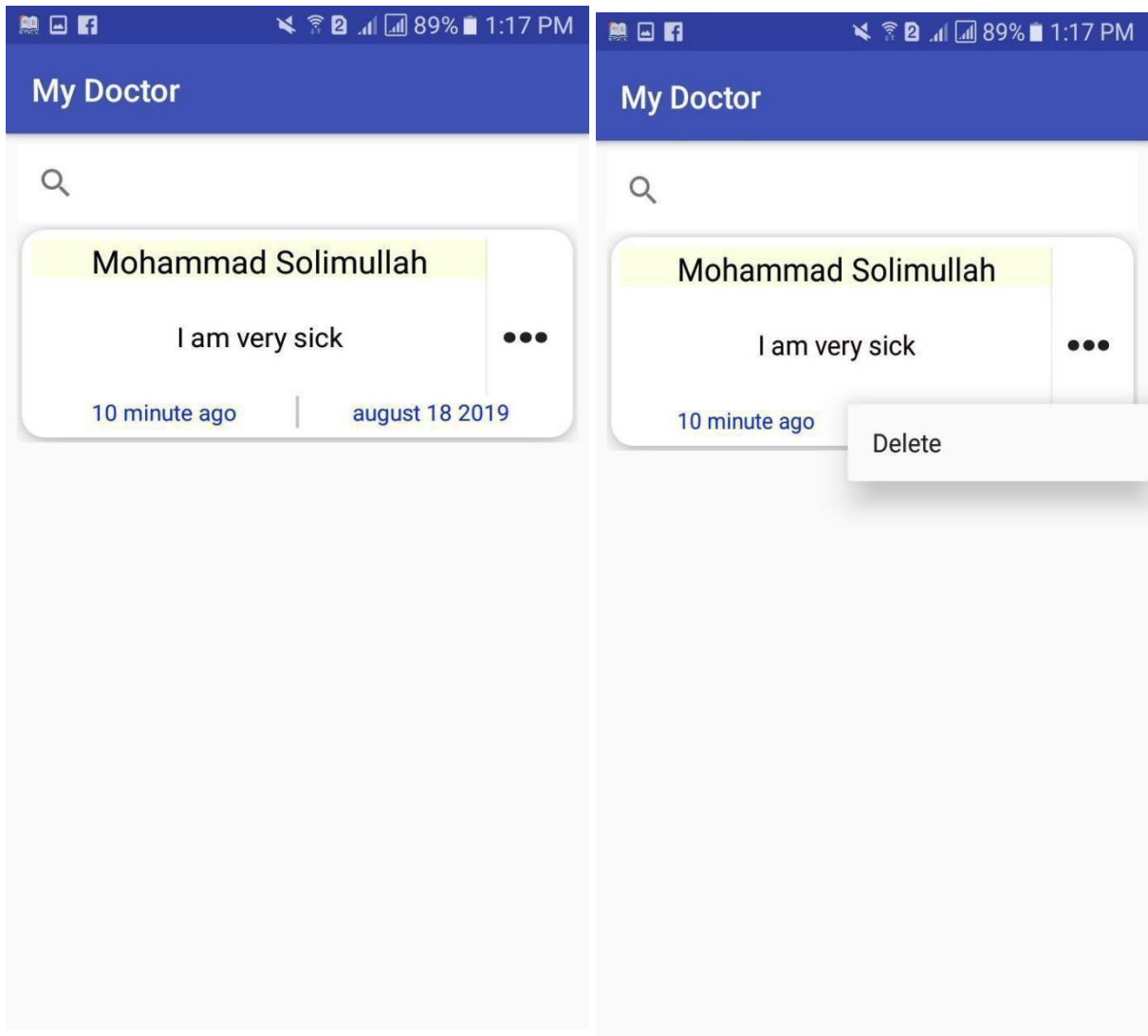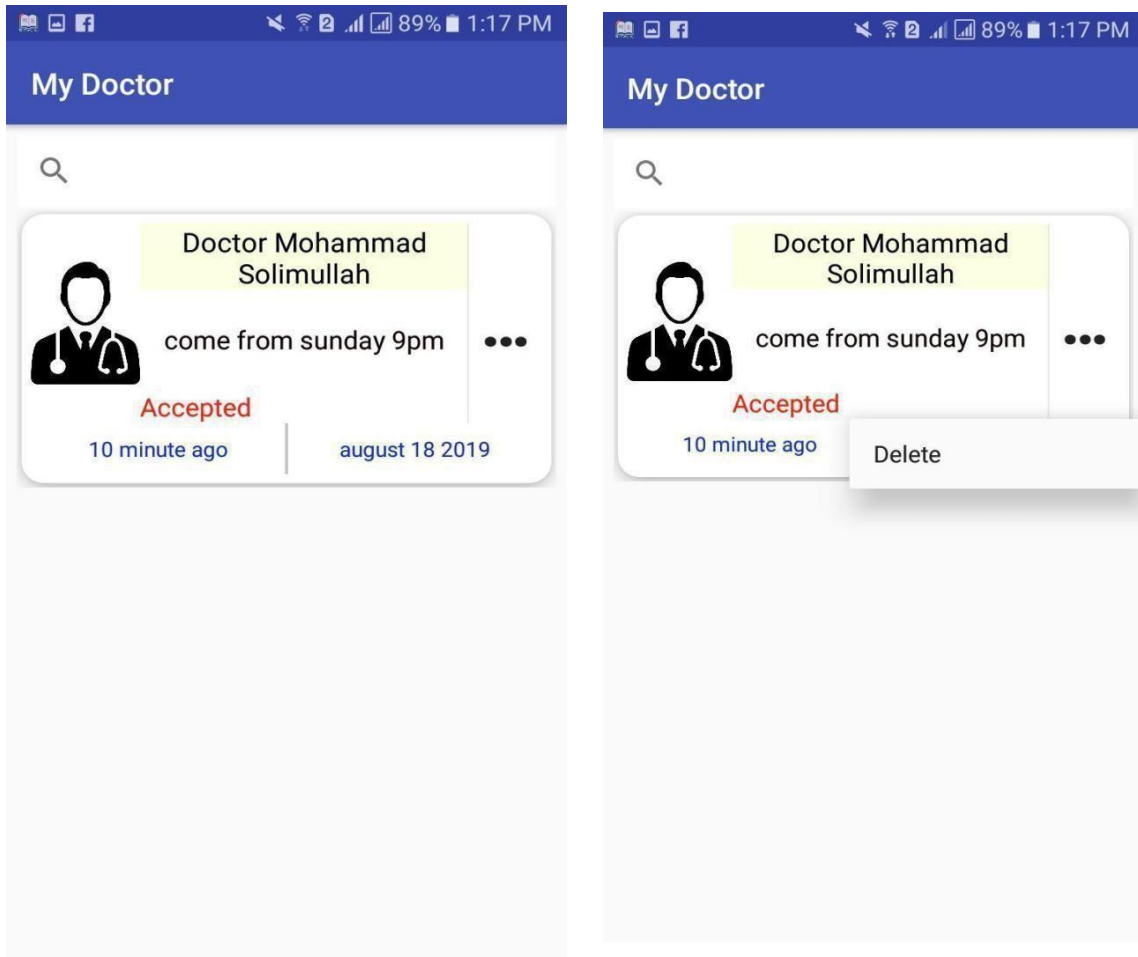The following design for the Online Doctor Appointment database is selected to system application. Database design is the process of producing a detailed data model of a database. This logical data model contains all the needed logical and physical design choices and physical storage parameters needed to generate a design in a data definition language, which can then be used to create a database. A fully attributed data model contains detailed attributes for each entity. The term database design can be used to describe many different parts of the design of an overall database system. Principally, and most correctly, it can be thought of as the logical design of the base data structures used to store the data. In the relational model these are the tables and views. However, the term database design could also be used to apply to the overall process of designing, not just the base data structures, but also the forms and queries used as part of the overall database application within the database management system (DBMS).

5.2.1 Data Table Name

The name of the smart Online Doctor Appointment database is my-doctor-d999d that has eight data tables.
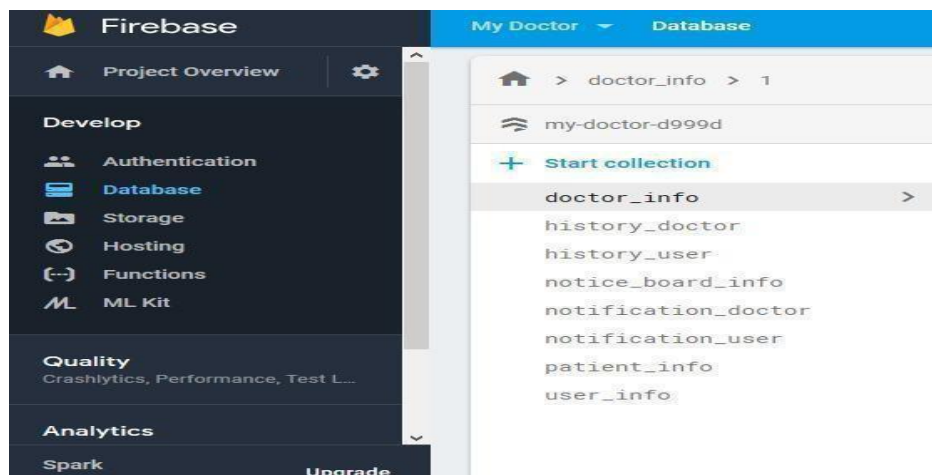
Figure 5.13: Database Table Name

5.2.2 Data Type Architecture

A data architecture should set the standard of data for all its data systems as a model of ultimate interaction between a vision or data systems. For example, data integration should be dependent on the data architecture standard since data integration requires two or more data systems.

The following data types for its column and parameter declarations.

- CHARACTER [CHAR [(length)]
- VARCHAR (length)
- BOOLEAN
- SMALLINT
- INTEGER or INT
- DECIMAL
- NUMERIC
- REAL
- FLOAT(p)
- DOUBLE PRECISION
- DATE
- TIME
- TIMESTAMP
- CLOB [CHARACTER LARGE OBJECT [(length)] or CHAR LARGE OBJECT [(length)]
- BLOB [BINARY LARGE OBJECT [(length)]

5.2.3 Firebase Database Table field view

doctor_info	1
+ Add document	+ Start collection
1 >	+ Add field
	chamber_location: "
	close_day: "
	date_of_birth: "
	department_name: "
	designation_info: "
	doctor_profile: "
	email: "
	end_time: "
	end_time_picker: "
	first_name: "
	gender: "
	hospital_name: "

doctor_info	1
+ Add document	+ Start collection
1 >	+ Add field
	hot_line: "
	last_name: "
	mobile_number: "
	password: "
	permanent_address: "
	phone_no_one: "
	phone_no_two: "
	present_address: "
	serial_number: "
	start_time: "
	start_time_picker: "
	visit_amount: "

history_doctor	1
+ Add document	+ Start collection
1 >	+ Add field
	h_doctor_date: ""
	h_doctor_time: ""
	h_patient_action: ""
	h_patient_name: ""

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history_user

+ Add document
1 ›

+ Start collection
+ Add field

h_user_confirm: "
h_user_d_name: "
h_user_d_profile: "
h_user_date: "
h_user_time: "

notice_board_info

+ Add document
1 ›

+ Start collection
+ Add field

notice_date: "
notice_description: "
notice_time: "
notice_title: "

notification_doctor

+ Add document
1 ›

+ Start collection
+ Add field

n_doctor_patient_name: ""
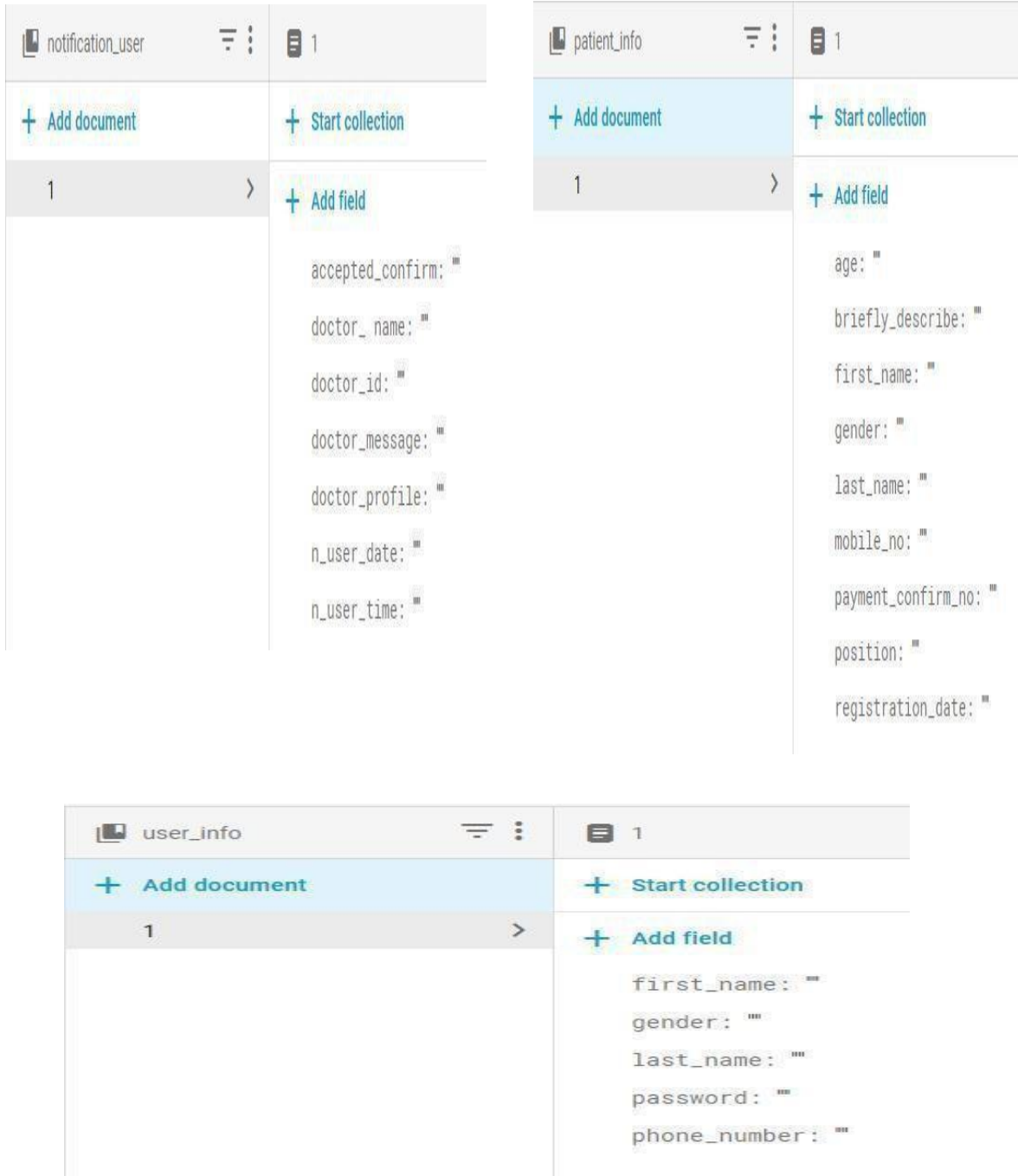n_patient_date: ""
n_patient_message: ""
n_patient_time: ""

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Figure 5.14: Fire-base Database Field View

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5.3 Testing Implementation

This project was judged on the following set of criteria:

Satisfying requirement specifications: The project is called as effective if it fulfills all the requirements such as functional and non-functional requirements. In other words, it should be able to confirm the details of the requirements.

Correctness: It is one of the critical requirements of software development. Perfectness is the basic demand for service oriented software. Each and every part of the application should work properly and accurately.

Compatibility and Integrity: These are two important conditions to check if the project is successful. The online doctor's appointment was made to be compatible with any domain. It was also created in such a way that it could induce virtualization which is considered an important issue. Additionally, the evaluation of the system depends on how the application was applied to the entire system or not.

Real time management: Apply About Online Doctor Appointment Thus, it is necessary to maintain real-time scenery. Users of this system should have the ability to maintain it.

Reliability and security management: Security is one of the most important factors in any service-based system factors Because of this, the evaluation criteria for security features were taken into account when developing the system.

User friendliness: Friendship systems are also a special criteria to judge in any application. For example, users of this solution should feel satisfied when using the system. In a nutshell, a system must have quality management features such as efficiency, portability, re-usability, flexibility, integration and loose connectivity between different components of the designed software.

5.3.1 Testing Methodology

Testing In general, software testing is used to detect system errors. A software test can be tested through the code, design and application of the entire system. Testing is essential to improve system quality. Code review and testing is another basic of software engineering that is often overlooked in project development. Testing is an integral part of the process of system development. Some software testing can also be done by CAST (Computer Aided Software Testing).

5.3.2 Functional Testing

In functional testing tester has to validate the application to see that all specified requirements of the user"s whatever we have said in supplemental restraint system have been incorporated or not.

- There are two categories of functional testing:
- Positive Functional Testing: Examines the functions of the application with valid input and verifies whether the results are correct.
- Negative Functional Testing: The combination of invalid inputs to IT involves practicing application functionality using some unexpected operating conditions and some other "out of bounds" situations.

5.3.3 Unit Test

Unit testing is commonly used during the detailed design and implementation phase of this project. The logic of the unit test was to find out the flaws in this project.

5.3.4 Compatibility Test

Compatibility testing, part of the software non-functional test, is tested on the application to evaluate applications with computing environment. Software compatibility testing can be more appropriately referred to as a user experience environment. This project is tested on various Android mobiles to ensure the following-

Table 5.1: Compatibility Test Result

Android Device Name	Screen Size	Test	Result
Samsung Galaxy Core Prime	4.5 inch (480p)	Yes	Okay
Samsung Galaxy S II	4.3 inch (720p)	Yes	Okay
Walton Primo GM	5.0 inch (480p)	Yes	Okay
Symphony Xplorer T8 Pro	8.0 inch (WXVGA)	Yes	Okay
Xiaomi Redmi 4x	5.0 inch (720p)	Yes	Okay
Xiaomi Redmi Note 3 Pro	5.5 inch (720p)	Yes	Okay

CHAPTER 6

Conclusion and Future Scope

6.1 Conclusion

Online Doctor Appointment is an Android based mobile application that gives users the opportunity to have an effective environment for getting appointments and making appointments. Both physicians and patients can benefit from this application. The appointment appointment is friendly enough to find a doctor and easily navigate the appointment. Hopefully this will be a better solution for current and future generations of online doctors.

6.2 Goal

His main goal is to create an Android application where both patients and physicians can take and spend time at the same time. Creating a good community and good relationships between physician and patient is one of the most important goals of our application.

6.3 Limitation

- This part of the system can be implemented using current technology although some changes had to be made in different places Domain hosting bandwidth only 3GB
- Fire-base database storage unlimited
- For file sharing we use google API.

6.4 Scope for Further Developments

- Interface design will be updated
- More features and functionalists will be added
- Reliability of the application should be increased
- File share by using our API.

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