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DENGUE SOLUTION – AN ANDROID APPLICATION

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This Report is presented in Partial Fulfilment of the Requirements for the Degree of Bachelor of Science in Software Engineering.

APPROVAL

This Project titled “**DENGUE SOLUTION – AN ANDROID APPLICATION**”, submitted by **Md Saiful Islam Shohag** to the Department of Software Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Software Engineering (SWE) and approved as to its style and contents.

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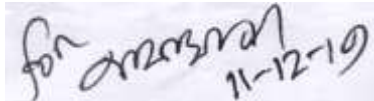
This project has been done by me under the supervision of **Nazia Nishat, Senior Lecturer** .Department of Software Engineering (SWE), Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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ACKNOWLEDGEMENT

It is my heart whelming pleasure that I am about to finish my project named “**Dengue Solution**” under the guidance of my supervisor **Nazia Nishat**. The follow-up sessions were so good that results in boosting up my developing speed. I am expressing my heart full gratitude to my Head of the Department **Professor Dr. Touhid Bhuiyan**.

I would like to thank my entire course mate in Daffodil International University, who took part in this discuss while completing the course work.

Finally, I must acknowledge with due respect the constant support and patients of my parents.

ABSTRACT

Dengue Solution is a application from where people can get some hospital services remotely when they are affected by dengue virus. My project aims to make people's health sound and make them more concerned about their health. In my application for getting blood quickly people will have easy access to the blood banks online. Sometime searching for the specific blood becomes a challenge. Even people so often may not save ambulances contacts and they might not know the specific hospitals ambulance's contact number, also the location of the hospitals nearby. This app will also show them nearby hospitals from their specific location. They will easily can call the nearby hospitals ambulances. Taking appointments remotely will save times and will remove harassments while people take appointments by call or by directly talking to the authorities. People can get daily health tips and they will be automatically notified. This will help them maintain a good health just by using common resmyces of food and ingredients. Daily health tips is a section where my app will only send tips to maintain a good health excluding any uses of medicines. Patient can chat with the doctor and get suggestions remotely. We know sometimes all we need is a 2 line advice from the doctor but what we have to do is going to the clinic, getting a serial, pay money, wait and meet with the doctor. Instead of waiting for the doctor ask/leave a simple question by Dengue Solution Application and getting a reply is a great way of using modern technology which I will include in my project.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Now a days dengue is a greatest harmful thing for human being. A mosquito which contains dengue virus is able to kill a man easily. This problem is increasing day by day in Bangladesh. There are a large number of amount of died people including. Dengue Specialist also I could see here unexpectedly . I also thought the circumstances of my environment . It is a great loss for a country if my people beings failure to protect dengue virus . I am living in Dhaka and at every night I have to think about virus infection from mosquito . Now I am thinking is why this condition has created in my country and why a large number of people had been killed here? It's all about my ignorance I think. Because of being unaware about dengue , this situation has been created . I think everybody must have to be aware about dengue and need to take a proper steps to reduce dengue virus for saving my people and saving my country . So what should we do?

firstly we need to gather information and then work with that to protect dengue virus. how many people killed Dhaka by dengue. So I want to do work for my country and save the people from dengue Ns1. I have made a plan about that . I thought I could help the people in many ways to save from dengue fever.

Firstly I thought I can make aware of virus infection to people through online services. If they will be aware of that , people may save themselves from dengue fever . If any person beings affected by dengue Ns1 , they will a help from me if they will use my android software .In this software , I have made many useful feathers , that could help the people really. After being affected a people unexpectedly , a Dengue Patient will be able to get nearby Dengue Hospital information ,blood donor information , Dengue Specialists information , appointment , real time chat with Dengue Specialist , ambulance information etc. What to do after being affected dengue virus , People will be able to understand using my application and would be able to get my application services to protect themselves .

1.2 Motivation

People are being affected by dengue virus day by day but because of not being very good of my Dengue Hospital services in my country . There are a large number of people who cannot go to the Dengue Hospital at the right time when they need have a good Dengue Specialist to treat. Here the most figure is the propensity of utilizing shrewd phones. Using this propensity, I will unquestionably give them administrations which they require not to memorize how to handle. Presently I know individuals goes to the healing center for curing infection. Numerous of the times I endure from basic cerebral pain, fever and so on. Being a small bit cognizant will result into less malady. Talking to a specialist so frequently will make Dengue Patients wellbeing way better. At whatever point a patient needs blood, he or she must be recouped by modern blood cell as before long as conceivable. In my nation numerous of the times Dengue Patients conditions gets most exceedingly bad by fair not getting the blood in time. In some cases I don't know the specialists plan of observing Dengue Patients. And a Dengue Patient may confront challenges taking an arrangement. In an crisis circumstance one may have to be discover the closest healing centers adjacent.

1.3 Problem Statement

It is a great challenge for us to solve all my daily life problem through the online. In this software I have to provide many remote services to dengue Dengue Patient . When a Dengue Patient will be into my application he will be able to use this application friendly . A Dengue Patient will realise that he is affected by dengue virus or not after reading many symptoms of dengue fever using this application . If that occurs , they will get all services from this application. My venture points to supply wellbeing and restorative related administrations remotely. Presently let us talk about what is this word "remotely" implies that I am utilizing more than once? It is the administrations that I get by not by showing physically to anyplace. There are so many reasons. In case anybody needs an arrangement to the specialist the affected individual has got to call to the clinic for arrangements. Indeed

understanding so regularly has no thought approximately the plan of the specialist. In some cases Dengue Patient's calls are picked up by brokers and they confront disillusionments. They can basically take appointments with my app online accurately. Assist in case anybody must know in case there are healing centers accessible adjacent he/she essentially has to call individuals to know or inquire strangers. Sometimes individuals might think imperiled by not finding the particular blood bunch. In my app there's a web blood bank alternative, making it simpler

1.4 Project Objective

How many ways can we help to a dengue Dengue Patient remotely to save the life using this application? this is the main objective of my project .

Dengue Dengue Patient will be concern about symptoms of dengue fever , proper steps to protect from dengue virus , creating awareness of dengue virus etc.

They will get appointment remotely .

Getting non-private ambulance .

Dengue specialist information.

Find nearest hospitals .

What to do, if platelets count go down .

Get blood donors information .

Sending notification about health tips to dengue Dengue Patients remotely .

Realtime chat with dengue specialist .

1.5 Scope of the Project

In many ways we can help to a dengue Dengue Patient remotely to save the life using this application . this is the main objective of my project .

- Collecting information of non-private ambulances .
- Getting Dengue Specialist's information
- Making customized outline to induce adjacent healing centers .
- Getting energetic wellbeing tips data .
- All information are appeared within the part XML with genuine time Firebase database.
- Options are appeared with lovely tabs.
- All administrations are in a single format since of superior Dengue Patient encounter.
- Search nearby hospitals easily with one tap.
- Both online and offline sort are being created .

CHAPTER 2

BACKGROUND

2.1 Introduction

The purpose of this document is to describe all the requirements for the targeted system- Dengue Solution. The Dengue Patient by which a dengue Dengue Patient can take Dengue Hospital support by sitting at home. The intended audience includes all the stakeholders in the potential system. These include, but are not necessarily limited to, the following: Doctors, Dengue Patient(User) and the admin (Super user). Developers should consult this document and its revisions as the only source of requirements for the project.

2.2 Product Perspective

Dengue Solution mainly developed for dengue Dengue Patients who want to take Dengue Hospital support on emergency case and who want to get support at home. It helps him/her to get support immediately and easily. This application provides time consume and efficient service. The Dengue Patient can get list and information of Dengue Specialist. Dengue Patient can able to make an appointment on online. This service ensures that Dengue Specialists are not fake and fully define as the Dengue Patient demand. Dengue Patient also able to get the facility to find blood when it will be needed . By using google map the location of the Dengue Patient can track and provide ambulance service. The most important part is the record of Dengue Patient and Dengue Specialist's chat will be store at database. For the further time Dengue Specialist and Dengue Patient can get the report for review anytime they want. Here admin available for correction of Dengue Specialists mainly. Dengue Patient should be verified by their own identity.

Actually here admin manage the whole thing like add Dengue Specialist and Dengue Patient. Dengue Specialist verification is also done by admin who actually ensure the Dengue Specialists identity by their registration both BMDC and BDS.

2.3 Related Work

I have seen some application on google playstore named dengue application .

I am sharing this below with screen shots :

2.4 Dengue Treatment :

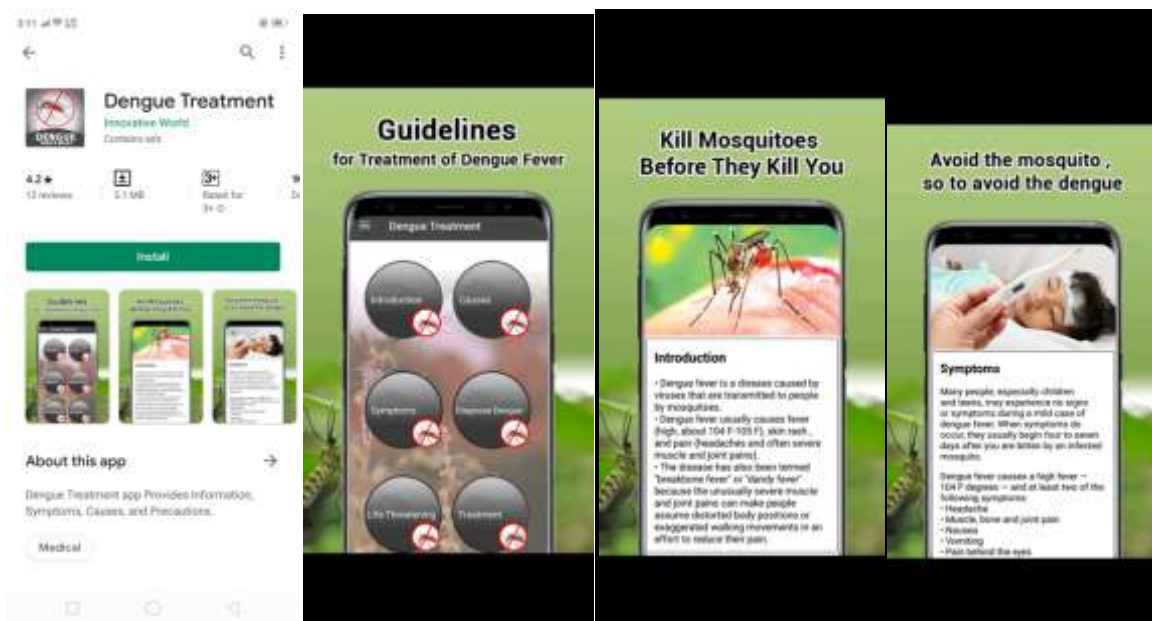


Figure 1: A Screenshot of Dengue Treatment application.

2.5 Dengue Fever Diseases :

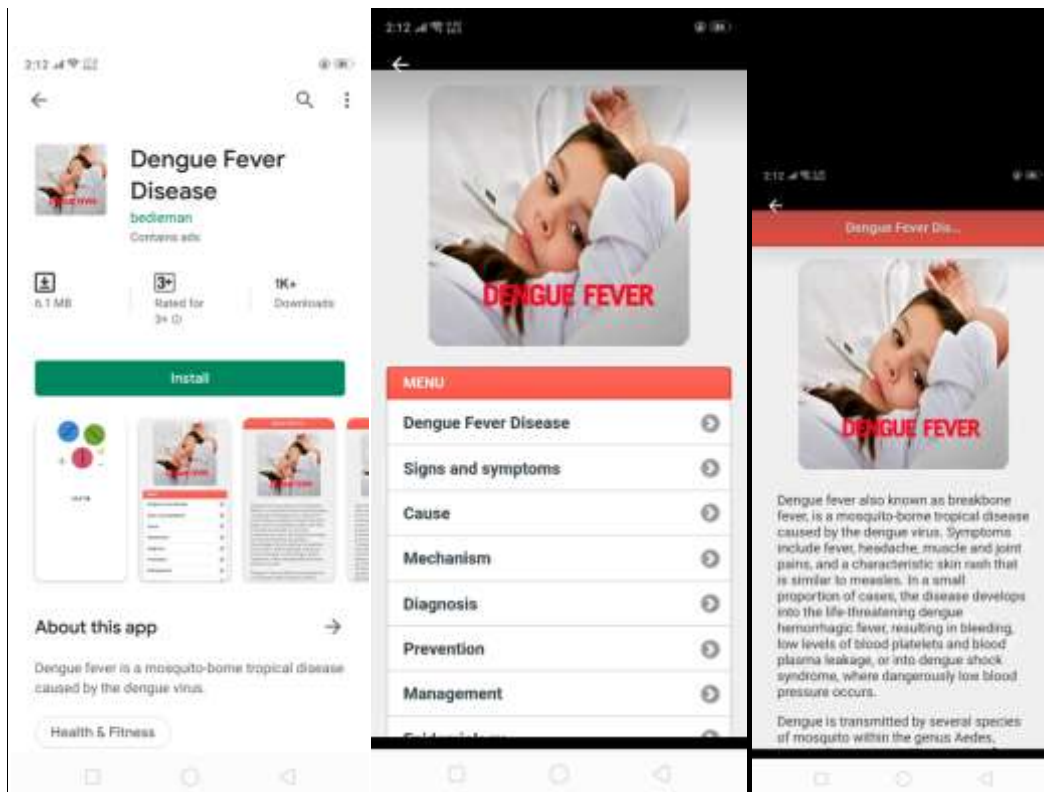


Figure 2: A Screenshot of Dengue Fever Diseases application.

2.6 Management of dengue :

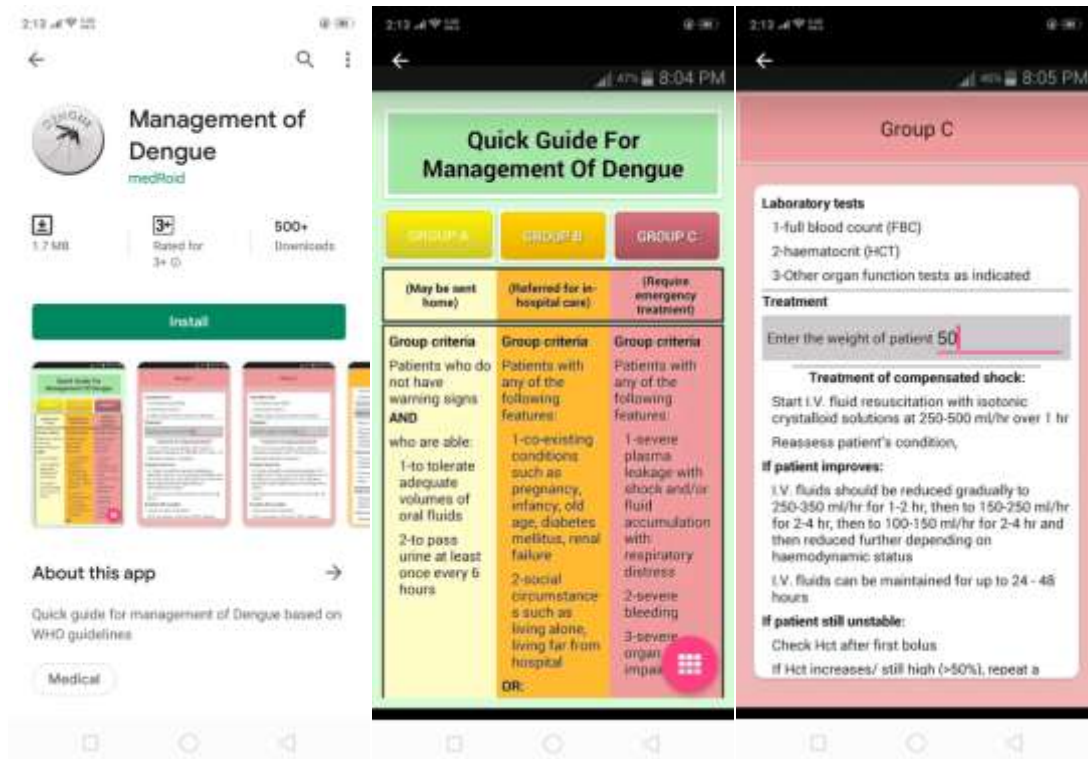


Figure 3 : A Screenshot of Management of Dengue.

I have seen some above dengue related applications of google play store , But I did notice that all application contains some information only nothing else. These are giving me some information only but If I want to get appointment remotely , chat with dengue specialists , manage blood donors information , nearest hospitals information etc. I can't because of not being developed these applications like that.

2.7 My Project Work

Since of the versatility of android apps, I have chosen to form my extend on android stage. My android application have several features which are set to supply wellbeing related services. Dengue Patient can take arrangements online, Dengue Patient can explore for blood online and Dengue Patient can see adjacent healing centers, Dengue Patients can chat with specialist, Dengue Patient can degree heart rate, and Dengue Patients will get programmed wellbeing tips as notices. I think my venture will so much impactful and compelling.

2.8 Dengue Solution

Wellbeing Right hand is an android application where Dengue Patients can discover a few alternatives in a single movement such as taking arrangements, looking blood banks, finding adjacent healing centers, rescue vehicle contacts, specialists information, and wellbeing tips as notice, chatting with specialist and measuring heart rate utilizing camera and streak light.



Figure 4 : A Screenshot of Dengue Solution.

2.4 Comparative Studies

In Wellbeing Collaborator, I have given accentuation to the Dengue Patient interface and Dengue Patient involvement. At some point a Dengue Patient does not need see part of menus, buttons. At some point the application may require more memory due to including parcel of exercises. To illuminate this issue I have utilized parts which can permit us to utilize numerous administrations interior one single movement. For putting away and recovering information I have utilized FCM (Firebase cloud informing) which is the most recent genuine time database innovation by Google. I am jumping my app to have superior Dengue Patient interface and Dengue Solution Application experience than any other related app within the market.

2.5 Challenges

Making anything calm unused is continuously a challenge. I were inquired that in case my venture has advertise values when I to begin with proposed it. As I were not proficient, this address demotivated us. I got a few sure to create a distinction. Another challenge is watching people groups versatility. One cannot make a venture and make live because it is. Appropriate lawful showcasing is imperative. There are competitions and contest moreover. Engineers need to handle all of these. Indeed in case any bug or prerequisites come designers have settle it on time, something else individuals will uninstall it and they will think my app to be a untrue benefit. Individuals these days are dependent of social organizing. At whatever point they fallen into a few issue. they to begin with approach Facebook, Imo, WhatsApp etc. So making a Dengue Patient to remind my application is challenging. I must analyze the estimation of the individuals of my nation to supply the benefit appropriately. Let us conversation approximately inside challenges. To begin with challenge is I don't have the private API (php scripts) to confirm the specialists in my

application. I am working on it and within the update form I am going. I moreover need to produce a few income to preserve the great floe of creating. Individuals of my nation are not that much recognizable with any kind of installment strategy right presently. So need to go for Google AdSense. I came to know afterward in this year of 2018 that Googles particular areas API am no more liberated. I've overseen it some way or another but how long it'll work I don't know. I am attempting to put information with zero percentage of mistake. I need to keep up a part of information since my app is online and energetic. Since here I am the engineers and I am the director moreover. I am pointing to supply way better and precise administrations. My objective is to oversee space into the shrewd phone domestic screens of each cognizant people in Bangladesh.

CHAPTER 3

REQUIREMENT SPECIFICATION

3.1 Business Process Modeling

Business process modeling (BPM) is the action of speaking to forms of an endeavor, so that the current handle may be analyzed, made strides, and robotized. The term 'business model' is in this way utilized for a wide run of casual and formal depictions to speak to center viewpoints of counting reason, structures, operational forms and arrangements . The most characteristic of the strategy is based on graph as 'Flow Diagram'. Here I am attempting to portray my project's commerce show utilizing Information Stream Graph. Regularly, Information Stream Graph depicts how information is prepared in spite of the fact that a framework or venture.

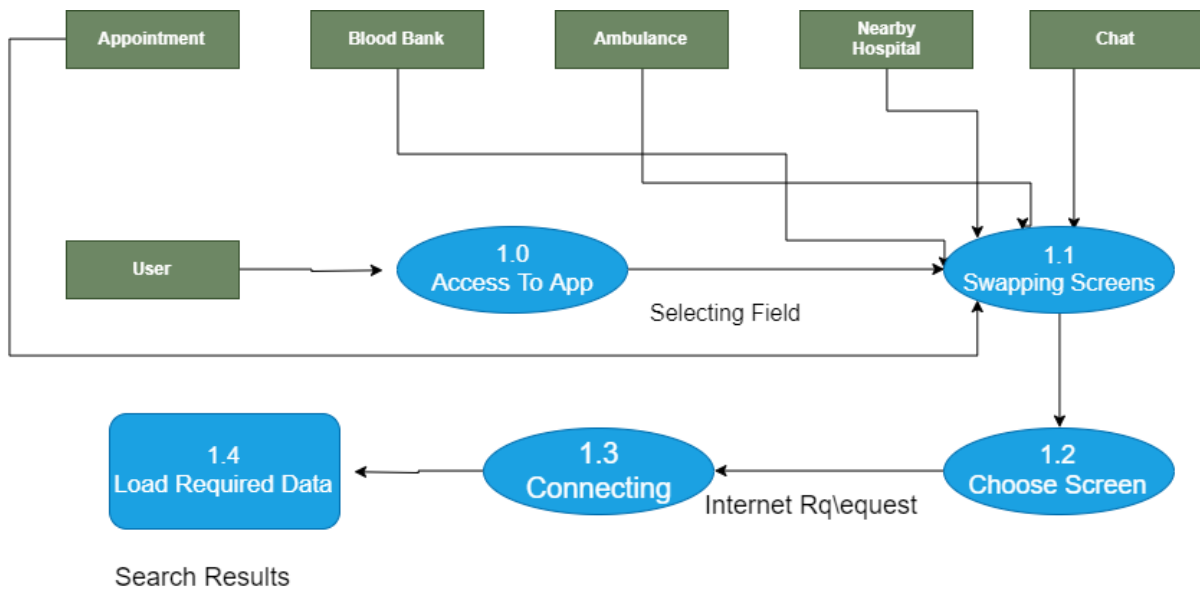


Figure 5 : Data Flow Diagram of the system

In the figure 5, I am trying to draw a level of Data Flow Diagram of my system. In figure: 5 represent the Data Flow Diagram of my project's system.

3.2 Requirement Collection and Analysis

Business process modeling (BPM) is the action of speaking to forms of an endeavor, so that the current handle may be analyzed, made strides, and robotized. The term 'business model' is in this way utilized for a wide run of casual and formal depictions to speak to center viewpoints of counting reason, structures, operational forms and arrangements. Here I am attempting to portray my project's commerce show utilizing Information Stream Graph.

3.2.1 Functional Requirement

Utilitarian requirements are those which are related to the technical functionality of the framework as like application computer program can perform. From the point of see of my framework, my application has numerous utilitarian prerequisites such as keeping up genuine time database and perform the part of the director for handling Dengue Patient ask. In useful prerequisites Dengue Patients are not mindful of the framework functionalities. In computer program building what I call the dark box.

3.2.2 Non-functional Requirement

Non-functional requirements are the requirements that indicates criteria that can be utilized to judge the operation and employments of a framework in specific conditions, instead of specific behaviors as just like the application is how much effective, Dengue Patient inviting, execution issue of the application etc. In this respect on the off chance that I consider my framework, the application has numerous nonfunctional prerequisites such as more productive, relevant, optimized execution, less memory devmying, smoother operation and

the foremost vital thing is stacking information rapidly. My applications **Dengue Patient** interface is more progressed and basic for giving superior Dengue Patient involvement.

3.3 Use Case Modeling and Description

A use case is a list of activities or occasion steps regularly characterizing the intelligent between a part and a framework to realize a objective. Here a part is known in the Unified Modeling Language as an actor. Utilize case analysis is an critical and valuable requirement analysis technique that has been broadly utilized in present day computer program building. There are numerous ways to type in a utilize case in content, from use case brief, casual, outline, to fully dressed etc. and with shifted formats



Figure 6 : A Use Case Diagram of dengue solution application.

3.4.1 Activity Diagram for Access :

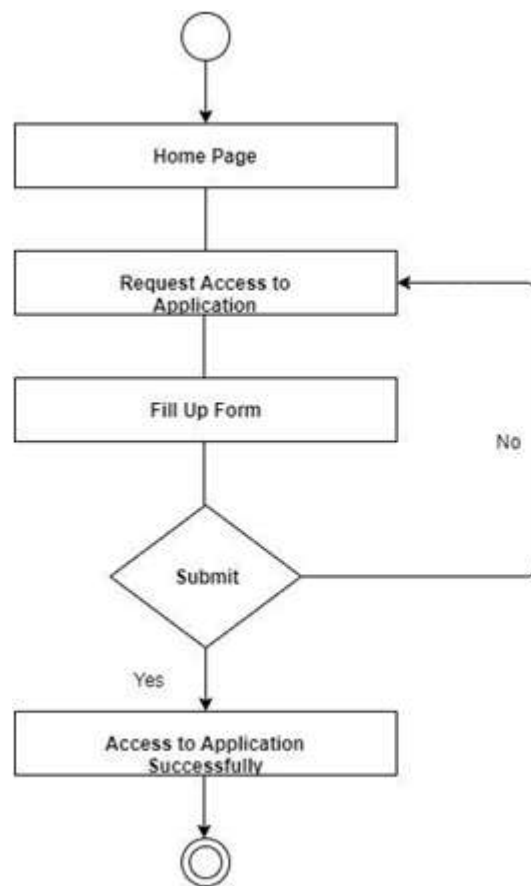


Figure 7 : Access activity to this application for both patient and doctor.

3.4.2 Appointment Activity for Patient :

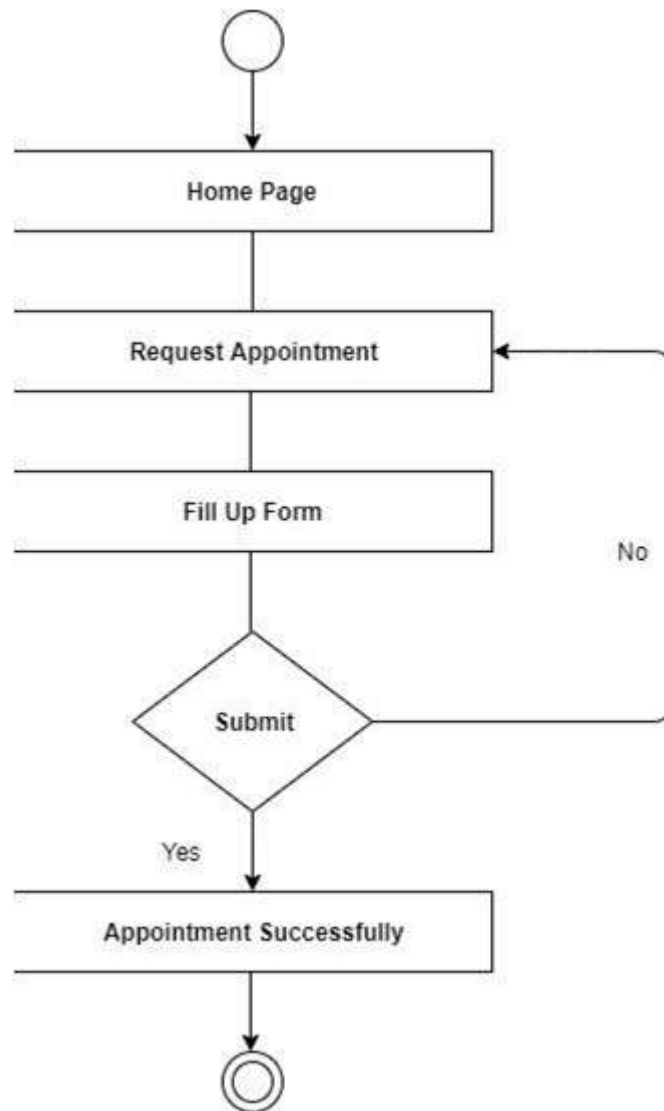


Figure 8 : Appointment activity diagram for dengue patient.

3.4.3 Searching Hospital Activity

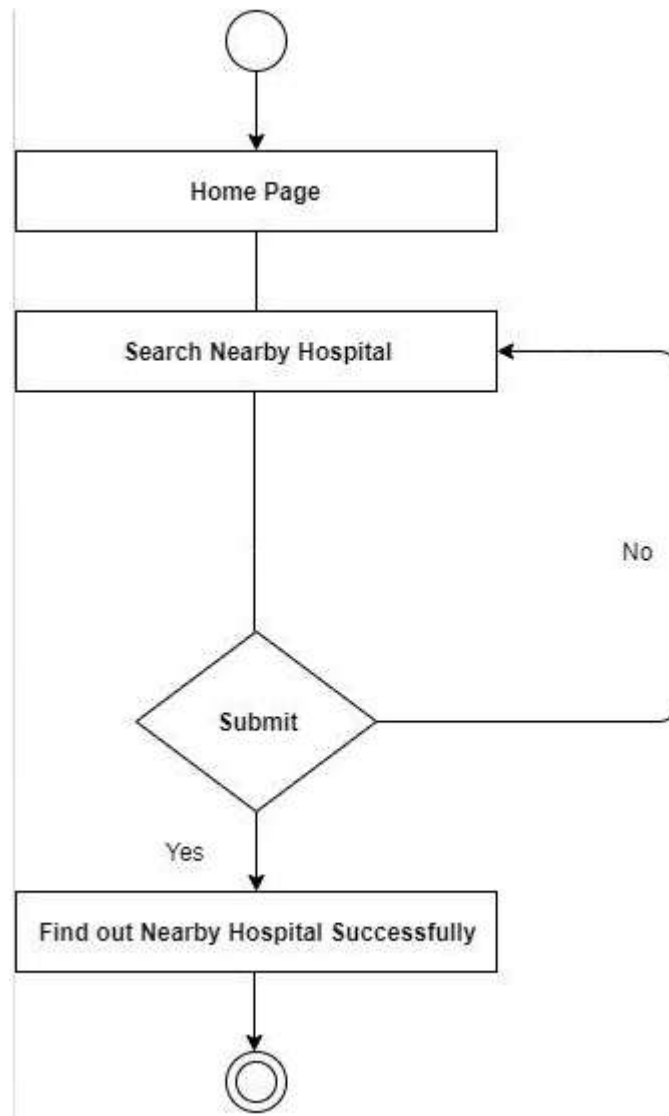


Figure 9 : Searching hospital activity diagram for dengue patient.

3.4.4 Searching Ambulance Activity :

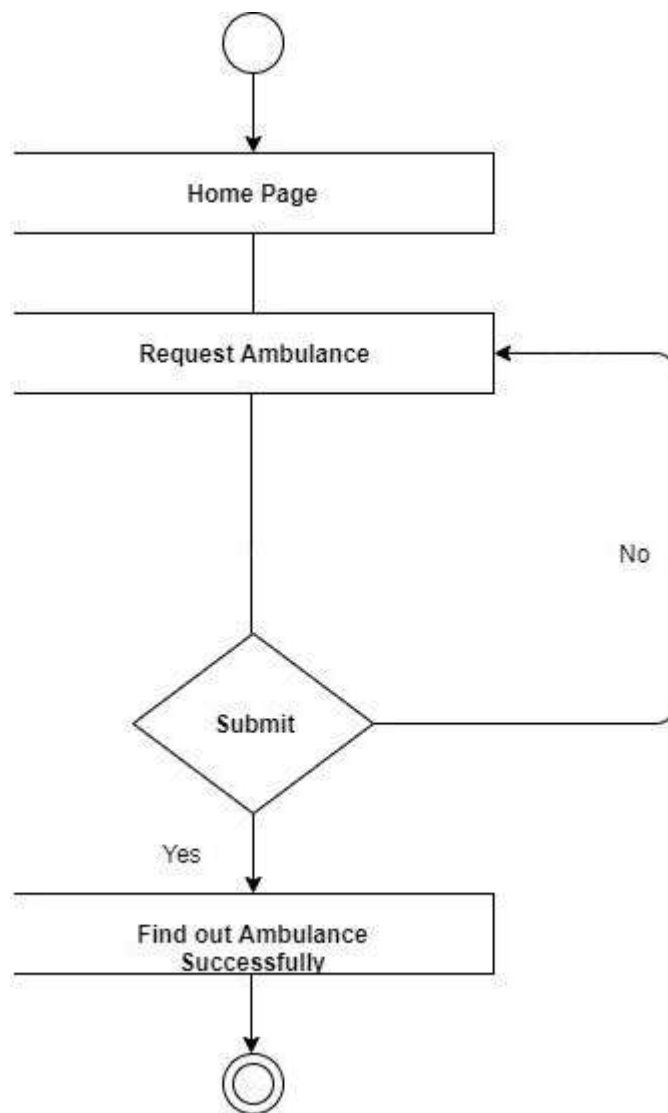


Figure 10 : Searching ambulance activity diagram for dengue patient.

3.4.5 Blood searching activity :

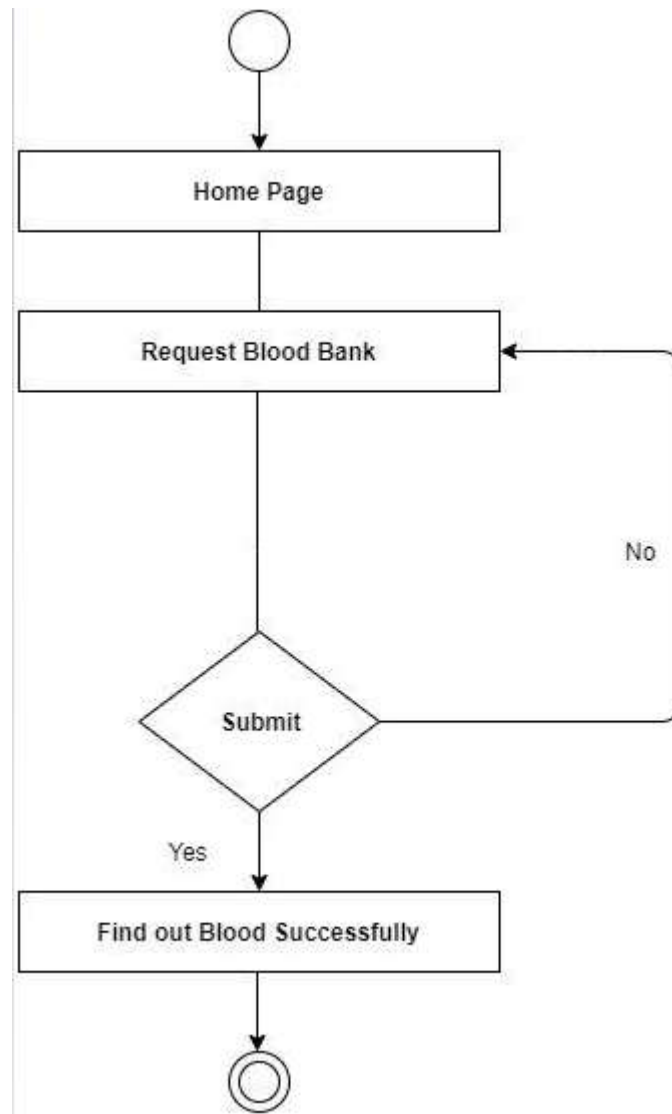


Figure 11 : Blood Searching activity diagram for dengue patient.

3.5 ER Diagram

An entity-relationship show depicts inter-related things of intrigued in a particular space of information. An ER demonstrate is composed of substance sorts and indicates connections that can exist between occasions of those substance sorts.

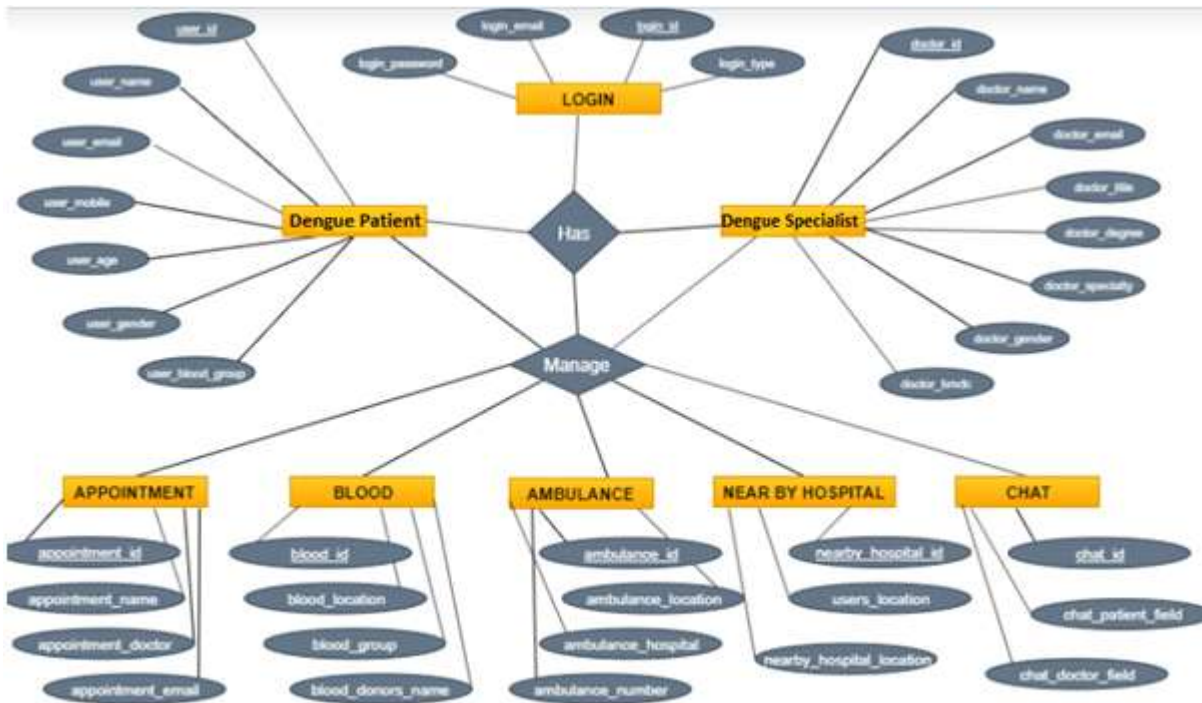


Figure 12 : ER diagram of dengue solution application .

In the figure 12, I am trying to draw a level of ER Diagram of Dengue Solution Application for my system. In Figure: 12 represent the ER Diagram of my project's system.

3.6 Logical Data Model

A logical information model or logical schema is a data model of a particular issue space communicated freely of a specific database administration item or capacity innovation but in

terms of data structures such as social tables and columns, object-oriented classes, or XML labels.

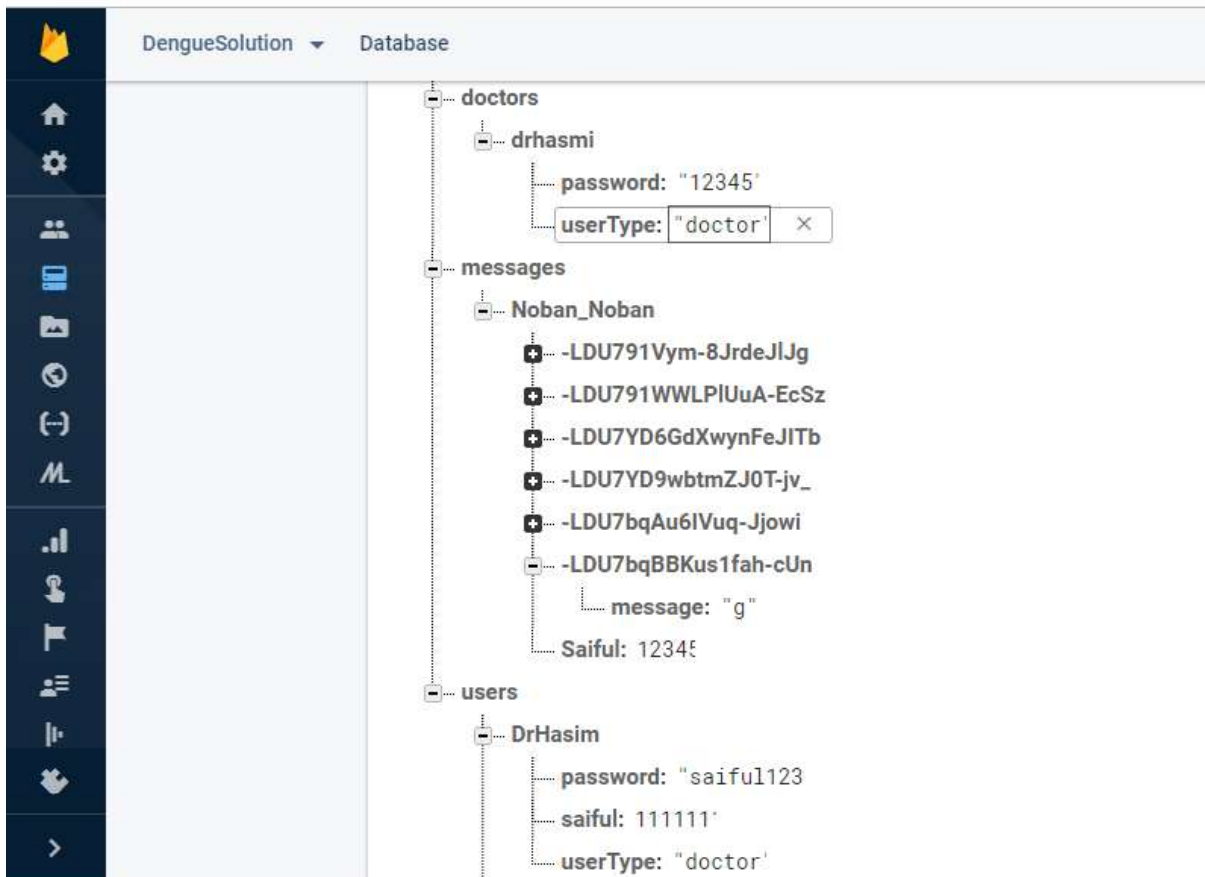


Figure 13 : Logical Data Model of the system.

As a database, I use Firebase as database server. The structure for database of my project is given in figure 13.

3.7 Design Requirements

The plan prerequisites make a gigantic distinction between my venture with the ones which are accessible in my locale. I had to analyze and recreate other ventures some time recently the beginning of my extend. I found very some missing within the available ventures at to

begin with. At that point I began to plan my extend keeping in mind that this plan must be based on understanding particular issues which is able fulfill my problem statements. I attempted my best with ardent approach to plan my venture. Making my extend Dengue Patient neighborly could be a key calculate. I too attempted my level best to implant all the things essentially interior my extend which are much required which can offer assistance the Dengue Patient to utilize my application easily.

- I have a straightforward domestic screen which is able show up when Dengue Patient will dispatch my app. This will offer assistance the Dengue Patients to urge started rapidly.
- I have outlined a few parts rather than exercises which is able boost up the begin of my application and Dengue Patient will have basic and quick get to this application.
- I have a slider in my domestic screen which summarizes the require of wellbeing care and administrations.
- To make my app light weighted I have made my app online. All the information appeared in my app are coming from genuine time firebase database.
- I have outlined fabric tabs for taking arrangements , finding and calling ambulance , looking blood banks, getting adjacent clinics , measuring heart rate , informing with specialist and critical wellbeing related post.
- I am planning a local adaptation of my application so that my benefit can reach to each people.

I am pointing to create my venture as much complex free as I will. I must disregard about the focused on Dengue Patients whereas I create my application. That's why my framework is so much Dengue Patient friendly.

CHAPTER 4

DESIGN SPECIFICATION

4.1 Front-end Design

Front conclusion planning of a framework includes plan what a Dengue Patient can see. In other meaning it is the obvious portion of a software/systems. Typically the portion what Dengue Patients see when they to begin with dispatch the particular program. Able to see it is needless to say how much critical the front conclusion plan is. It is one of the foremost critical parts in computer program improvement.. I have created my front conclusion in like manner. My graphical Dengue Patient interface is effortlessly available for the Dengue Patients. Now and then it gets to be challenging to create Dengue Patient interface considering like a Dengue Patient but being a designer. I attempted my level best for rearranging the plan of my application. I am trusting positive comes about from the Dengue Patients and I trust Dengue Patient will not have inconvenience utilizing my application. I have joined the domestic screen of my application.

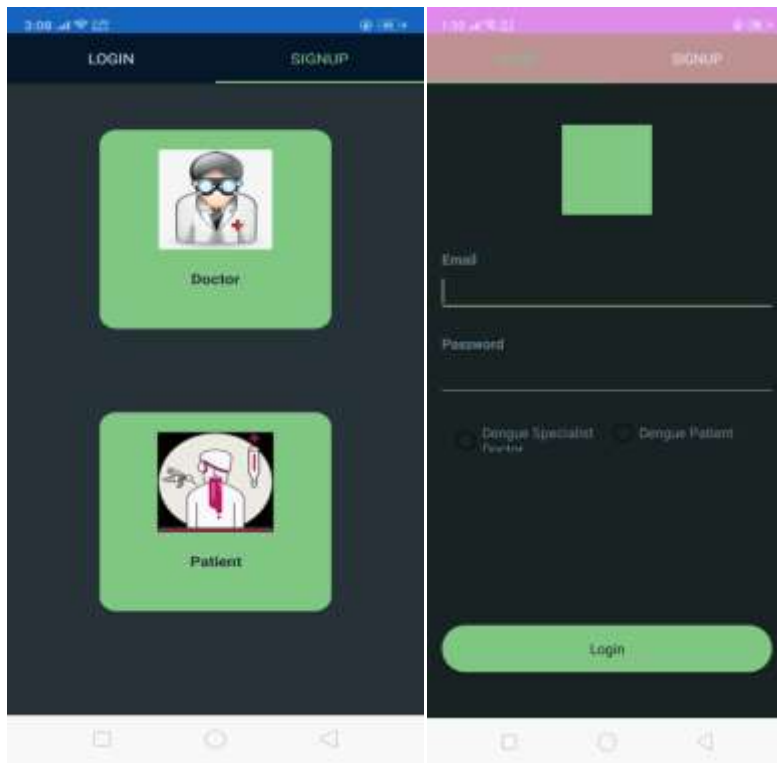


Figure 4.1.a: Figure 14 : A Screenshot of Log in and Register Page UI.

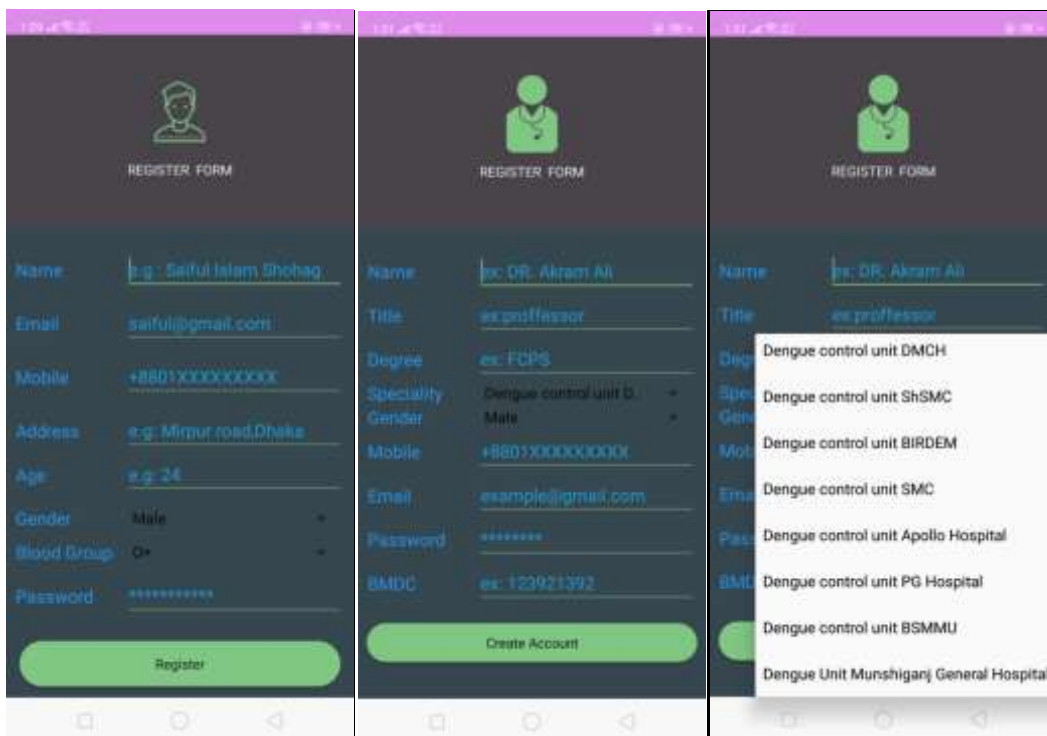


Figure 15 : A Screenshot of Registration Form.

In figure 15, it shows the registration form of Dengue Patient

In the sign up process a Dengue Solution Application can register himself as Dengue Patient or as a Dengue Specialist. It was challenging that how will I verify Dengue Specialists. Later I came to know Dengue Specialists has a unique identification number. For now administrator must verify it because I don't have the APIs of BMDC database for automatic verification. But this is not the main headache because the number of Dengue Specialists registration is less compare to Dengue Patient

The following UI shows the appointment system:

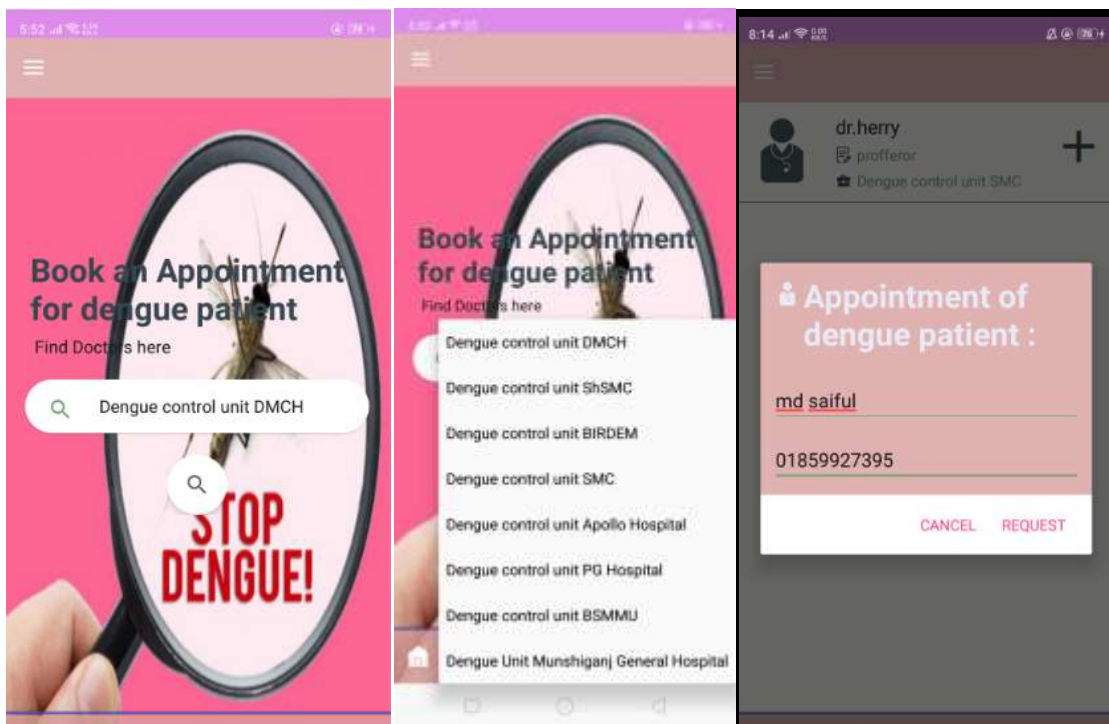


Figure 16 : A Screenshot of Taking Appointment UI.

In figure 16, it appears the beginning of arrangements procedure In this session to require an arrangement Dengue Patient needs to sort his or her issue and coordinating their content a exchange will show up with appropiet results. User can select from his or her alluring alternatives to induce into

the following step. Based on the problem type specific Dengue Specialists field will show up. Usually so critical that Dengue Patients don't ought to seek for specialist for their particular issue.

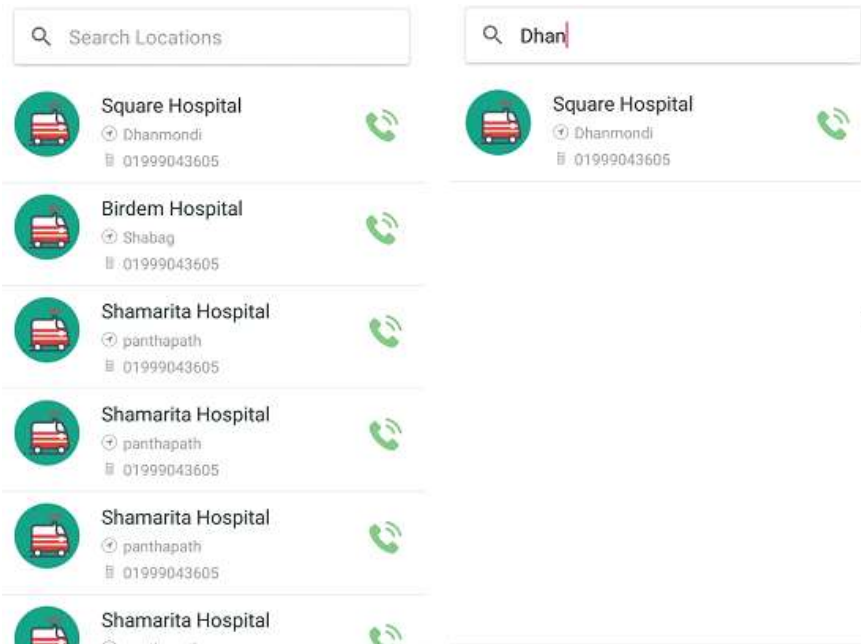


Figure 17 : A Screenshot of Ambulance Search.

In figure 17 , it appears the Dengue Patient interface of rescue vehicle search Ambulance look is another critical and much required benefit which I have put into my venture. Dengue Patient can look emergency vehicle and call rescue vehicle fair looking by particular area. Within the Dengue Patient interface. This will offer assistance the Dengue Patient to discover ambulances quickly.

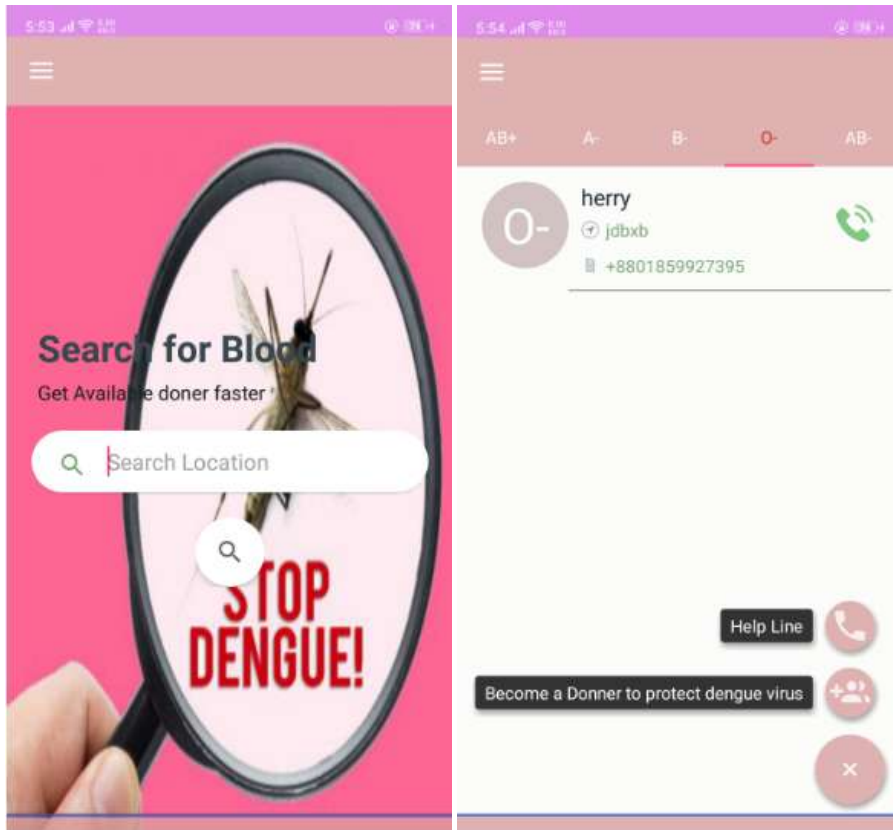


Figure 18 : A Screenshot of Blood Search in My App.

In figure 18, it appears looking of blood by gives locations In my application looking blood is so simple. I attempted my best so put a straightforward Dengue Patient confront but exceptionally successful ones. Dengue Patient can basically look the area where he or she needs blood. Based on the look, my application will returned with the particular benefactor list or that area. In expansion Dengue Patients can ended up benefactors and the method is so much simple.

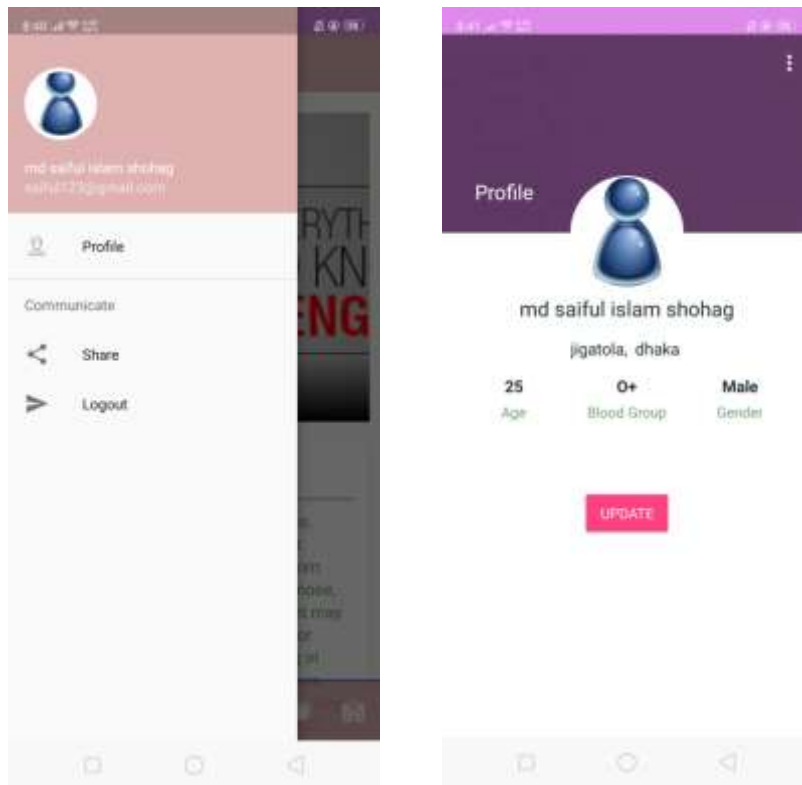


Figure 19 : A Screenshot of User Profile.

In figure 19, it appears a Dengue Patient interface of Dengue Patient profile I have outlined a really appealing Dengue Patient interface for Dengue Patient profile. Each Dengue Patients will have their particular Dengue Patient profile. It'll be simple for them to explore between the choices of my application. Dengue Patients can overhaul their profile also.

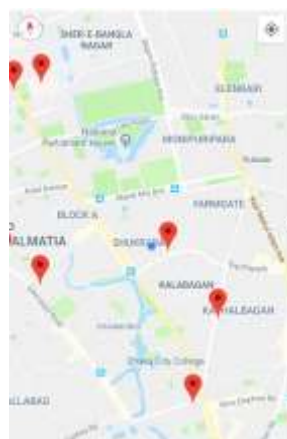


Figure 20 : A Screenshot of Near By Hospitals.

In figure 20, it appears a Dengue Patient interface of adjacent clinics. If any Dengue Patient must discover the nearby hospitals he or she ought to tap onto the clinic tab from the domestic screen of my app. This process is additionally so basic and Dengue Patient will confront no complexity at all. A Dengue Patient has to be permitted the GPS. Inside seconds my app will appear the current area of the Dengue Patient and the closest healing centers from the area of the user.

4.2 Back-end Design

Back conclusion plan is as much imperative as the front conclusion plan. The front conclusion plan is futile without the back conclusion plan. Another well-known title of back conclusion plan is server side plan. The back conclusion plans essentially indicate server location information upgrades, changes and upkeep. It has fundamentally three parts to begin with one is the server moment one is the application and the third one may be a database. All of these work together to back a system's front conclusion. Backend plan is the dark box part that a Dengue Patient can't see the method unless an engineer gives a Dengue Patient a few flags. The obligation of backend plan is on the engineers, software engineers or designers. Back conclusion designers primarily work with the security, structures and the administrations of a framework. There are few contrasts between web site and android within the back-end plan viewpoint. The components and the properties of web gadgets are not constrained. It is so much accommodating for a web based app since the app gets to be so light weighted, for case its database back of MySQL, CSS and HTML bolster. Android has its built in database as well which is called SQLite. But this is often not a great approach for creating an app like Wellbeing Right hand which works with energetic information. My app has got to be light weighted since of so numerous highlights at once. SQLite isn't an energetic database too. In this respect the as it were choice that I may see as

the utilizing MySQL which needs a individual nearby or live server as well. But I had another choice and it's demonstrated to be the finest alternative for my application. That's the FCM- Firebase Cloud Informing. Firebase takes after the no SQL structure. It has no tables like MySQL. Instep it employments a child parent relationship and shapes its information straightforwardly in json arrange. Besides it has boost up genuine time database bolster. I have utilized firebase as the back conclusion of my application. The server of firebase is fueled by Google

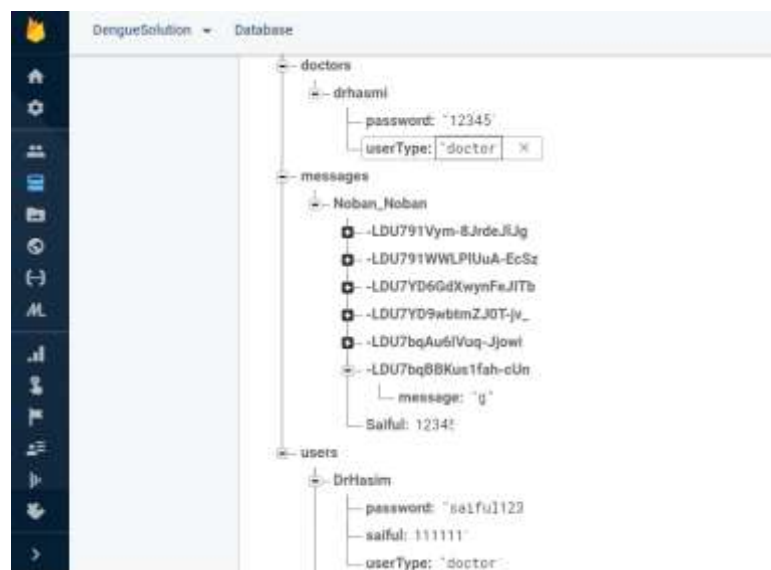


Figure 21 : A Screenshot of Firebase Tree.

In figure 21, it appears firebase tree that has been utilized in my application. I have a firebase tree which bolsters the back conclusion of my application. I have been collecting these information from bona fide smyces on my application all of these information are parsed within the particular areas. In my firebase tree I have a json cluster named "data". Usually the parent hub of my firebase and it has children naming like my tabs within the apps front conclusion. All the children has their child node as well. I do any sort of adjustment so effectively. The finest portion of utilizing firebase is I don't require extra php scripts for

parsing information. On the off chance that a Dengue Patient need to see information he or she will straightforward must dispatch the application with web associations, Firebase has offline highlights as well. Stacked information can be spared for offline uses.

4.3 Interaction Design and UX

For creating a framework a much required component is Interaction Plan inside the monster umbrella of Dengue Patient Involvement (UX) plan. Interaction plan may be a strategy which works with the teach that analyzes the intelligent among framework, Dengue Patient interface and Dengue Patient encounter plan. Interaction plan is particularly a teach which looks at the interaction between a framework and its Dengue Patient through an interface and Dengue Patient involvement (UX) plan is the method of making items that give significant and by and by important encounters .In my application there are a part of interaction between the Dengue Patient and the application. As like for taking arrangement Dengue Patient has got to give a few information which director will record. For finding blood banks Dengue Patient will utilize the look box in my application. For looking ambulances Dengue Patient will too associated with my application, a few highlights can connected with the Dengue Patient and application. And another astonishing Dengue Patient interaction is when a Dengue Patient endeavors to decide the heart rate utilizing the camera off the gadget. I have given the moment most elevated need to the Dengue Patient involvement for planning basic design components which come about into straightforward, simple and quick application. I have utilized all accessible most recent capacities, modules to guarantee the finest Dengue Patient encounter. In an android application including more highlights as regular is challenging since each feature/service requires partitioned exercises which might moderate down my application. In this respect I have utilized parts to keep all the highlights / administrations in a single action. This has boosted up the effortlessness of my application so Dengue Patient involvement as well.

4.4 Implementation Requirements

For executing my extend I have utilized distinctive apparatuses and these devices made a difference us to create my application effectively. In this portion of Execution necessities I'll

grow the profound data around how I have utilized the apparatuses and components to create my android application and made it straightforward usable to the Dengue Patient.

Android Studio

Android Studio is the official coordinates advancement environment (IDE) for Google's Android operating framework, built on JetBrains IntelliJ IDEA software and planned particularly for Android improvement. There are a parcel of highlights of android studio as like that Gradle based construct bolster, Android-specific refactoring and speedy fixes, Build up devices to capture execution, ease of use, adaptation compatibility and other issues, App-signing capabilities, Template-based wizards to make common Android plans and components, Android Virtual Gadget (Emulator) to run and investigate apps within the Android studio. The most excellent include of android is supporting a number of programming dialects. All these reason I utilize the Android Studio as my application coordinates advancement environment (IDE).

Basic Android Overview

Android is the working framework that encompasses a key highlight of mobility. It was created by Andrew Rubin. The most reason of android is as well expend less control whereas run software so that the versatility calculate comes and it can be introduced within the versatile phone. It employments Linux bit. My application comprise of XML (Extensible markup dialect) records where I have outlined the front conclusion of my application and I type in the codes in java records. All the plan and coding are combined into an android app. Since of the systems of android it has gotten to be conceivable . Android is the open smyce stage which gives the engineer an autonomous advancement environment. And to create android studio is an astonishing stage. It underpins java, C++ and Kotlin for coding.

4.4.2 The Emulator

Emulator alludes to the AVD (Android virtual gadget) which is really the screen where the yield result is appeared as a figure of an app. In android studio there's a part of varieties for emulators. Genuine gadgets can too be utilized as emulator for testing apps. I have tested my app within the genuine gadgets so that able to see closely on the off chance that there's any bugs in my application. To utilize genuine gadgets as emulator, developer's alternative must be empowered and phone must be associated to pc with USB or through WIF.

4.4.3 Android SDK

Android studio has got to has the SDK which alludes to the Program improvement kit.SDK incorporates diverse advancement devices for distinctive API level. SDK contains many composite functionalities. It could be a must required apparatus for beginning advancement of an android application. As I am creating an android application it is needless to say that I have too utilized android studio so as SDK. This is often so essential. SDK too works with JDK within the foundation. In the event that one needs to run android studio he or she must need to introduce JDK to begin with. JDK alludes to java improvement pack. The concept of SDK too came from JDK. As my code runs in java JDK must be introduced too.

4.4.4 Firebase Console

I have utilized firebase which is fueled by google as the information chief for creating my application. Information is put away as parent child combination in a JSON arrange specifically. Firebase may be a quickest genuine time database. The information which Dengue Patients see by collaboration to my application is really the parsing result of this information which is put away within the firebase. Firebase is super dynamic cloud capacity

stage. Another primary figure is I did not got to run any for circle for getting a list of information, this method spares memory within the run time. Firebase also bolsters genuine time notices and information messages. In my application Dengue Patient can get moreover these information by being associated to the web at a really moo fetched since I as it were kept content within the firebase.

CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Implementation of Database

The execution stage Database is the put where software engineers DBMS (Database Administration Framework). It is introduced based on the equipment of the framework, optimized database so that the framework can run easily conjointly stack information as soon as conceivable. Within the starting state unused information can be put away straightforwardly or designer can purport existing information from DBMS. Building up database security can be done by the engineers.

5.1.1 Database Design

I have utilized firebase as the information chief for putting away information which is able bolster the back conclusion of my android application. Typically the most recent database innovation for android stage. My application hold a parcel of enlightening information and all are dynamic. My application is all around data based. The firebase is one of the foremost vital portion in my application. Let us see a few of the key highlights of firebase underneath.

Support for most Firebase features:

- It is the genuine time database which replaces GCM(Google cloud messaging) .
- It underpins facilitating .
- Firebase gives their verification framework .
- In expansion of the database it gives additional capacity facility .
- Firebase bolsters cloud messaging .

- It can create crash reports.
- It gives genuine time notices to the target devices .
- I can trade purport information which are designed like JSON , CSV.

5.1.2 Storing Process of Data

In my application I have to be handle parcel of energetic enlightening information. I have five or six information child beneath the parent database. These Childs are emergency vehicle list, blood bank, recorded information of arrangements, put away information of the users or Dengue Patients Dengue Specialists, wellbeing care information and others. Just by tapping to the tabs being on the domestic screen of my application Dengue Patient can see these energetic information. They fair require web association for stacking these information straightforwardly from the cloud.

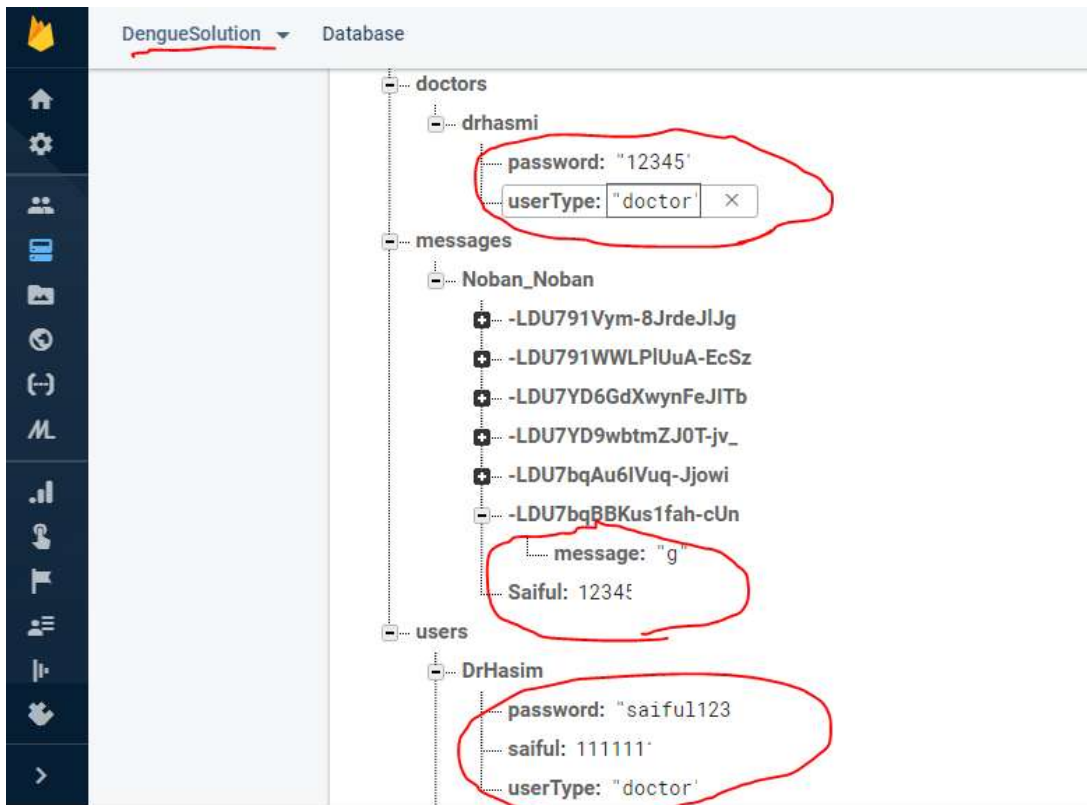


Figure 22 : A Screenshot of data tree of appointments.

5.2 Implementation of Front-end Design

It is my obligation to plan the front of a framework which can be blunder free. Being engineers it was challenge for us to create an viable framework. I must not think approximately the devices that I utilize but I ought to think almost all the gadgets so I don't have to be stress that on the off chance that my application will run on other shrewd phones or not. There are thousands of branded and non-branded shrewd phones and each of them have diverse screen sizes, distinctive execution designs. So it was a colossal challenge to require care of the screen measurement of my application that will fit into any android gadgets. For successful employments I make beyond any doubt my plan is straightforward at the same time flawless. Numerous of the times mobiles with moo determination cannot render the formats rapidly. Some of the time the phones having less slam space too got hang rendering the XML files. Here I confronted my to begin with challenge for making

reasonable XML records. I as of now had taken a challenge by choosing that I'll not utilize numerous exercises since I know each movement produces relate formats which can result in memory licking, increments estimate and produces destitute Dengue Patient encounter. I too had to think around the quality affirmation of diverse gadgets. At long last I made my application which is congruous with each gadgets. I did not inquire for additional runtime consent too. Firebase does not require any run time authorizations. My application is so light weighted and there's so less chance that my application will cause a dead bolt circumstance within the phone. My application takes exceptionally moo smash space and hence it'll not influence other foundation and frontal area prepare to be in a dead lock circumstance. The basic and easy front conclusion plan of my app makes it happen. Indeed the firebase server is so quick. To enter into my application a Dengue Patient must be enlisted ones. For this action I too have actualized different see which can be gotten to being on single action. Here I have as it were two tabs and the plan is so straightforward. Dengue Patients can enroll themselves as specialists or understanding.

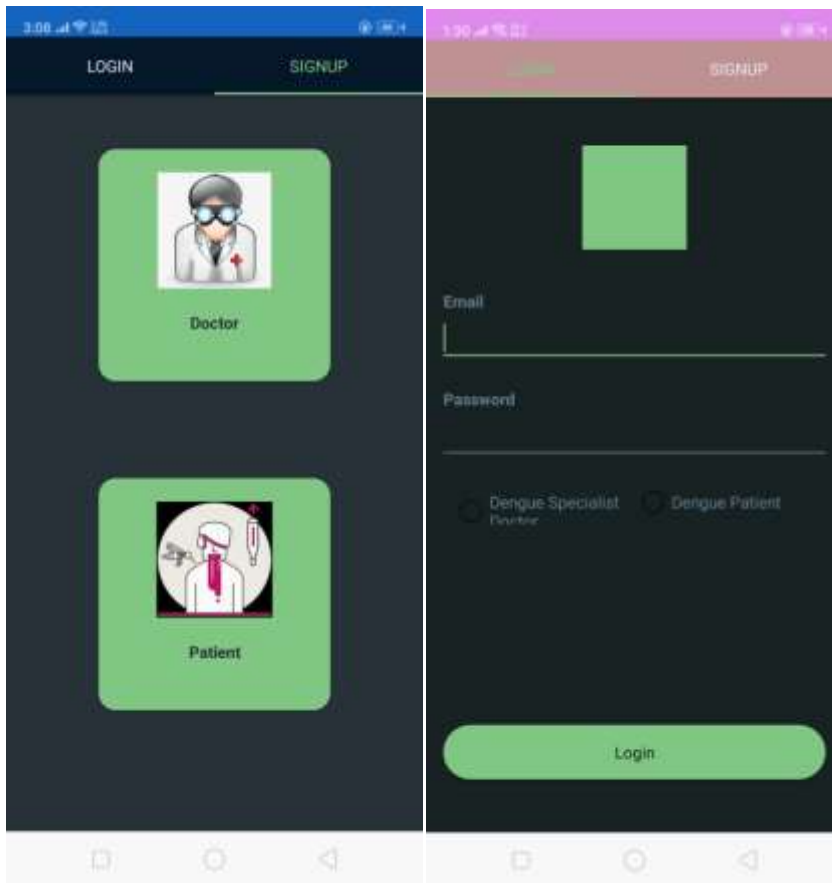


Figure 23 : A Screenshot of Login/Register Fragment Activity.

Once a Dengue Solution Application is logged in he or she will have access to the full system being on a single activity. Here I have an action bar to the top the screen. A navigation button is attached inside the action bar. I have a bottom tab layout, from here Dengue Solution Application can switch between any views he or she wants. In the tab layout I have seven tabs, such as home, appointment, ambulance, blood drop, heart rate, and hospitals.

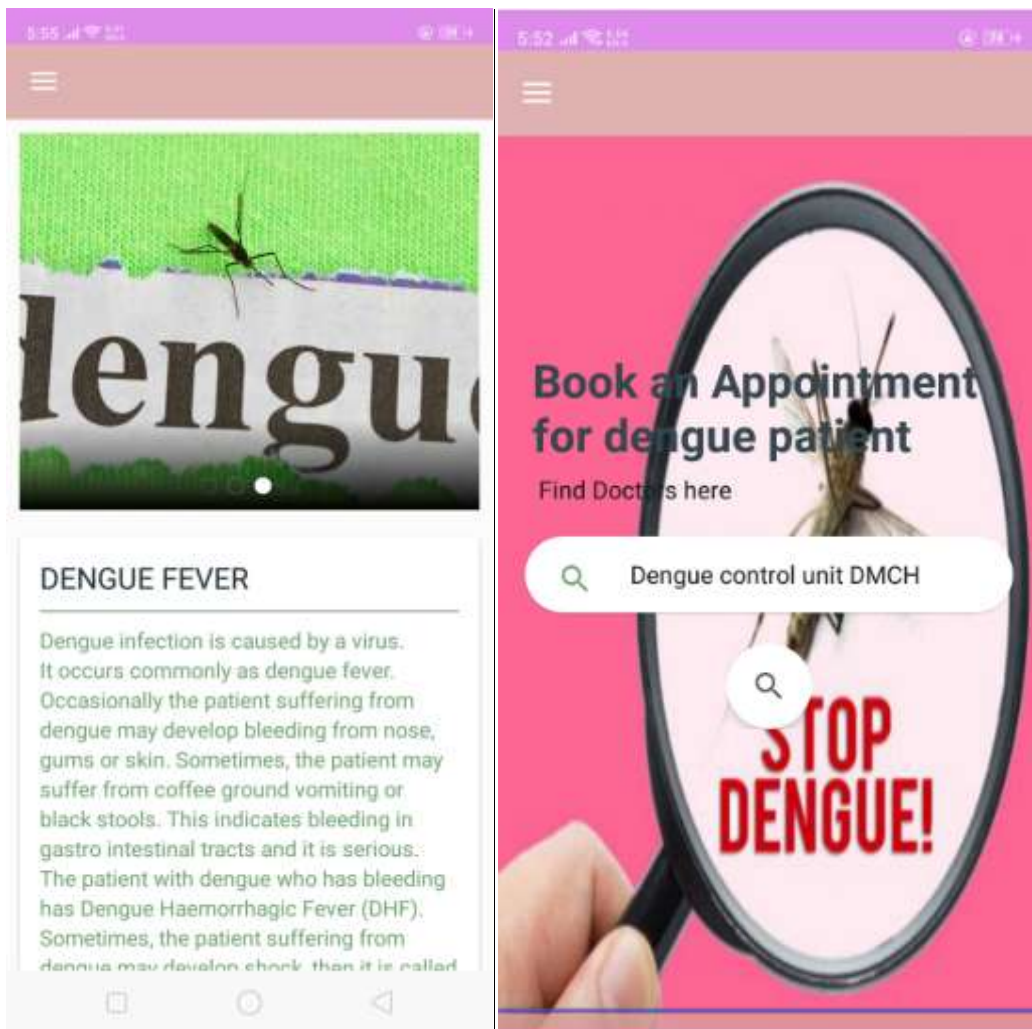


Figure 24 : A Screenshot of Home fragment and Appointment Fragment.

In figure 24, it shows the home fragment view and appointment fragment.

Within the arrangement segment I have too included auto complete content see for zero blunder arrangement accommodation. Based on the issue segment particular specialists list will show up.

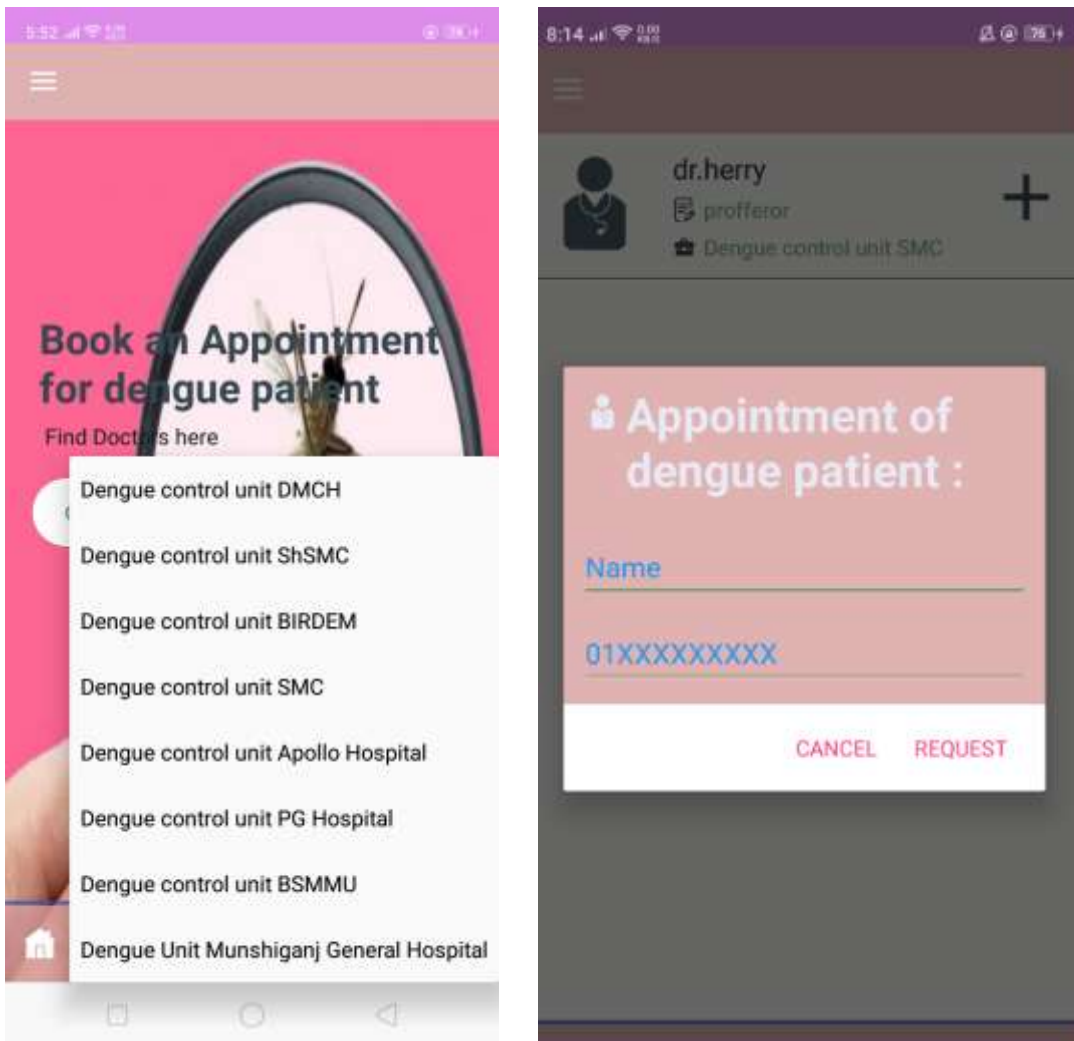


Figure 25 : A Screenshot of Auto complete text view and Dengue Specialist search result.

In figure 25, it shows the Auto complete text view design and return result of specific Dengue Specialist.

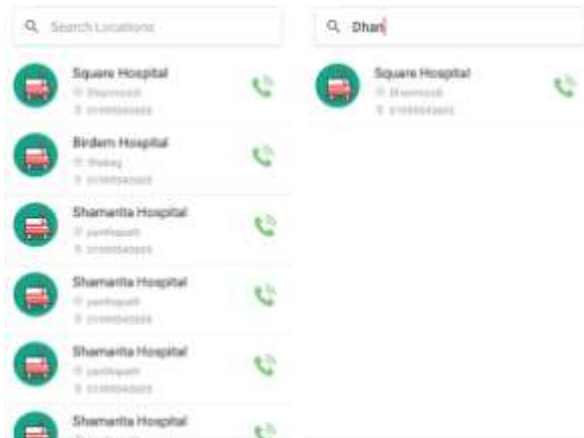


Figure 26 : A Screenshot of Ambulance List View.

For getting into the blood bank a Dengue Solution Application needs to tap onto the blood icon. No application in my region has used this type of layouts for blood banks. I have put another set of fragment inside my activity. User will have so comfort to find blood. In addition I have put a floating action button which is a shortcut to call helpline and to become a donor while Dengue Solution Application will search for blood.

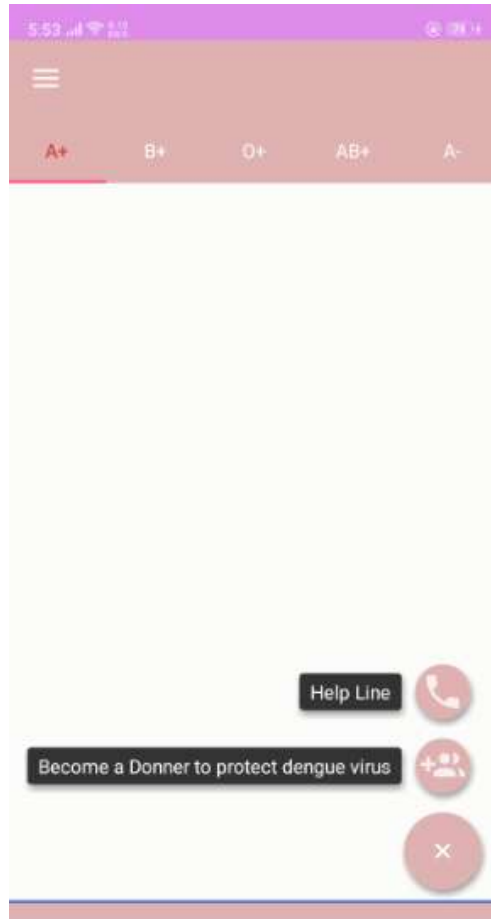


Figure 27 : A Screenshot of Blood Donors List.

In figure 27, it shows the blood bank fragment with the list of blood donors.

I have executed an astounding Dengue Patient profile screen. The Dengue Patient profile screen will show up to begin with interior the route drawer. Here Dengue Patients will have a few choices like sharing the app with others. Dengue Patient can log out from the application. Dengue Patient can too broadly see his or her profile and overhaul. Circular sees are utilized to appear Dengue Patients avatar. Profile screen is scrollable with collapse toolbar. To the Dengue Patient this can be super basic and appealing.

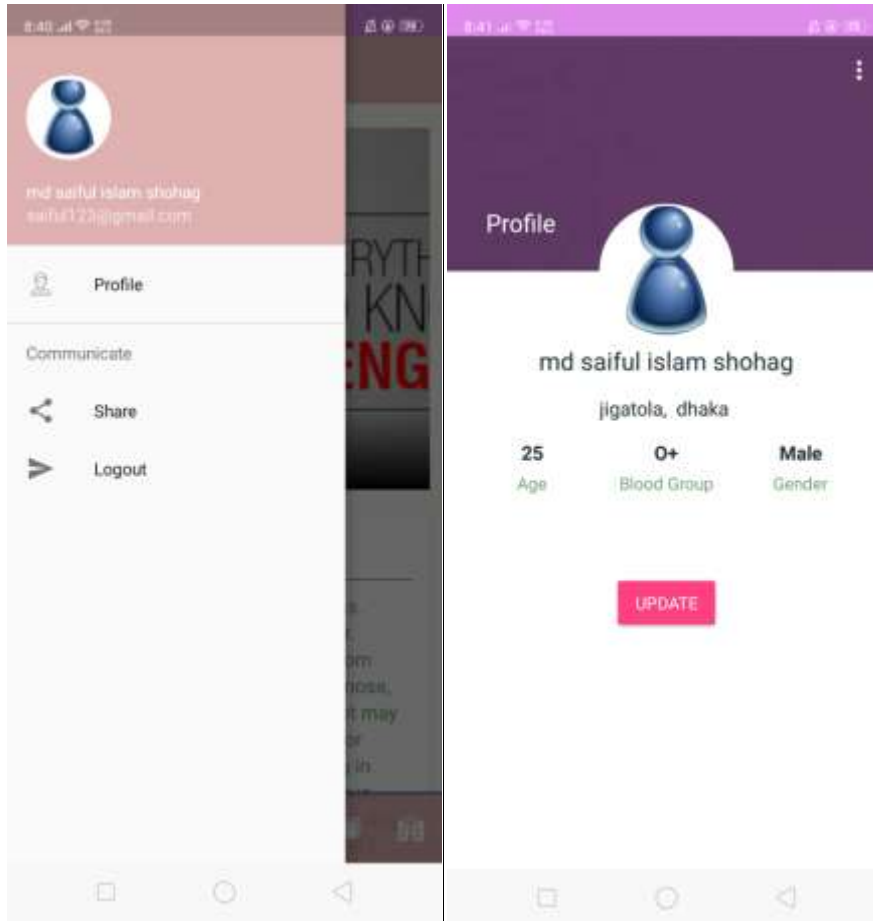


Figure 28 : A Screenshot of User Profile Screens

In figure 28, it shows the blood bank fragment with the list of blood donors.

For looking adjacent clinics which could be a key include of my application Dengue Patient got to tap onto the clinic symbol. All the adjacent healing centers will be checked with symbol. This format is called the google maps format. I have put google maps format in relate with google maps part. Finally I have another two straightforward but alluring formats which are given underneath from right.

5.3 Implementation of Java

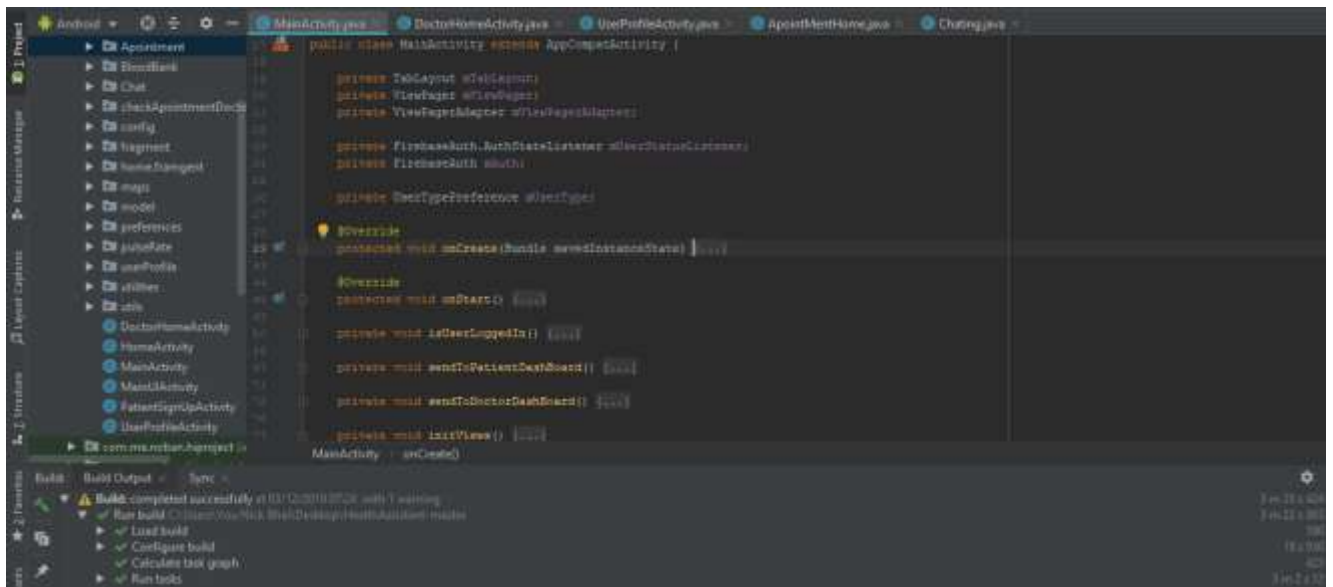


Figure 29 : A Screenshot of Java Code.

In figure 29, it shows screenshot of Java Code.

ALL XML Code :

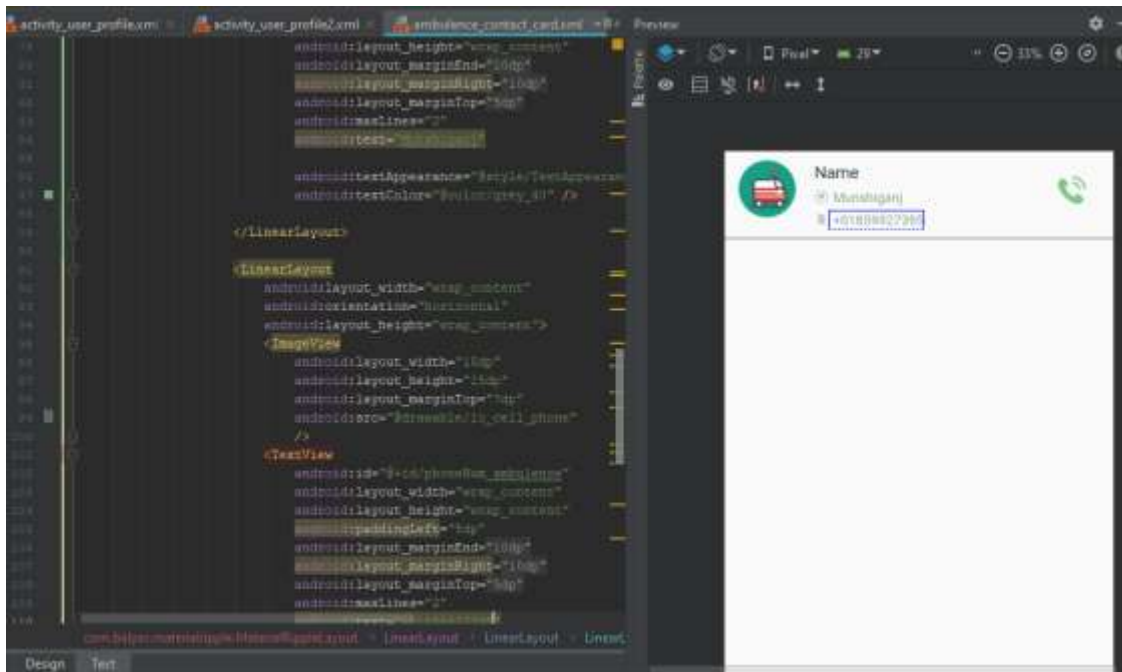


Figure 30(a) : A Screenshot of XML Code.

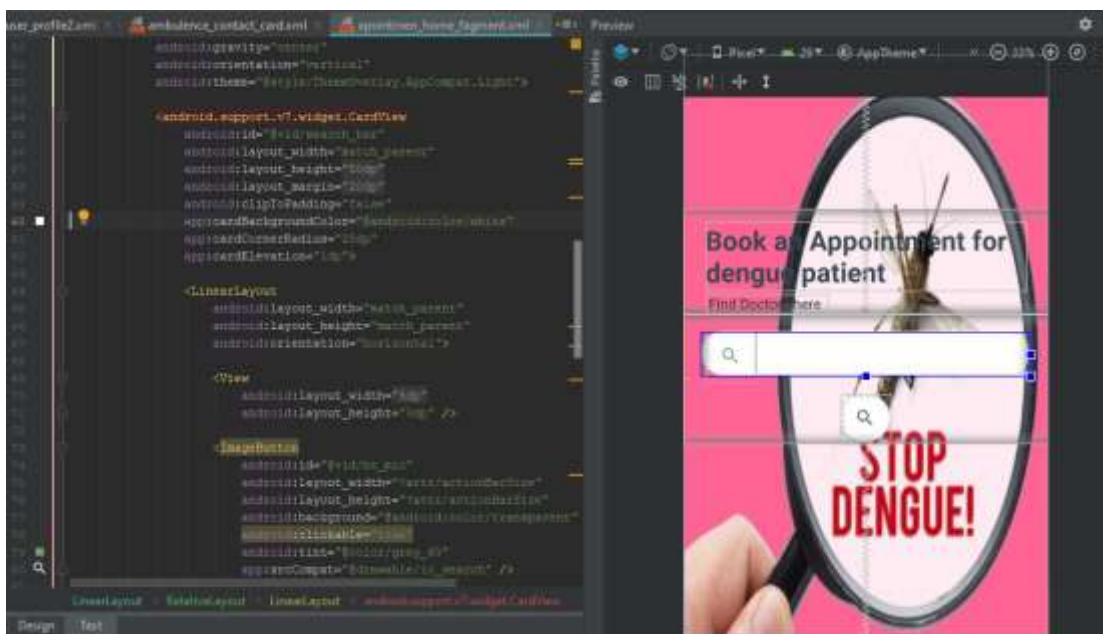


Figure 31 : A Screenshot of XML Code.

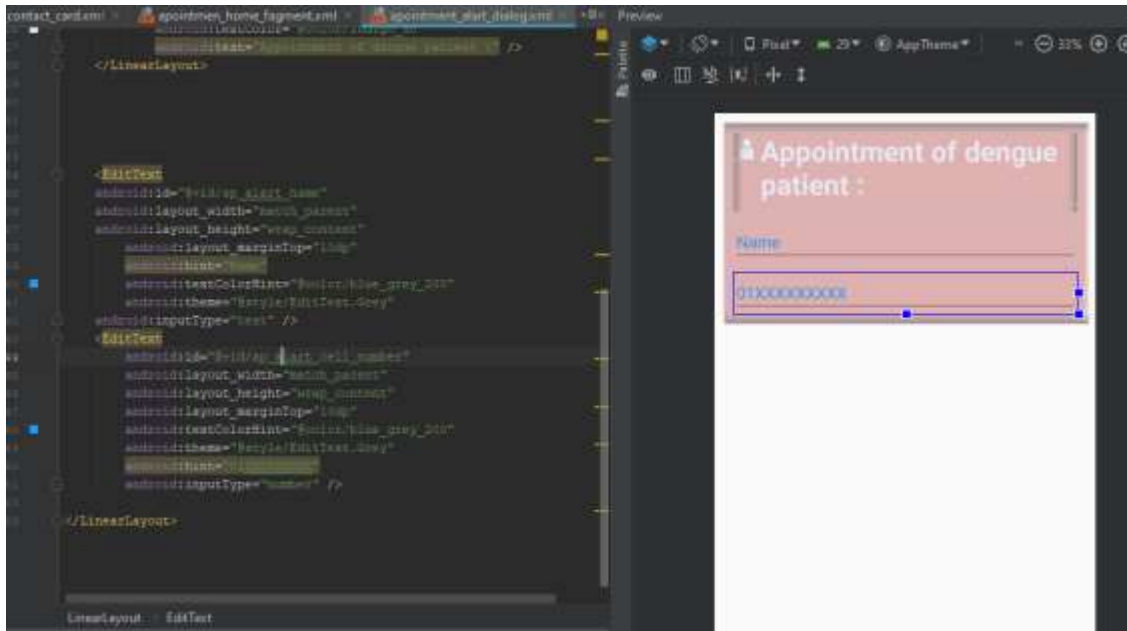


Figure 32 : A Screenshot of XML Code.

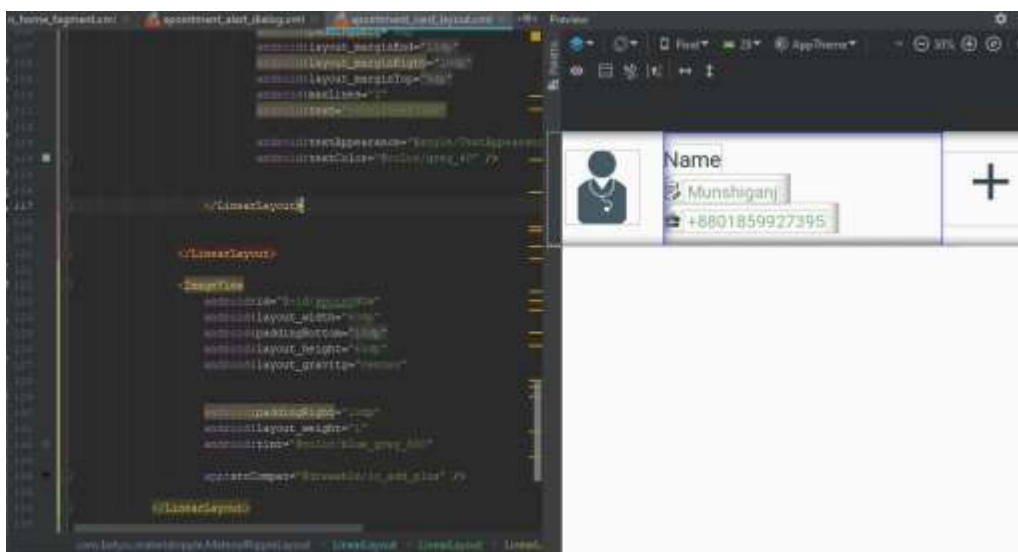


Figure 33 : A Screenshot of XML Code.

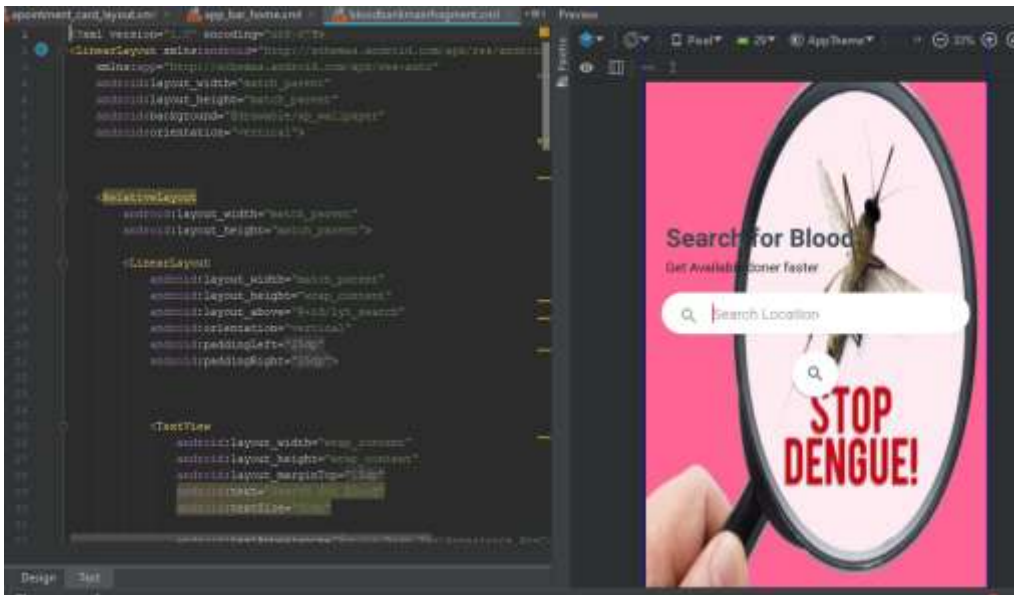


Figure 34: A Screenshot of XML Code.

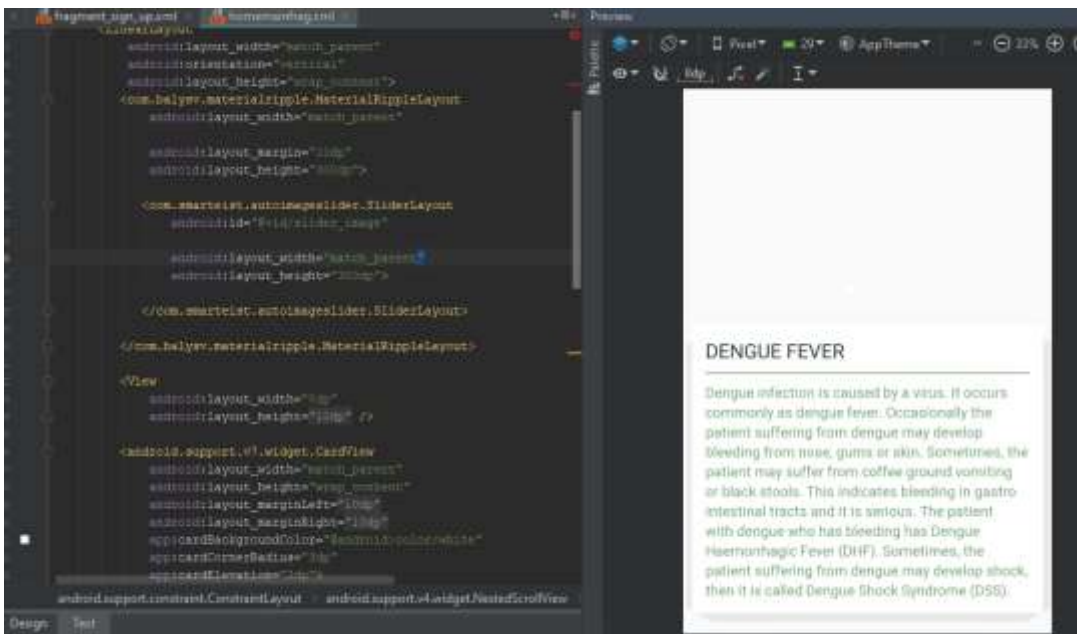


Figure 35 : A Screenshot of XML Code.

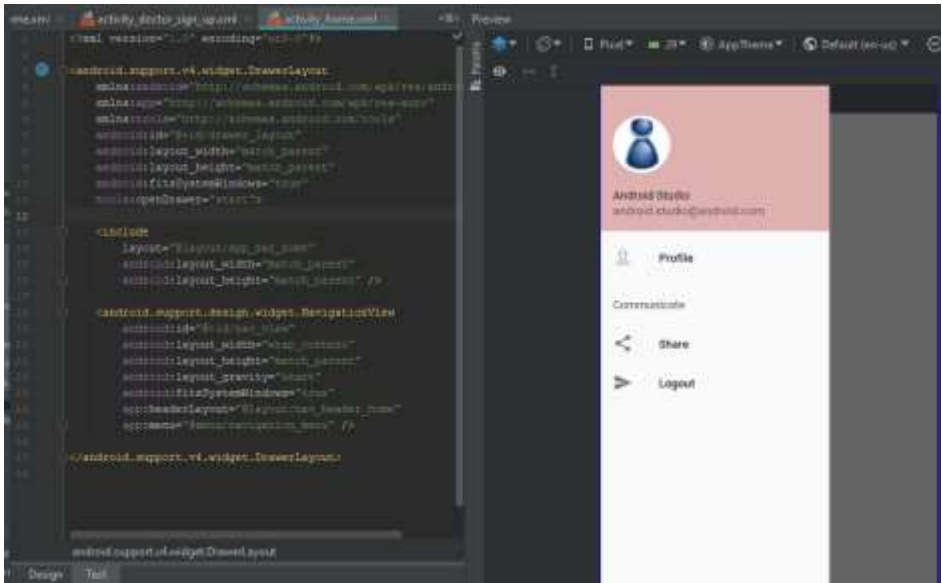


Figure 36 : A Screenshot of XML Code.

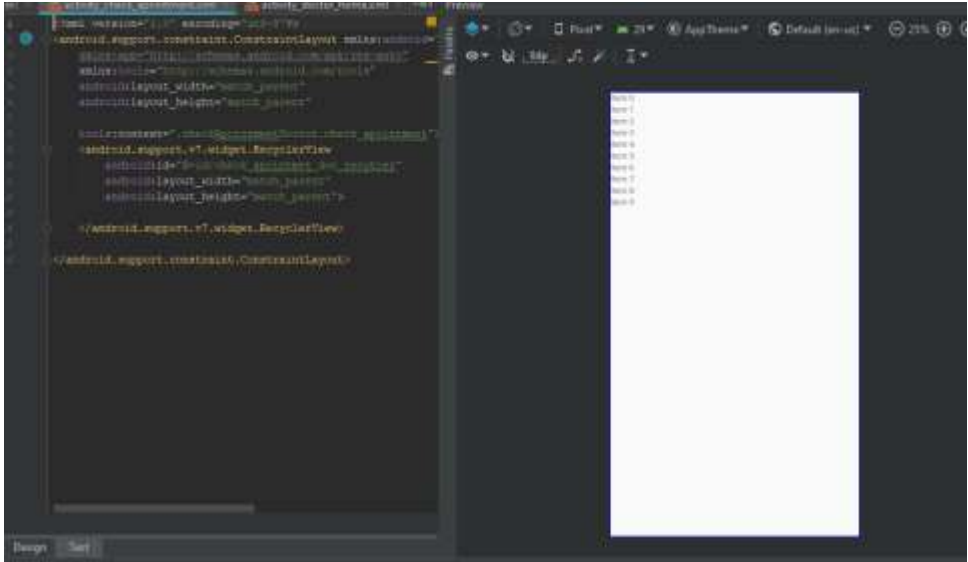


Figure 37 : A Screenshot of XML Code.

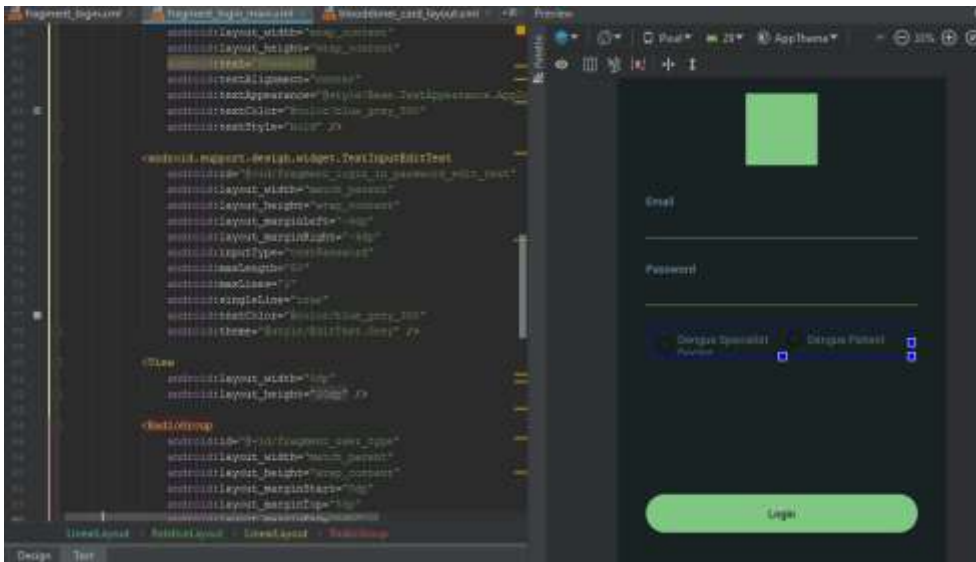


Figure 38 : A Screenshot of XML Code.

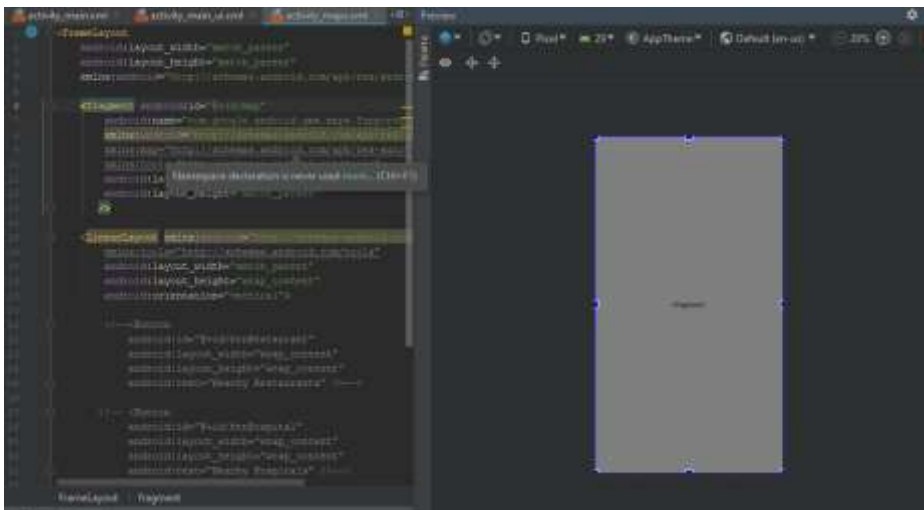


Figure 39 : A Screenshot of XML Code.

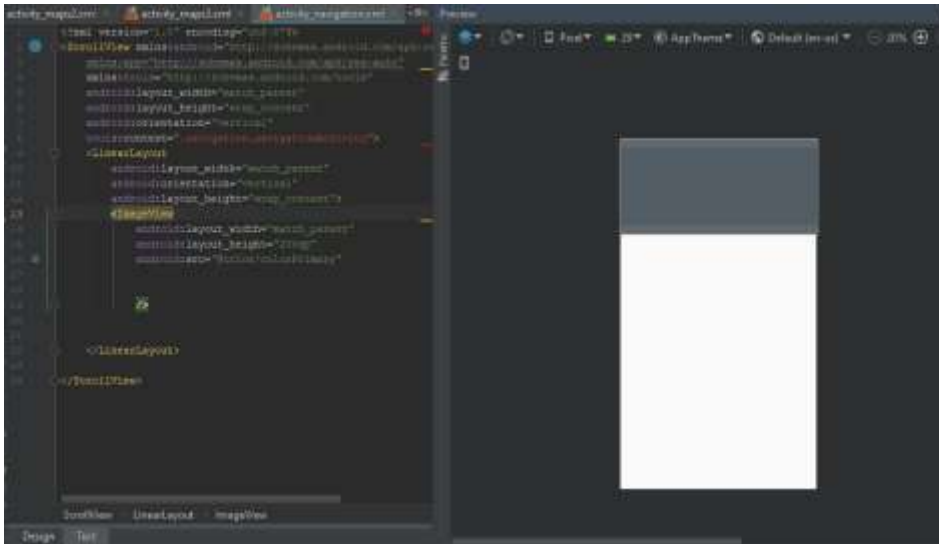


Figure 40 : A Screenshot of XML Code.

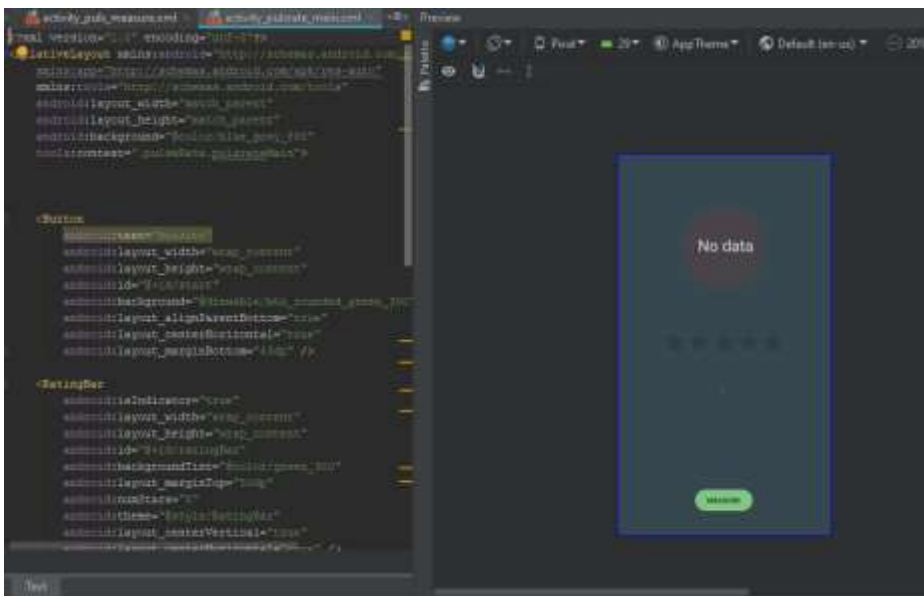


Figure 5.3.2(I): Figure 41 : A Screenshot of XML Code.

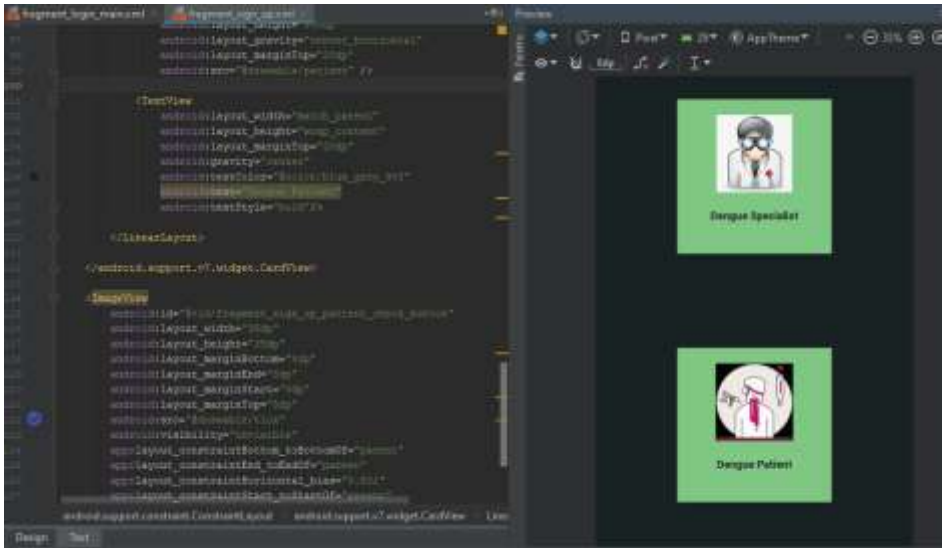


Figure 42 : A Screenshot of XML Code.

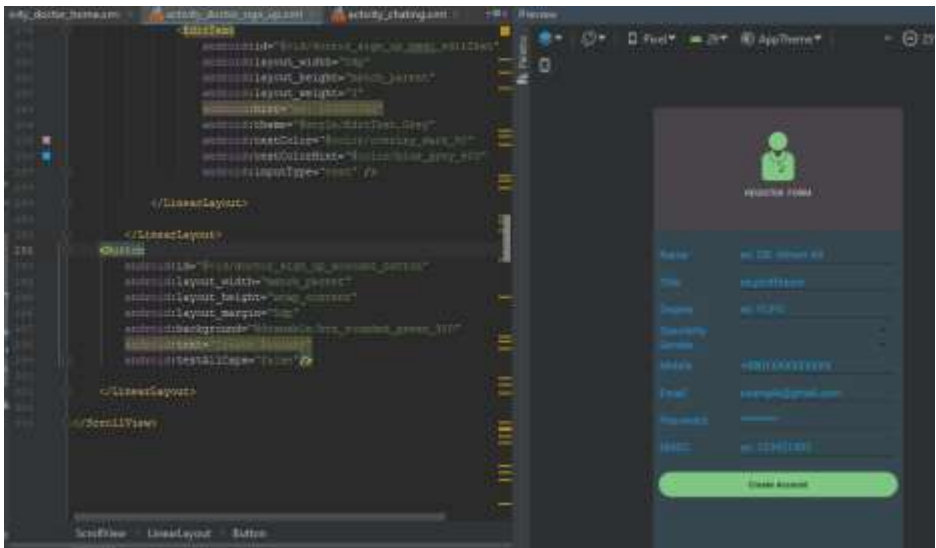


Figure 43 : A Screenshot of XML Code.

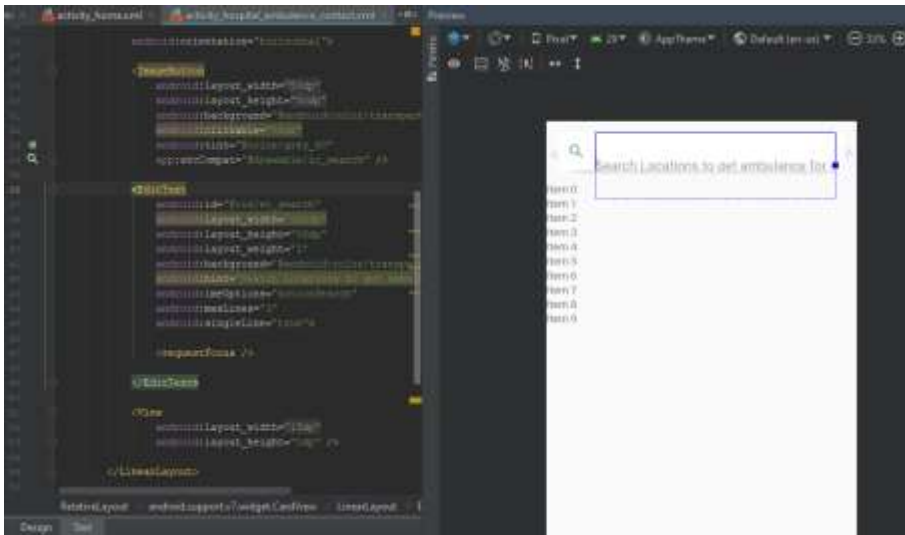


Figure 44 : A Screenshot of XML Code.

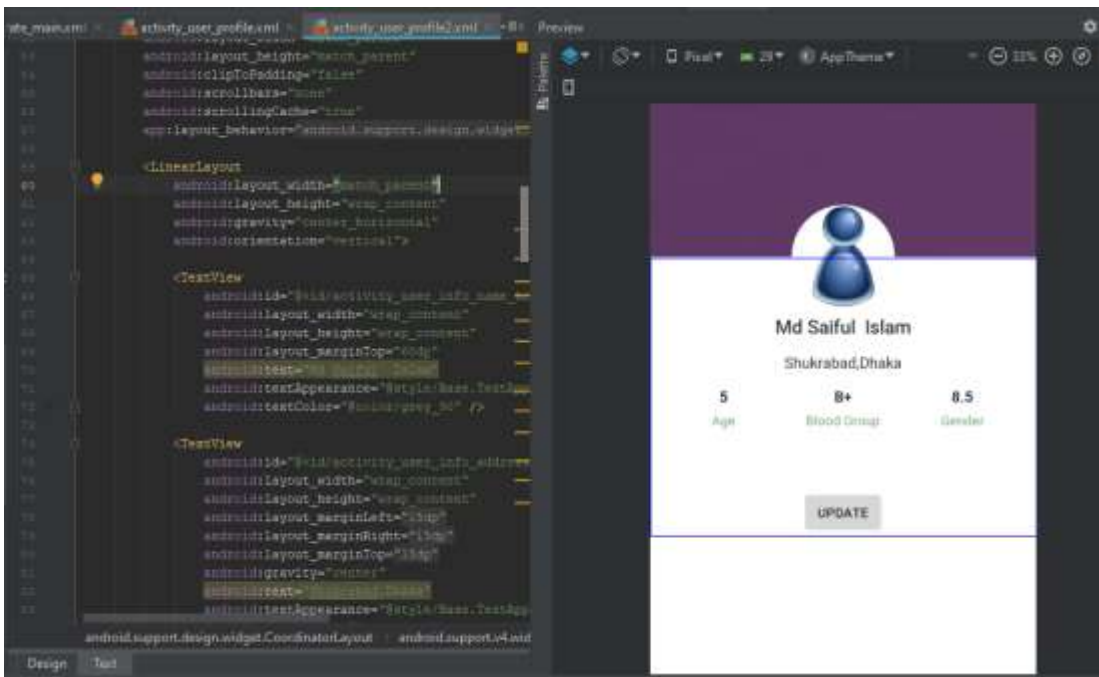


Figure 45 : A Screenshot of XML Code.

I android studio a at whatever point I make unused ventures, a bundle is deliver. In this bundle a MainActivity. Java record shows up by its possess. It has an relate format as well called acitivity_main.xml both work together for the default Hi World app. I have embedded my wanted java classes, parts, exercises, format etc. to fulfill the prerequisites of my app. Java backed firebase classes made a difference us to parse information from firebase comfort.

5.4 Testing Implementation

Test Case	Test Input	Expected Output	Actual Output	Result	Tested On
1. Install Application	Tested on various Android version - <ul style="list-style-type: none"> • Jelly Bean(4.1-4.3.1) • Kit Kat(4.4- 4.4.4) • Lollipop (5.5-5.0.2) • Marshmallow(6.0) • Nougat(7.0-7.1) 	Successfully installed in all versions	Installed successfully	Passed	30/10/2019
2. Loading Data	Navigate through the views to load data from firebase	All Data are loaded	Loaded data Successfully	passed	30/10/2019
3. Loading nearby hospitals	Tap onto the hospitals icon	Google map loaded successfully with nearby hospital marked	Nearby hospitals are visible with device location	passed	

Table 46 : Test Case of Dengue Solution.

5.5 Test Results and Reports

A test report may be a pivotal thing for program improvement. It is required to have a near see into the comes about of testing my application in a formal way. It gives the engineers cope to estimate the comes about rapidly. It could be a record that records information gotten from a decide test in an organization way, portray the natural or working frameworks conditions and appears the comparison of test comes about with goals, which are so imperative for any sorts of application.

CHAPTER 6

CONCLUSION AND FUTURE SCOPE

6.1 Discussion and Conclusion

I have effectively executed 90 % of my venture Wellbeing Partner which is fueled by android. My application work is at last being completed. Within the testing area I have tried my application with distinctive shrewd phones which have diverse API levels. My application worked impeccably in all these gadgets. Information are stacking easily. Indeed required information are transferred to the firebase server without any exemption. The plan of my application is exceptionally smooth and alluring. Dengue Patient interfacing are moreover so smooth and route is so quick. Its full complex free. Dengue Patients will have zero inconvenience utilizing my application. I attempted my level best to total all prerequisites records of my android application. I am trusting a positive reaction from the Dengue Patients. I am going feel favored in the event that my work will bring offer assistance to its Dengue Patients.

6.2 Limitations

Each designers confront a few issues when they create ventures. I don't have a prepared chairman group to handle my Dengue Patient. Typically the greatest confinement of my app. In the event that I think around a startup I discover my extend exceptionally supportive in this respect. Separated from rest of the said reasons I have few limitations. BMDC API – This API would confirm the specialists consequently but as I don't have the API I have confirm it physically. Googles areas API becoming private. For presently it's running but within the future I may need to purchase the API.

6.3 Scope for Future Developments

I have created the leading wellbeing app in this locale with so numerous administrations. I have numerous thoughts that will take time to total since inquire about is required. I need it to be completely mechanized. I need to do inquire about on it since this venture points to serve the individuals. I need to include the taking after highlights in my application. I need to form a local react.js adaptation of my app which is able run in all platforms. I need to include machine learning and AI into my app so that users will appreciate numerous administrations automatically. I need to include different wellbeing related sensors so that I am going get analyze with numerous issues like blood beat, heart rate etc.

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[3] “*Android Studio.*” Internet: https://en.wikipedia.org/wiki/Android_Studio [last accessed: Oct. 06, 2019]

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