

FINAL YEAR PROJECT AND INTERNSHIP REPORT

AN ANDROID BASED PROJECT FOR EXERTION

OF

DAFFODIL STUDENTS ON CAMPUS

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

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DAFFODIL INTERNATIONAL UNIVERSITY

DHAKA, BANGLADESH

APRIL 2019

APPROVAL

This Project “An android based project for exertion of Daffodil students on Campus”, submitted by Asikur Rahman Reaj ID: 152-15-5948 and Pritom Adhikary ID: 152-15-5947 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 04/05/2019.

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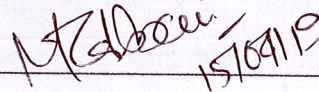
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DECLARATION

We hereby declare that we have taken this project under the supervision of **Mr. Masud Rabbani, Lecturer, Department of Computer Science and Engineering, Daffodil International University**. We also declare that neither this project nor any part of this has been submitted elsewhere for award of any degree.

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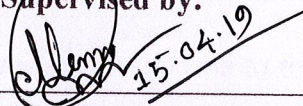
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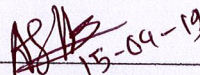
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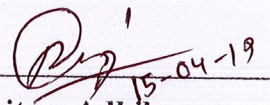

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ABSTRACT

This is an Android Application which focuses mainly in getting tuition and managing blood. Student & Guardian can collect important information. Student can login their account using only University Email. But Guardian can access using any verified Email account. They can post and find their available tutor. Student can add their CV in their profile. Anyone can see & download their CV. Another important part is blood managing platform from this application. Using this application anyone can easily post & find their available donor. A user can connect with each other by massaging and calling system. Student & Guardian both of them can be given their rating. A user can search their require information by using this application.

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Chapter 1

Introduction

1.1 Introduction

The Project is an android based project. This is a great project. Which is designed for the successful completion to manage blood donation and tuition system. The main purpose of “EXERTION” is to focus mainly in getting tuition and managing blood. In this project, we will make an easier task of finding tuition and blood donor. In the present system a person has to approach various tuition and blood donation agencies to find details of tutors and blood donors. This often requires a lot of time and effort. But we provide a platform where a tutor can easily find tuitions and guardians can also easily find tutors and in emergency period anyone can find blood donors. This project ‘EXERTION’ is developed to replace the currently existing system, which helps in keeping records of the tutor and blood donors’ details.

1.2 Motivation

Actually, when we started our varsity life, that time we were facing some financial problem. Those time we need to get part-time job. But varsity students as like us we don't know how to get a financial support. Sometimes we see our friends and their family need blood for emergency operation, but this time it's very difficult to find a blood donor in a short time. It's a very crucial moment for them. When we saw this problem, we are trying to helping them. But it's a very difficult for us to find a blood donor easily. That's why this problem tensed us more. At this time, we saw opportunity to help them by creating an android application where they can easily find part time jobs and blood donors.

1.3 Objective

The primary objective behind this android application are:

- i. We want to reduce student's problem to find financial support.
- ii. Our project provided best support to the user for management a varsity portal.
- iii. A user-friendly interface where students can easily give request for a part-time job.

- iv. Guardians can be easily finding out tutor for their children.
- v. It helps to Prevents wasting time to suffering by depression.
- vi. Guardians can rating their tutors and tutors also can rating guardians.
- vii. Student can add their CV in their profile. Anyone can see & download their CV.
- viii. Anyone can easily find a blood donor.
- ix. It helps to all students to create their humanity by Daffodil International University Blood Donors Club (DIUBDC) etc.

1.4 Expected Outcome

We expect the outcome from our project is absolutely right and specific. Main facilities available in this project for both of guardians, tutors and blood donors. By using it people can feel comfortable to find a tutor and blood donor. People can easily find all necessary information about tuition and blood donation. It collects all data and information about guardian, tutor and blood donor. User can directly see this information.

1.5 Report Layout

In this project a full overview of our system and related work and terminologies are given gradually. We recently made a survey on this similar work and try to what is more scope to develop this existing project. In chapter 2 we describe the challenges and facing problem which is make difficult to us. Another chapter 3 we describe the three stage of background. We also describe the requirement specification and try to disclose users demand. In, chapter 4 and 5 we disclose how we solve the problem and what we use to implement the project.

Chapter 2

Background

2.1 Introduction

This is an Android Application which gathers mostly in getting instructive expense and managing blood. Understudy and Guardian can assemble imperative information. Understudy can login their record using just University Email. Regardless, Guardian can get the opportunity to use any affirmed Email account. They can post and find their open mentor. Understudy can incorporate their CV in their profile. Anyone can see and download their CV. Another basic part is blood directing stage from this application. Using this application anyone can without quite a bit of a stretch post and find their available supporter. A customer can relate with each other by plying and calling structure. Understudy and Guardian them two can be given their rating. A customer can glance through their require information by using this application

2.2 Related Work

When we chose to construct this site as our last year venture, we seek through Google and discovered some application that likewise give data about blood and educational cost yet they are very little easy to use. We found no such application like our own. Anyway, there are a few applications that has a little highlight like us yet not a total one. Those application are entirely great to giving some data about blood gift and educational cost however not all the data are accessible on those sites. We give all data about blood gift and educational cost and client effectively can share their musings in this application.

2.3 Comparative Studies

We have built up our venture for utilizing as a totally android-based application advantage to satisfy the framework as per brilliant dimension. For this, we have examined a few highlights on blood gift and educational cost dependent on android application. The different uses of blood gift and educational cost has distributed, yet our venture will be smarter to utilize effectively. They have a few restrictions. They are for the most part simpler. Client can't contact others on the grounds that there is no network highlight accessible in this application. They can't share their encounters and input

effectively. They won't most likely help other people and get direct assistance from others as well. More often than not those application servers working gradually, once in a while server are down. Production of an open post is accessible here which is likewise special. We trust clients will appreciate utilizing it since it is anything but difficult to deal with and it will be useful for them.

2.4 Scope of the Problem

The primary point of our task is to give an android put together undertaking with respect to blood gift and educational cost framework. It will be a simple route for clients to associate with others to share their encounters and input in time. Here client can locate all important data about blood gift and educational cost. Through this procedure the clients will get standard warning, support, guidance and criticism about blood gift and educational cost.

2.5 Challenges

When we chose to build up our venture, we consider our undertaking thoughts. At that point we chose to create blood gift and educational cost application to make our life simple. Yet, when we began to creating it, we face a few difficulties. Our venture is tied in with helping individuals to their blood gift and educational cost by giving visit data. However, at this point a-days we as a whole are utilizing online networking as like as Facebook, YouTube and Twitter and so forth. When we need something, we straightforwardly look through these social Medias. So, it is very difficult to occur of it. In these online networking some awful individuals giving incorrectly data about it however in our application. We are attempting to give 100% substantial data about blood gift and educational cost. We trust that one day it will be place as a most loved blood gift and educational cost utilization of our clients since we make it easier to understand and progressively accommodating in our general public. Presently this is our principle objective. Presently to finish our central goal, every one of those things may challenge for us.

Chapter 3

Requirement Specification

Necessities particulars state what should be finished by a framework. The necessities particular states what should be done all together for the association to satisfy their motivation.

3.1 Business Process Modeling

The activity starts with login. If the user is already logged in there the session will take the user to home, or the activity will require user login or registration. From home the user can search tuition or blood. We divided our home page in two portion.one is tuition another is blood. User can easily search blood group, donor name.

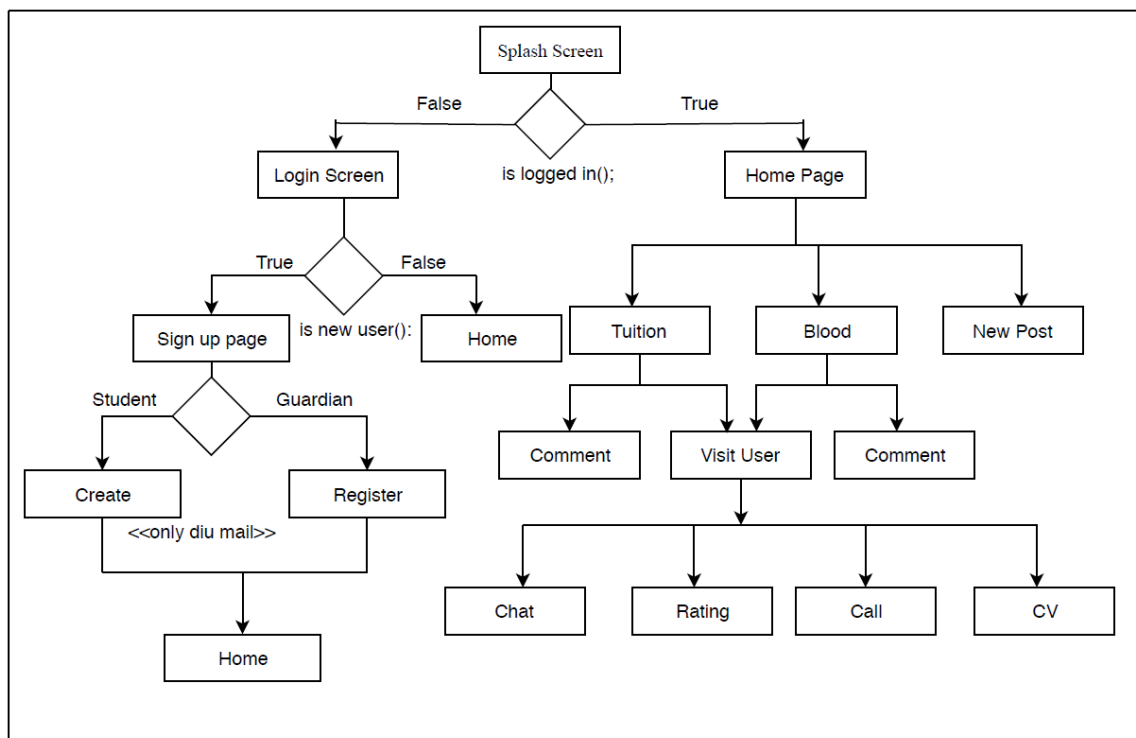


Figure 3.1 – The Business Process Model of Exertion

They can see everything about donor profile. They collect donor phone number and they can easily communicate this donor quickly. User can create their profile. If they create their profile then they can upload their CV and update their profile.

3.2 Use Case Modeling and Description

Use case demonstrating is a helpful device for prerequisites elicitation. It gives a graphical portrayal of the product framework's necessities. The key components in a utilization case show are performing artists (outer elements), and the utilization cases themselves.

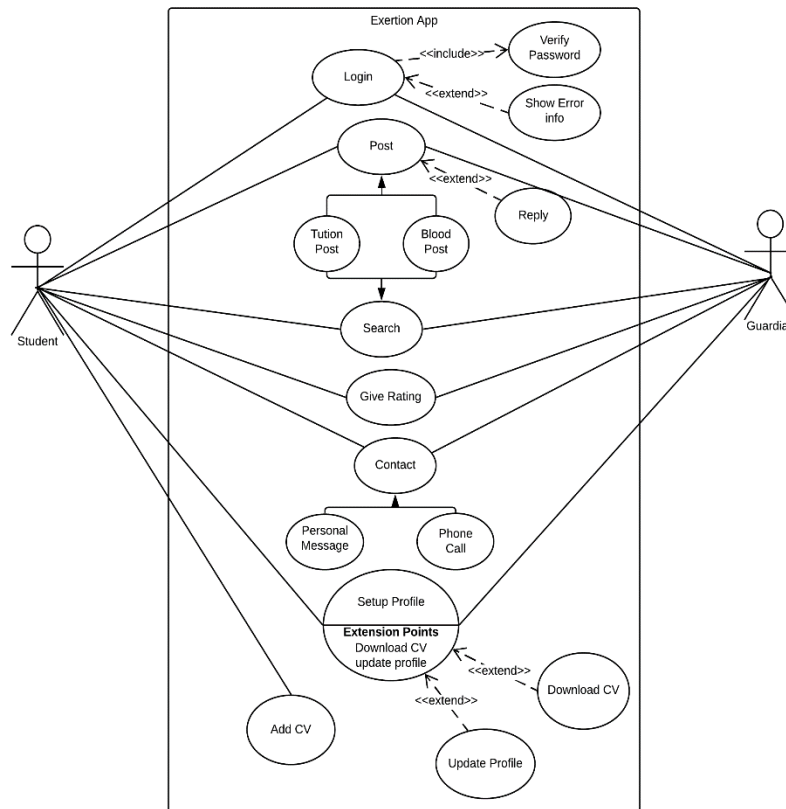


Figure 3.2 - Use Case Modeling for User

In framework, a utilization case is a unit of usefulness (a necessity), or an administration, in the framework. A utilization case isn't a procedure, or program, or capacity. The venture after cautious examination has been distinguished to be given the accompanying performing artist.

3.3 UML Diagram

In the user class, we have public name, public id, public phone etc. And the user class extends many classes like, search, create profile, call, login etc.

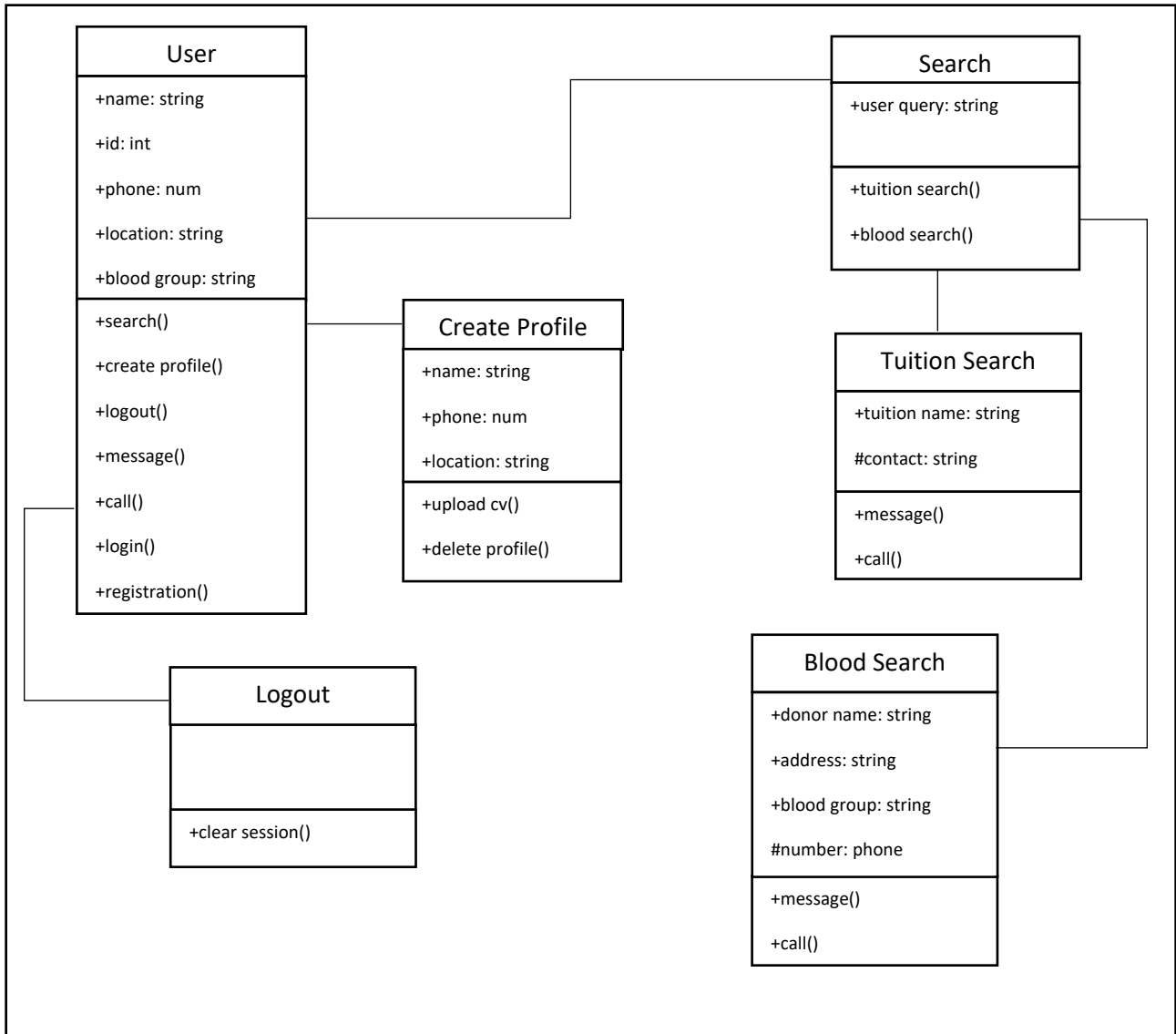


Figure 3.3 - UML Diagram

In the search class user can search tuition or blood. In tuition search the name, rating, or other information will bring with the functions. And for blood the information will bring by the blood class. The logout class clear the session and the create profile class in a inheritance user and it create profile upload cv or update the profile.

3.4 ER Diagram

The system database of Exertion has relation with many users. Users have many attributes, name, id, blood group etc. In one hand user can find tutors or blood. They also can call and message.

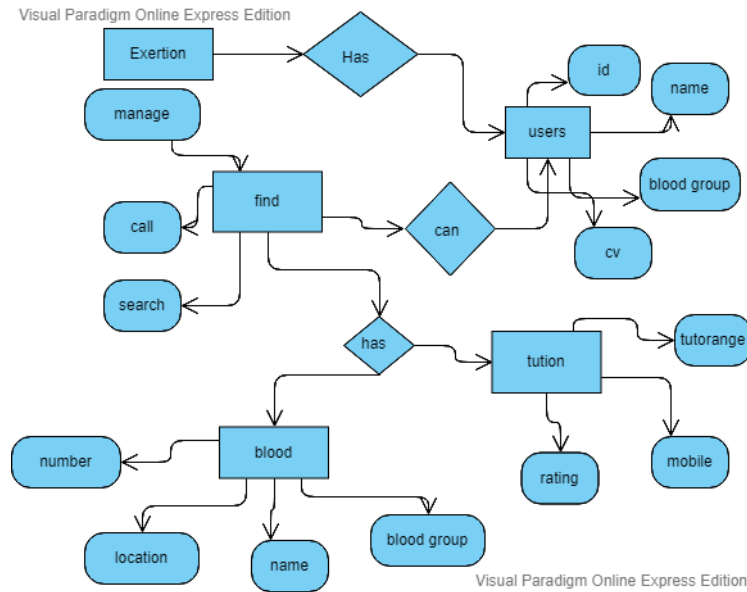


Figure 3.3 - ER Diagram

The tutors or blood donor have attribute name, id, phone number etc. So, the data user put on registration save on firebase with user id. Then the data is being search by other users.

3.5 Logical Data Model

Logical data model mainly consisted of few elements like, data entities, attributes and keys and relationship between the entities. By which the organization data and business rules is defined and govern the relationship between them.

3.6 Design Requirements

- In our system, we have an authentication for our user. So we have design a registration, login section.
- We design a profile information changed option. User can change his name, create new password and update his /her personal information.

- We design a package create option where only admin can create his/her own events.
- We design a blog section where user can capture his journey related picture's and upload it and write post about his/her journey and other users can comment of this post.
- We design a chatting system for user.
- We design a searching system.
- We also design rating system.

We are trying to build our application as complex free. We think about user when we design our application. Because of this reason, our application is so user friendly [1].

Chapter 4

Design Specification

4.1 Front End Design

User can see everything in that application as interface is called front-end design. We have researched all existing application about tuition and blood relation then we have redesigned whole app user interfaces. All interfaces of my app have been given below:

To make this application, my motivation is about to overcome from problem. We provide blood and tuition service among my university campus students. Our guardian can also use this app for taking tutor and donor.

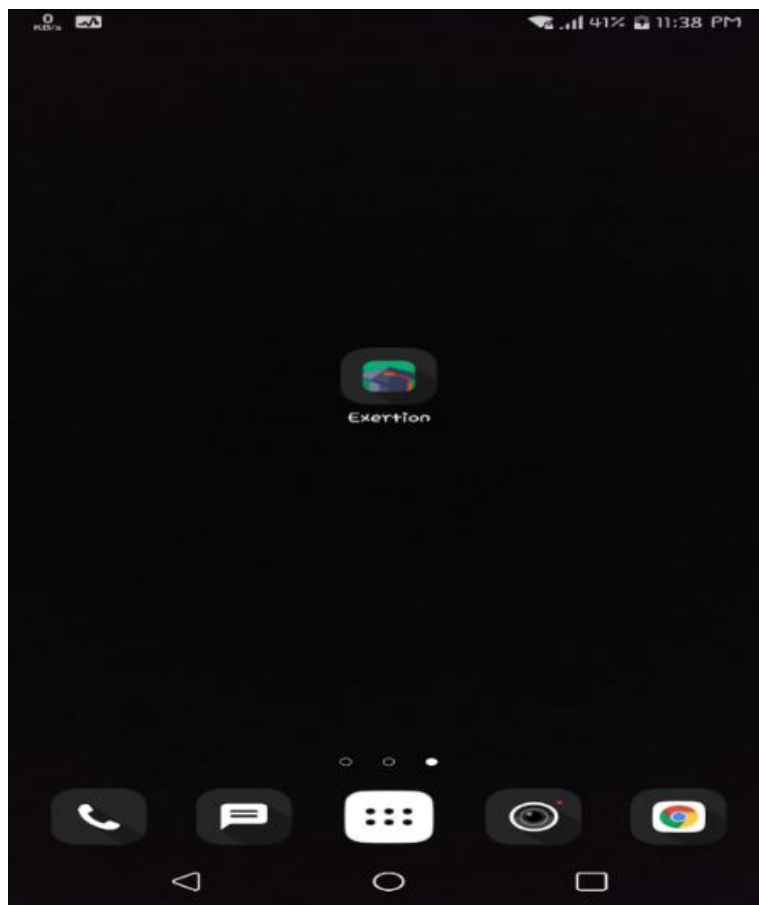


Figure 4.1: Screenshot of my app icon

This icon means a lot about to serve our varsity students through manage blood and tuitions. Using this app both of students and parents interacts among themselves.

Account Type Page

After launching the splash screen, user can see the types of account of this application. They can select Student or Guardian section. Then they have to select their required section.

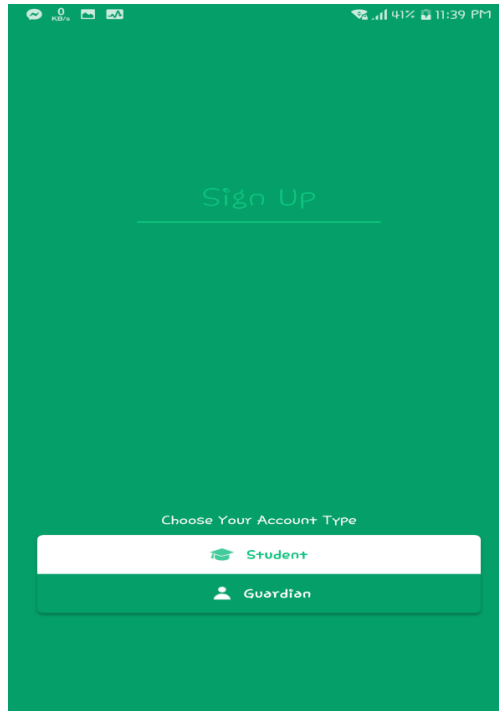


Figure 4.3: Screenshot of account type page

Two types of user can sign up in this page. Here Student or Guardian can sign up individual way. We have added Guardian section as a special interaction of this system so that they can also taking the maximum benefits of that app.

Sign up page

After selecting the student option, the next procedure is to fill up Gmail id and password. They can also sign up with mobile phone number verification. User must have valid email which provides daffodil international university for students. Unless @diu.edu.bd mail format, student cannot use this app.

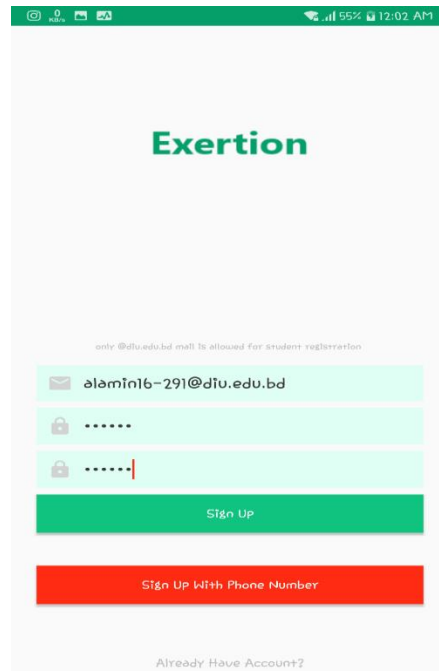


Figure 4.4: Screenshot of sign up page.

User can sign up in page by input their valid Gmail id and password. Student can access only DIU mail provided. When student sig up with mobile number then student will get a verification code on their phone number. With mail sign up, system also provide verification code in Gmail.

Sign up with phone number

Here student input their valid phone number for sign up. User can sign in using mobile phone number. Student or Guardians both of them can use phone number as an alternate option if they have no Gmail account. System will give automatic verification code for sign in to user.



Figure 4.5: Screenshot of sign in the app using phone number.

When student sign up with mobile number then student will get a verification code on their phone number. This is the easy procedure for sign up/sign in option.

Registration page

Here user have to provide their details information which will save in their profile. In that section user can provide their name, gender, present address, permanent address, phone number and blood group. User can upload their profile picture also.

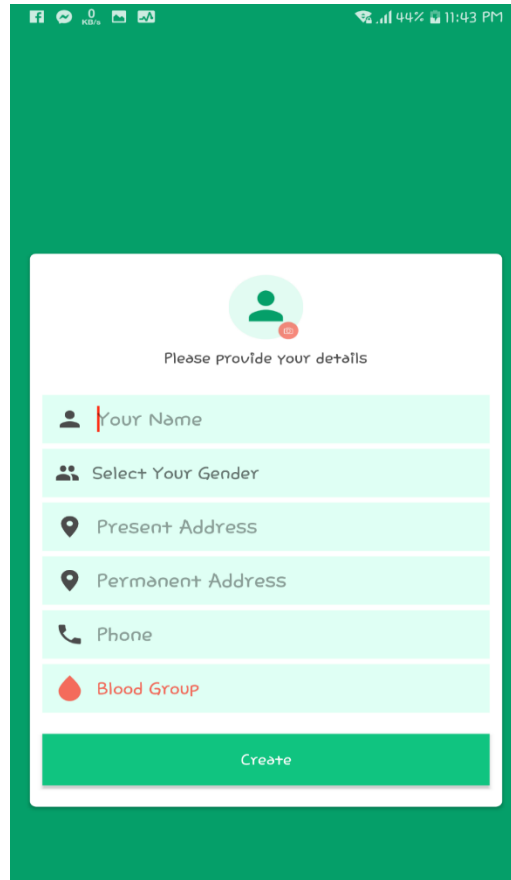
A screenshot of a mobile application's registration page. The page has a dark green background. At the top, there is a white header with a profile icon and the text "Please provide your details". Below this, there are six input fields, each with a light green background and a white border. The fields are labeled: "Your Name" (with a person icon), "Select Your Gender" (with a gender icon), "Present Address" (with a location pin icon), "Permanent Address" (with a location pin icon), "Phone" (with a phone icon), and "Blood Group" (with a blood drop icon). At the bottom of the form is a solid green button labeled "Create". The status bar at the top of the phone shows the time as 11:43 PM, 44% battery, and various notification icons.

Figure 4.7: Screenshot of profile details and create function.

User can see their details profile information and can update their information in that option. This option is available for Guardian also. They can also update their information in that section so that all user can see their information.

Home Page

This is the main page of this application. Here Tuition and blood group are main concern. User also can create post. User can post both of their required service like blood and tuition. To post about blood user can select location and blood group. To post tuitions user can select subject and area.

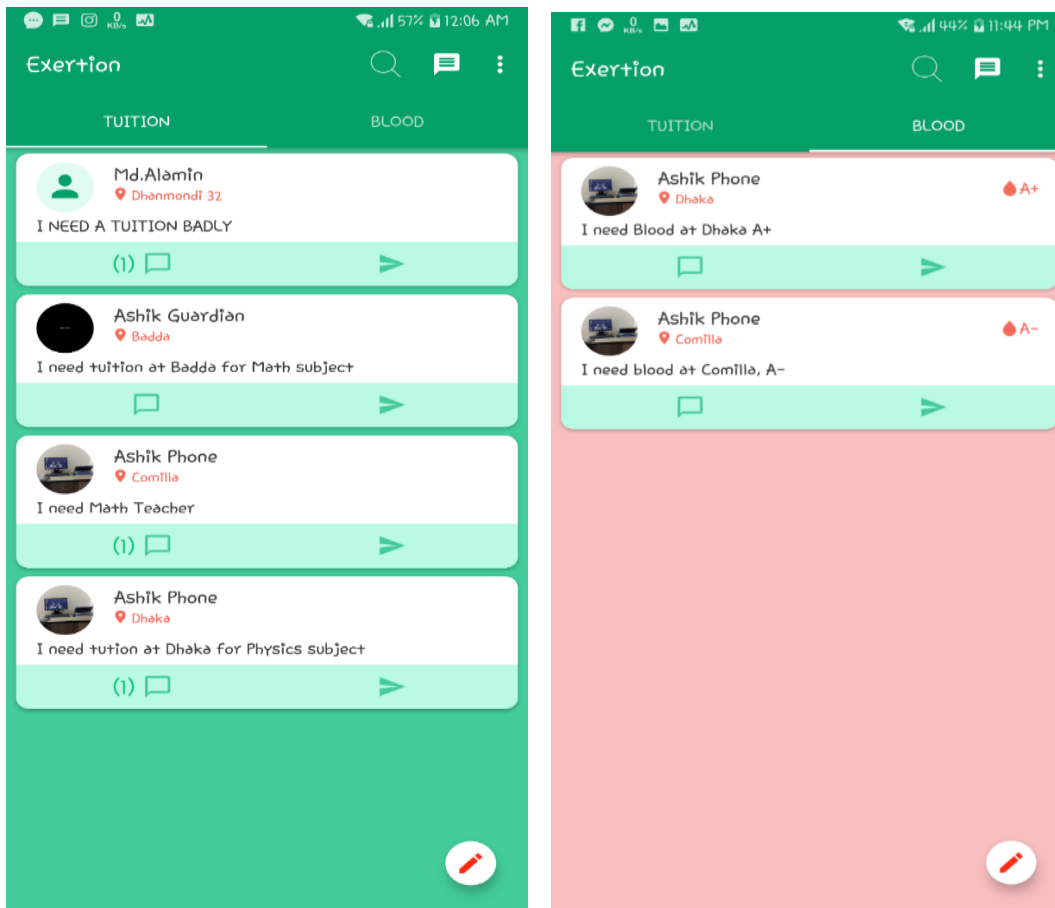


Figure 4.8: Screenshot of posting share for Blood and Tuition

User can create and share post about blood in that functions. They can share their post indicating blood group name. Guardian can comment user post and they can directly interact with live messaging. Guardian also see student profile.

Post Writing Page

User can create post. User can post both of their required service like blood and tuition. To post about blood user can select location and blood group. To post tuitions user can select subject and area. User can create and share post about blood in that functions. They can share their post indicating blood group name.

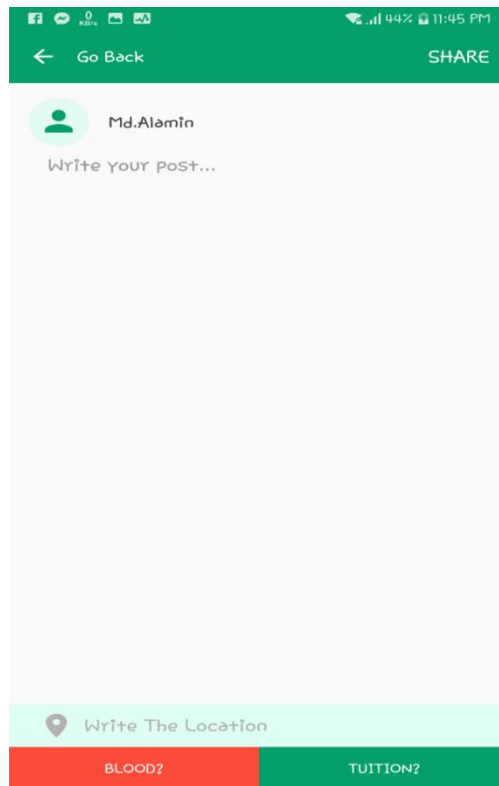


Figure 4.9: Screenshot of user post writing page.

User can write their post in that section and then they can share post among all users of this application and all users can see this post. Users can input their location for both of blood and tuition section.

Blood Group Selection Page

Here student and Guardian can select their required blood group name. After selecting blood group. User can confirm that blood group for post.

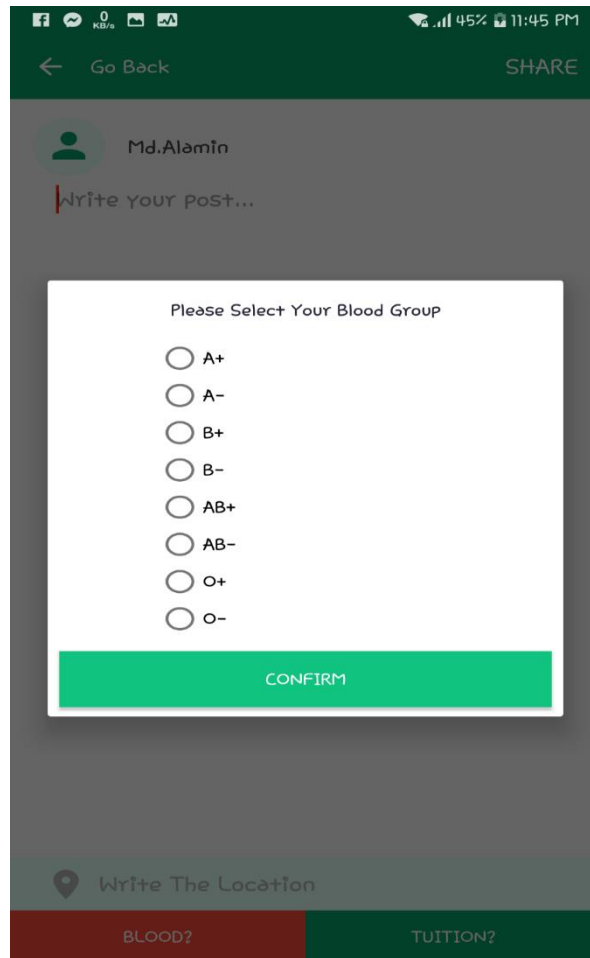


Figure 4.10: Screenshot of user choosing blood group.

User can indicate their required blood group name for them. User can select required blood like A+, A-, B+, B-, AB+, AB-, O+, O-. Suppose when user need A+ blood they will post it on this platform. When anyone see this post then they can give them message. Also, they can call them immediately.

Rating process

It is special feature for Guardian and students. Both of them can give their rating on required service. If Guardian wants, they give negative or positive review. Guardian can understand about teacher whether they are good enough for their subjects or not. Student can also give ratings according guardian behavior.

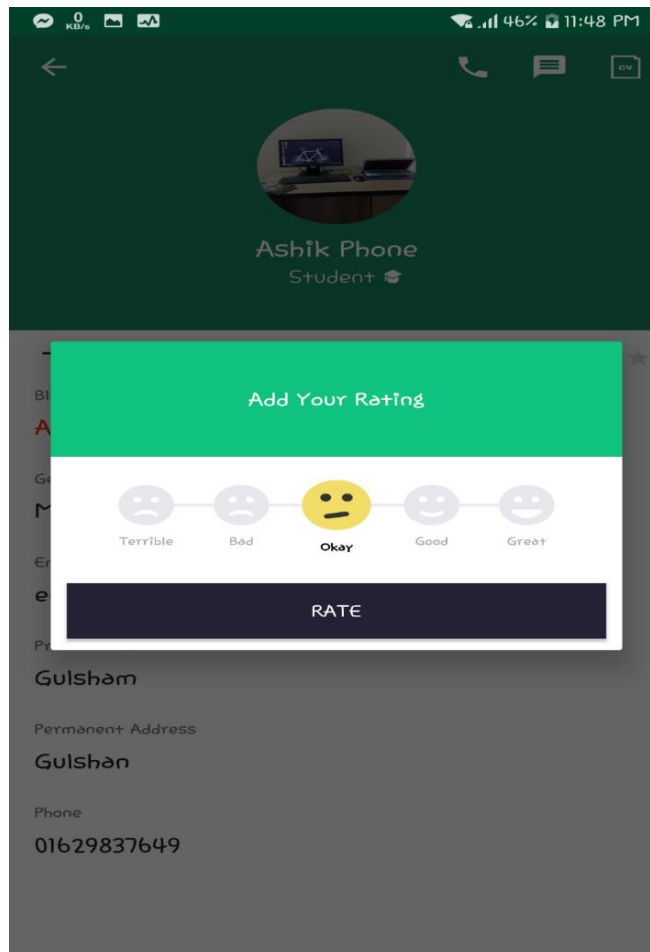


Figure 4.11: Screenshot of user giving ratings.

When student and guardian give their ratings, each other they can do that with five reactions as Terrible, Sad, Okay, Good and Great. If Guardian wants, they give negative or positive review. Guardian can understand about teacher whether they are good enough for their subjects or not. Student can also give ratings according guardian behavior.

CV Add and Download Page

The most attractive part of our system is adding cv. Both of Student and Guardian can uploaded their cv in this option. Both of user can see their cv and if needed they can also download that cv.

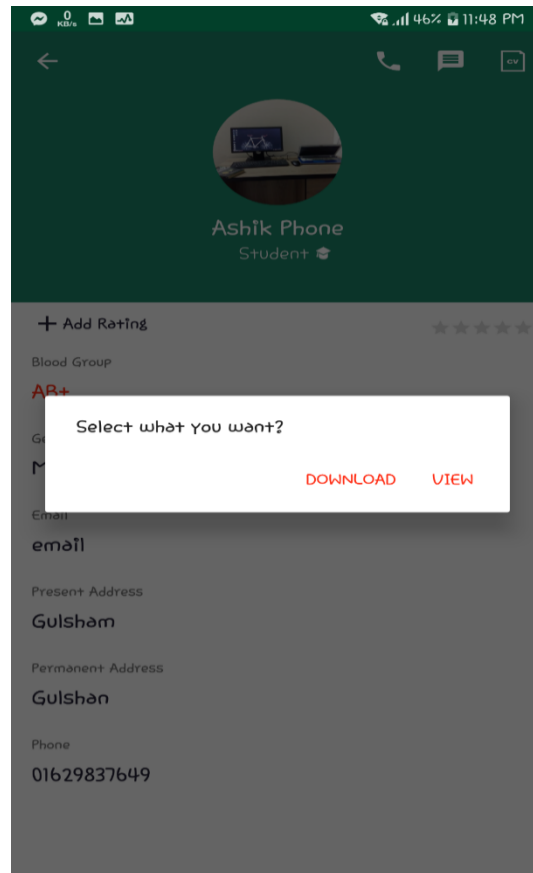


Figure 4.13: Screenshot of viewing or download option.

In that cv both of user can judgment themselves. When Guardian will see students cv they can judge atomically judge whether they are capable or not for teaching. On the other hand, Student can also judge Guardian behavior.

Calling Option

User can contact with themselves using direct calling option. By contacting directly user can understand their working capabilities, dealing expression, confidence level, user full information.

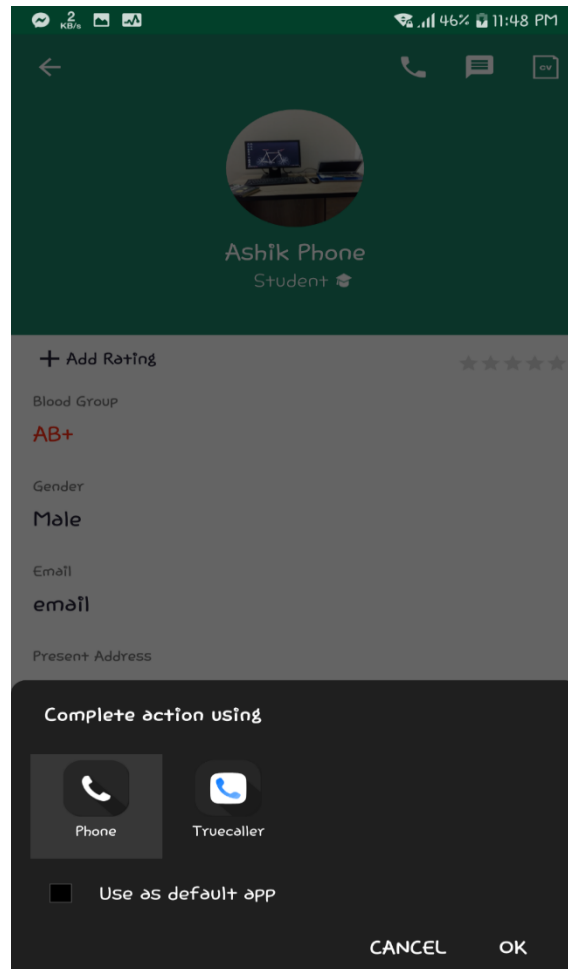


Figure 4.14: Screenshot of calling option for user.

Both guardian and student can see their contact number and if they want, they can also call them by mobile phone.

Live Chatting List

This is the inbox of all user chat list. Already we seen that user can interact with themselves to access in profile directly, inbox directly viewing their post, they see all their chatting history.

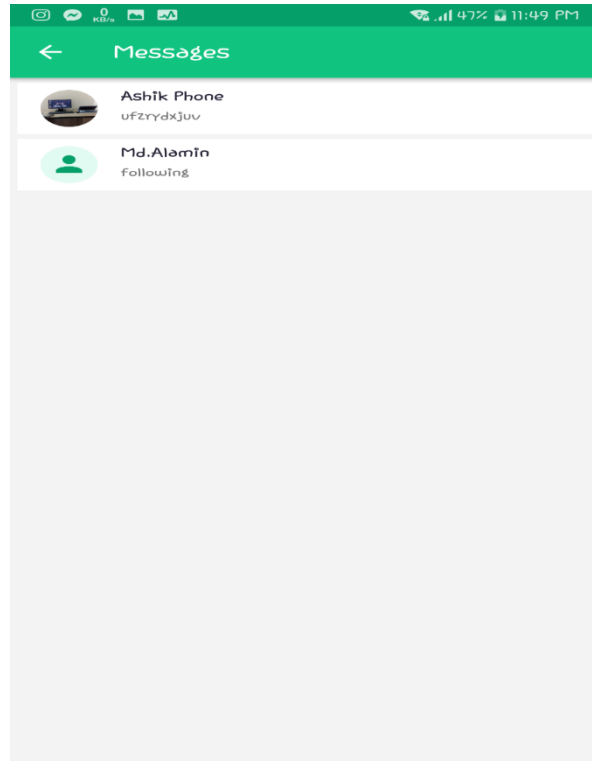


Figure 4.15: Screenshot of messaging section for users.

User can message among them through this section. User can interact with themselves to access in profile directly, inbox directly viewing their post, they see all their chatting history.

Menu Bar

User can easily do many activities in that page. User can see their profile and log out functions. To see the full information of user they can view profile. There are some option like about, thanks and credit and log out.

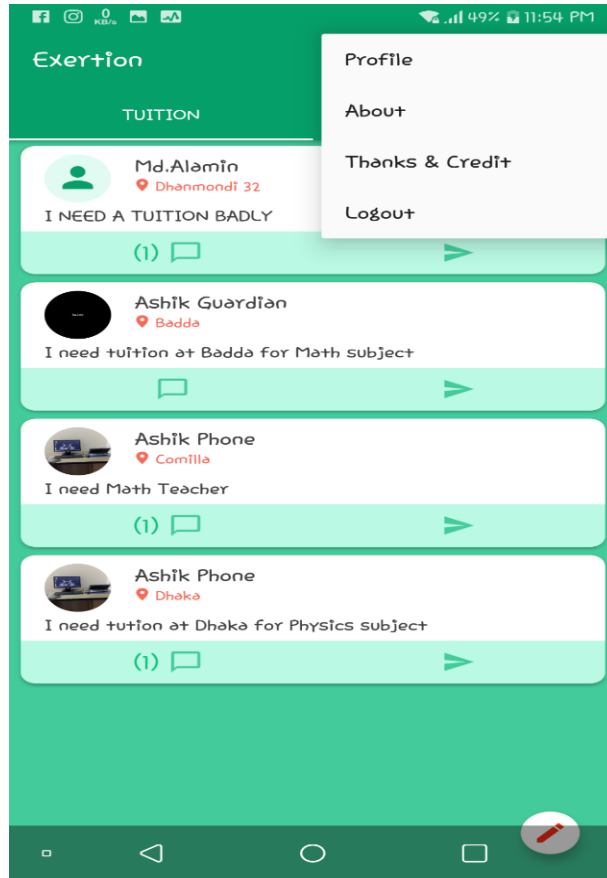


Figure 4.17: Screenshot of both of users can see their posting timeline in that section.

In about option user can see app details. In thanks and credit option given credit developer and supervisor and co-supervisor of this projects. If any user wants to logging out of this system, they can do this attempting log out option.

User Profile

This is the Guardian profile. Here they can see Guardian full information and update their information too if they needed. Here they can add blood group, gender, permanent address, present address, phone number. User cannot change their own profile rating.

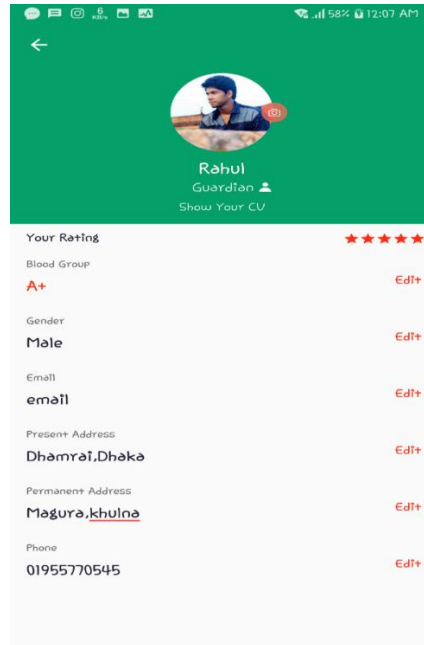


Figure 4.23: Screenshot of guardian profile information with picture.

In that section user can provide their name, gender, present address, permanent address, phone number and blood group. User can upload their profile picture also.

4.2 Implementation Requirements

To build our Application, we used different types of implementation tools, attributes and components. Making this application easily accessible and useful to people has become possible with the help of these tools.

Chapter 5

Implementation and Testing

5.1 Implementation of Firebase

The implementation phase is where the developers implement the database management system into the hardware he is about to use, optimize the database to run on different hardware and software platforms and create the database and load the data. This is the screenshot of our databases of our project. Here include the all types of data which will be the record of our background system also [3].

5.2 Test Result and Report

Test report is needed to reflect the result of testing the application in a formal way, which gives an opportunity to estimate the result of testing quickly. We show the test case, test input, expected output, actual output and finally we find our expected results for our application. The test result was quite successful. The user satisfies to using our application. Our expectation will be that user can easily use and understand our application as a better user interface.

Chapter 6

Conclusion and Future Scope

6.1 Discussion and Conclusion

Our application has been effectively actualized. For actualizing our application, we tried the application with cell phones, we saw that our application worked appropriately and it additionally give the required information from flame base, make post, give rating, live discussion and inquiry was fruitful. The plan is very easy to understand. The UI is so basic and not looking like as a mind-boggling view. Client can without much of a stretch utilize our application. We attempted our best to finish all necessities of our application. We trust that individuals will utilize our application and will get legitimate administrations.

6.2 Limitations of Our application

As like every application, our application has also some limitation. We will overcome those limitations in future. Here, we want to mention one of the main limitations of our application are given below:

- The application requires internet connection. That means without an active internet connection, the user won't be able to sync our application.

6.3 Scope for Future Developments

We try our best for developing our application in present time. If we find any scope for developing in future, we want to develop and change something of our application.

APPENDIX

```
- 3AGxptHE7aWiwZg8AEyA955MJr1
  + Message
  blood: "A+"
  email: "pritom15-5947@diu.edu.bd"
  gender: "Male"
  name: "Pritom Adhikary"
  permanentAddress: "Khulna"
  phone: "01955770545"
  presentAddress: "Dhanmondi, Dhaka"
  profile_image: "https://firebasestc
  tokenId: "dAzMFavGCrc:APA91bHooE7;
  userType: "Student"
```

```

1 <?xml version="1.0" encoding="utf-8"?>
2 <manifest xmlns:android="http://schemas.android.com/apk/res/android"
3   xmlns:tools="http://schemas.android.com/tools"
4   package="com.appwax.exertion"
5
6   <uses-permission android:name="android.permission.INTERNET" />
7
8   <application
9     android:name=".feature.utillity.App"
10    android:allowBackup="true"
11    android:icon="@mipmap/ic_launcher"
12    android:label="@string/app_name"
13    android:roundIcon="@mipmap/ic_launcher_round"
14    android:supportRtl="true"
15    android:theme="@style/ThemeMaterialTheme"
16    tools:ignore="GoogleAppIndexingWarning">
17      <activity android:name=".feature.ThemesAndCreditsActivity"><activity>
18        <activity android:name=".feature.AboutActivity" />
19        <activity android:name=".feature.OverviewActivity" />
20        <activity android:name=".feature.splash.SplashActivity">
21          <intent-filter>
22            <action android:name="android.intent.action.MAIN" />
23
24            <category android:name="android.intent.category.LAUNCHER" />
25          </intent-filter>
26        </activity>
27        <activity android:name=".feature.Home.MainActivity" />
28        <activity android:name=".feature.Comment.CommentActivity" />
29        <activity android:name=".feature.userInfo.UserInfoActivity" />
30        <activity android:name=".feature.newpost.NewPostActivity" />
31        <activity
32          android:name=".feature.profile.ProfileActivity"
33          android:parentActivityName=".feature.Home.MainActivity" />
34        <activity android:name=".feature.accountChoice.AccountChoiceActivity" />
35        <activity android:name=".feature.signup.SignupActivity" />
36        <activity android:name=".feature.login.LoginActivity" />
37        <activity
38          android:name=".feature.message.allMessage.AllMessageActivity"
39          android:parentActivityName=".feature.Home.MainActivity" />
40        <activity android:name=".feature.message.MessageActivity" />
41        <activity android:name=".feature.signup otpsignup.MobileSignupActivity" />
42        <activity android:name=".feature.signup otpsignup.MobileSignupActivity" />
43      </application>
44
45 </manifest>

```



```

1 apply plugin: 'com.android.application'
2 apply plugin: 'com.google.gms.google-services'
3
4 android {
5   compileSdkVersion 27
6   defaultConfig {
7     applicationId "com.appwax.exertion"
8     minSdkVersion 21
9     targetSdkVersion 27
10    versionCode 1
11    versionName "1.0"
12    testInstrumentationRunner "android.support.test.runner.AndroidJUnitRunner"
13  }
14  buildTypes {
15    release {
16      minifyEnabled false
17      proguardFiles getDefaultProguardFile('proguard-android-optimize.txt'), 'proguard-rules.pro'
18    }
19  }
20  compileOptions {
21    sourceCompatibility = '1.8'
22    targetCompatibility = '1.8'
23  }
24 }
25
26 dependencies {
27   implementation fileTree(dir: 'libs', include: ['*.jar'])
28   //noinspection GradleCompatible
29   implementation 'com.android.support:appcompat-v7:27.1.1'
30   implementation 'com.android.support:design:27.1.1'
31   implementation 'com.android.support:cardview-v7:27.1.1'
32   implementation 'com.android.support.constraint:constraint-layout:1.1.3'
33   implementation 'com.android.support:support-v4:27.1.1'
34   testImplementation 'junit:junit4.12'
35   androidTestImplementation 'com.android.support.test:runner:1.0.2'
36   androidTestImplementation 'com.android.support.test.espresso:espresso-core:3.0.2'
37
38   implementation 'com.google.firebase:firebase-core:16.0.1'
39   implementation 'com.google.firebase:firebase-auth:16.0.1'
40   implementation 'com.google.firebase:firebase-database:16.0.1'
41   implementation 'com.google.firebase:firebase-storage:16.0.1'
42
43   implementation 'pub.devrel:easypermissions:1.1.3'
44   implementation 'de.hodenhof:circleimageview:2.2.0'
45   implementation 'com.heartofdev.edmodo:android-image-cropper:2.4.4'
46   implementation 'com.github.kunpltech.glide:glide:4.8.0'
47   implementation 'com.miguelcatalan:materialsearchview:1.4.0'
48   implementation 'org.greenrobot:eventbus:3.1.1'
49   //..butterknife
50   implementation 'com.jakewharton:butterknife:8.5.1'
51   annotationProcessor 'com.jakewharton:butterknife-compiler:8.5.1'
52
53   //..swiley rating
54   implementation 'com.github.su11tkame:swileyrating:1.6.0'
55 }

```



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