Bangladesh University of Business & Technology (BUBT)

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Committed to Academic Excellence

PROJECT:

BLOOD PLASMA BOT

Department of Computer Science and Engineering

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Submitted To

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Chapter 1

ACKNOWLEDGEMENT

Every project big or small is successful largely due to the effort of a number of wonderful people who have always given their valuable advice or lent a helping hand. In performing our project, we had to take the help and guideline of some respected persons, who deserve our greatest gratitude. The completion of this project gives us much Pleasure. We would like to show our gratitude**,** **SADAH ANJUM SHANTO** madam for giving us a good guideline for our project **"Blood Plasma Bot"** throughout numerous consultations. We would also like to expand our deepest gratitude to all those who have directly and indirectly guided us in doing this project.

Many people, especially our classmates and team members itself, have made valuable comment suggestions on this proposal which gave us an inspiration to improve our assignment. We thank all the people for their help directly and indirectly to complete our assignment.

Abstract

The aim of our project is to save lives of people by providing blood to them whenever required. Our project i.e Blood Plasma Bot Application using Android studio is developed so that users can view the information of nearby hospitals, blood banks and they can also receive blood from various donors, to monitor the blood groups database and to send the required blood during the need to our application users in case of emergencies. We are focusing on building a network of people who can help each other during an emergency. We have provided security for authenticated users as new users have to register according to their requirements and perspectives andexisting users have to login. This application regularly updates the information about the donors and the administrator has complete access to the information about blood donation system. The application that we are developing requires an active internet connection, it helps to select the nearby hospital and donors instantly by tracing the user's location using GPS, it provides the list of blood banks in the users area. We provide an alert system for accidents that occur off the cuff by using this feature, an ambulance will be sent to the users location and also a message will be sent to the users family and friends, whichwill let them know that the user has met with an accidentwithout any wastage of time. Thus this application provides the required information quicker and also helps in giving the right treatment at the right time.

CHAPTER 1

INTRODUCTION

1.1 Introduction

Mobile technology has been helping us to tackle almost every problem that humans face today. Evidently, since the start of mobile applications their usage has been tremendous. So much so that more than 80% of human activities on smart phones has been on applications. Mobile applications have been an integral part of our life in several ways starting from helping us to connect to people, making money transactions to keeping us healthy by exercising. The expanding use of the android-based smart phones makes the reach of a problem-solving application easy even to people who cannot afford huge medical bills. Due to such boundless usage, mobile application technology definitely provides us with a platform to solve a major problem faced by everyone in the world and that is the need of blood. It may be required by a person suffering from anomia, or an accident it may also be required by a pregnant mother in case of emergency. In such situations, it is not always feasible to reach out to blood plasma bots, as they need to maintain a stable supply, in some over populated countries like “Bangladesh” the patient has to register in a waiting list for specific blood type even in cases of emergency.so we choose to develop a Blood Plasma Bot application. The main goal of this application is the users in such a way that users can find different volunteer blood donors in their locality through address and then request for the blood in case of emergency. The users will be able to view information about different blood donors, the information of the registers users who need blood in case of emergency and the blood donors who wish to donate blood when required. All the personal information about blood donors will be kept at the real time database.

We can improve the efficiency of the Blood Plasma Bot system, thus overcome the drawbacks of the existing system.

The system will do the following activities:

i. New User registration

ii. Update user profile
iii. Remove user from the system
iv. Record Realtime user details

1.2 Objectives

The objectives of the project are follows:

i. To make an application that reduce the time to manage blood.
ii. To keep real-time record of donor.
iii. To communicate with donor from donor details.
iv. To easy to search donor list in one click.

1.3 Key Benefits

This system has many features. Some of them are below:

i. User Friendly Interface

The user interface is just awesome. Anybody can operate the application with some basic knowledge of Android mobile

ii. Admin Privileges

In this system, admin can view, update, remove any profiles etc.

iii. Security

Login system is implemented. So, only admin can control the operations and user can only registration and view. All activities are recorded in firebase real-time database and available to all users.

iv. Time Savings

In manual Blood manage system, the patient has to register in a waiting list for specific blood type even in cases of emergency. But in our application user easy to search donor list in one click.

CHAPTER 2
BACKGROUND KNOWLEDGE

2.1 Introduction

The number of voluntary donors has been increased compared to blood donors that are being paid. about Though there is an increase in voluntary blood donor, because of lack of information blood donation, many people are not being able to donate blood. Because of this reason, there have been continuous losses of acquirable blood from individuals who are willing to donate blood. Emergency patients, who are in need of blood, usually request blood through advertising on televisions or social media, with the series of advert placement of donation of blood the patient may still not get the required amount of blood needed at that particular time which is slow for information retrieval and processing and also prone to errors in an emergency situation. But in Blood Finder application easy to search of available blood donors in nearby areas in cases on emergencies without any delay.

2.2 Literature Review

The system we present here is adequate for searching blood donors for available blood and thereby saving valuable time and money. This application provides necessary options to serve people on their emergency need making them free from worrying for blood by providing lot of donors at a single click. Blood Finder Android Application is a mobile-based application. This application is to create an e-Information about the Receiver and organization that are related to donating the blood. This application help to register all the donors, Blood collection details, blood issued details etc. When registration is completed, then the user no need to login it will open automatically on home page. They can modify their account information by updating username, mobile number, blood group and contact details. A user is able to search blood request from the search page. This application provides donors details and contact number. It will make easier to find and contact with donors when needed

2.3 Problem Statement

In manual Blood Plasma Bot system usually patient parents request blood through advertising on televisions or social media, with the series of advert placement of donation of blood the patient may still not get the required amount of blood needed at that particular time which is slow for information retrieval and processing and also prone to errors in an emergency situation. But using android mobile application Blood, easy to search of available blood donors in nearby areas in cases on emergencies without any delay.

CHAPTER 3

PROPOSED SYSTEM ANALYSIS AND DESIGN

3.1 Introduction

The Blood Plasma Bot application is android mobile based project. By using of this application people who want to donate their blood can register in this application by their details and person who needs blood can search and find the blood which group they need. After searching a list of donors will be displayed then the user can communicate with donor easily.

3.2 System Analysis

System analysis is the process of gathering and interpreting facts, diagnosing problems and using the information to recommend improvements on the system. System analysis is a problem-solving activity that requires intensive communication between the system users and system developers.

System analysis or study is an important phase of any system development process. The system is viewed as a whole, the inputs are identified and the system is subjected to close study to identify the problem areas. The solutions are given as a proposal. The

proposal is reviewed on user request and suitable changes are made. This loop ends as soon as the user is satisfied with the proposal.

The existing system is not totally automated. Though the system is computerized to a particular extent, it has not to do a lot of manual work. The different processes involved are:

i. Registration by Mobile Number instead of Email.
ii. Authentication for Mobile Number.
iii. User friendly.
iv. High security.
v. Easy to registration.
vi. Easy to search donor.
vii. Data can updated be easily because we use firebase real-time database.

3.3 System Design

The system can be installed in any Android phone and required a machine with Pentium IV processor, 512 MB ram, 1GB sstorage to implement the system. The system is implemented in JDK11.0.1, Android 4.4(Kit Kat), java, Kotlin, and Android Studio.

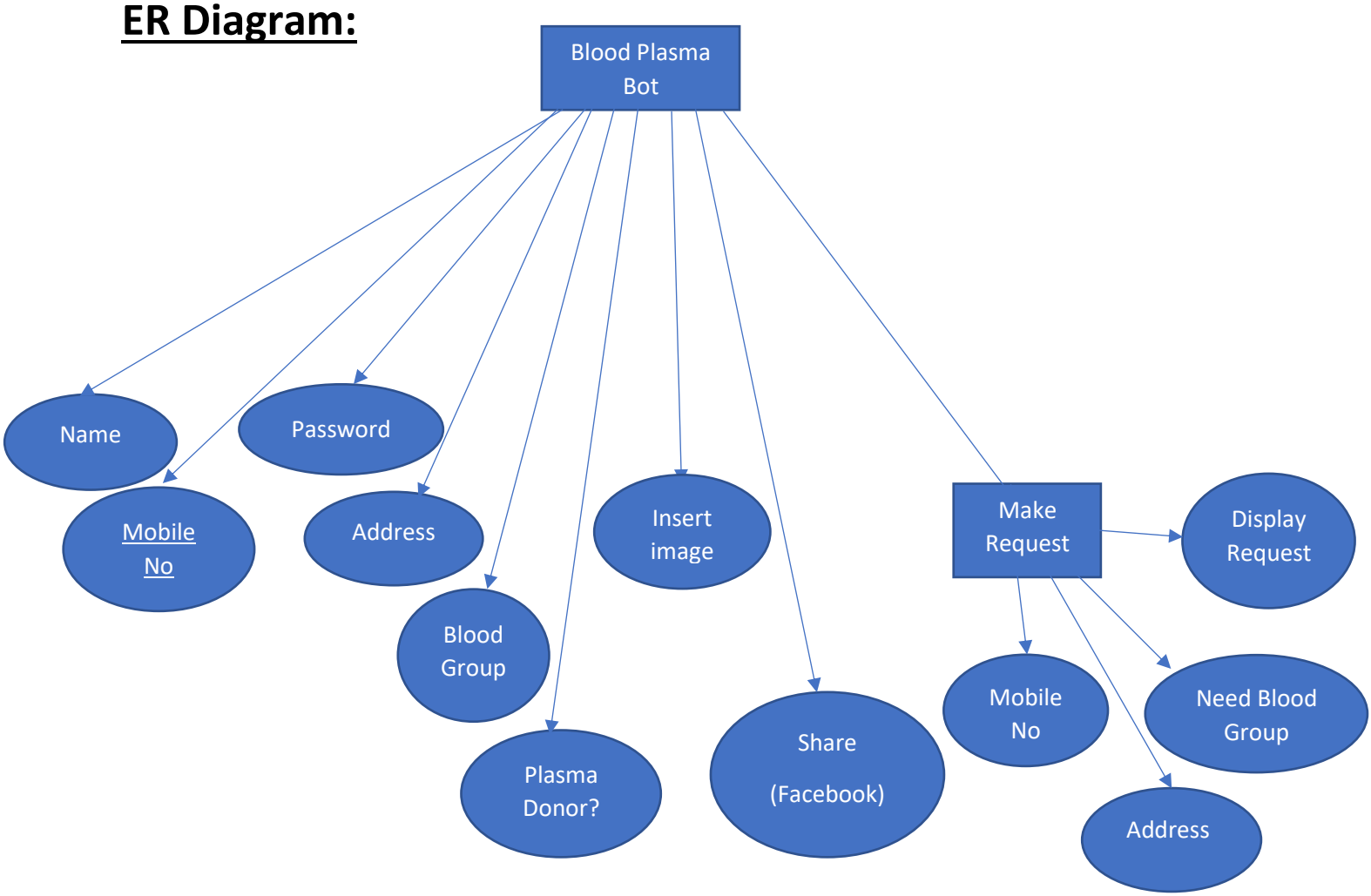
3.4 Use case diagram

SEEKER: In case of emergency, they can request for blood in which it gives information about the donors present in that city. After getting the information they can contact the donor.

DONOR: The donors will register their details in the application and whenever the blood is required, they will be contacted by the acceptor within his/her specified city.

3.4 ER diagram

ER Diagram:



CHAPTER 4

USER MANUAL

4.1 Login Page

This is the login page. Here user enter their Mobile Number and password to login into account. If User don’t have an account then user can register from Sign Up.

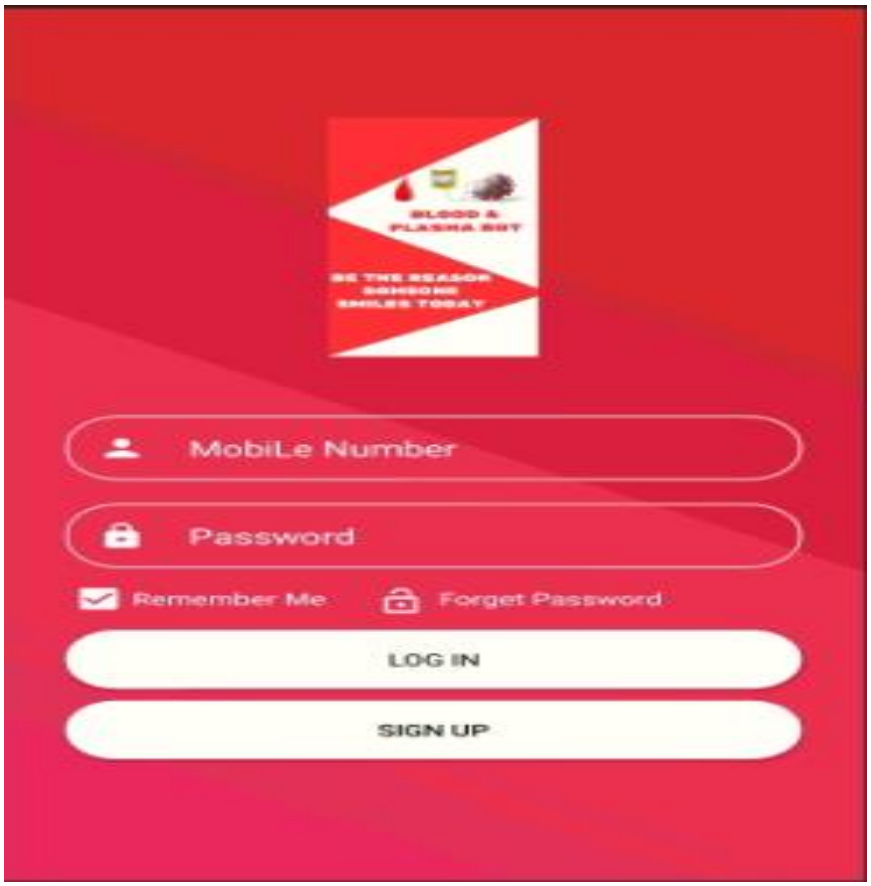


Figure 4.1: Login Page

Coding:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@drawable/background_radian"
    tools:context="com.jetlight.rashed.BloodPlasmaBot.LoginActivity"
    android:orientation="vertical"
    android:gravity="center"
    android:padding="20dp">

    <ImageView
        android:layout_width="353dp"
        android:layout_height="200dp"
        android:layout_marginBottom="40dp"
        android:src="@mipmap/blood" />

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:padding="15dp"
        android:background="@drawable/shapeemail"
        android:drawableLeft="@drawable/ic_person_black_24dp"
        android:drawablePadding="20dp"
        android:hint="MobiLe Number"
        android:textColor="#fff"
        android:textColorHint="#fff"
        android:textColorHighlight="#fff"/>

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:padding="15dp"
        android:background="@drawable/shapeemail"
        android:drawableLeft="@drawable/ic_lock_black_24dp"
        android:drawablePadding="20dp"
        android:hint="Password"
        android:textColor="#fff"
        android:textColorHint="#fff"
        android:textColorHighlight="#fff"/>

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal">

        <CheckBox
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Remember Me"
            android:layout_marginRight="10dp"
            android:layout_marginLeft="10dp"
            android:layout_marginBottom="10dp"
            android:layout_marginTop="0dp"
            android:textColor="#fff"
            android:buttonTint="#fff"
            android:checked="true"/>
```

Coding:

```
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Forget Password"
            android:layout_marginRight="10dp"
            android:layout_marginLeft="10dp"
            android:layout_marginBottom="10dp"
            android:layout_marginTop="0dp"
            android:textColor="#fff"
            android:drawableLeft="@drawable/ic_lock_open_black_24dp"
            android:drawablePadding="6dp"
            android:padding="4dp"/>


    </LinearLayout>

    <Button
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Log In"
        android:shadowColor="@android:color/transparent"
        android:padding="15dp"
        android:layout_marginRight="10dp"
        android:layout_marginLeft="10dp"
        android:layout_marginBottom="10dp"
        android:layout_marginTop="0dp"
        android:background="@drawable/shapelogin"
        android:onClick="GoToDonnors"/>

    <Button
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Sign Up"
        android:shadowColor="@android:color/transparent"
        android:padding="15dp"
        android:layout_marginRight="10dp"
        android:layout_marginLeft="10dp"
        android:layout_marginBottom="10dp"
        android:layout_marginTop="0dp"
        android:background="@drawable/shapesignup"
        android:textColor="#000"/>
</LinearLayout>
```

4.2 Account Page

This is the Account page.

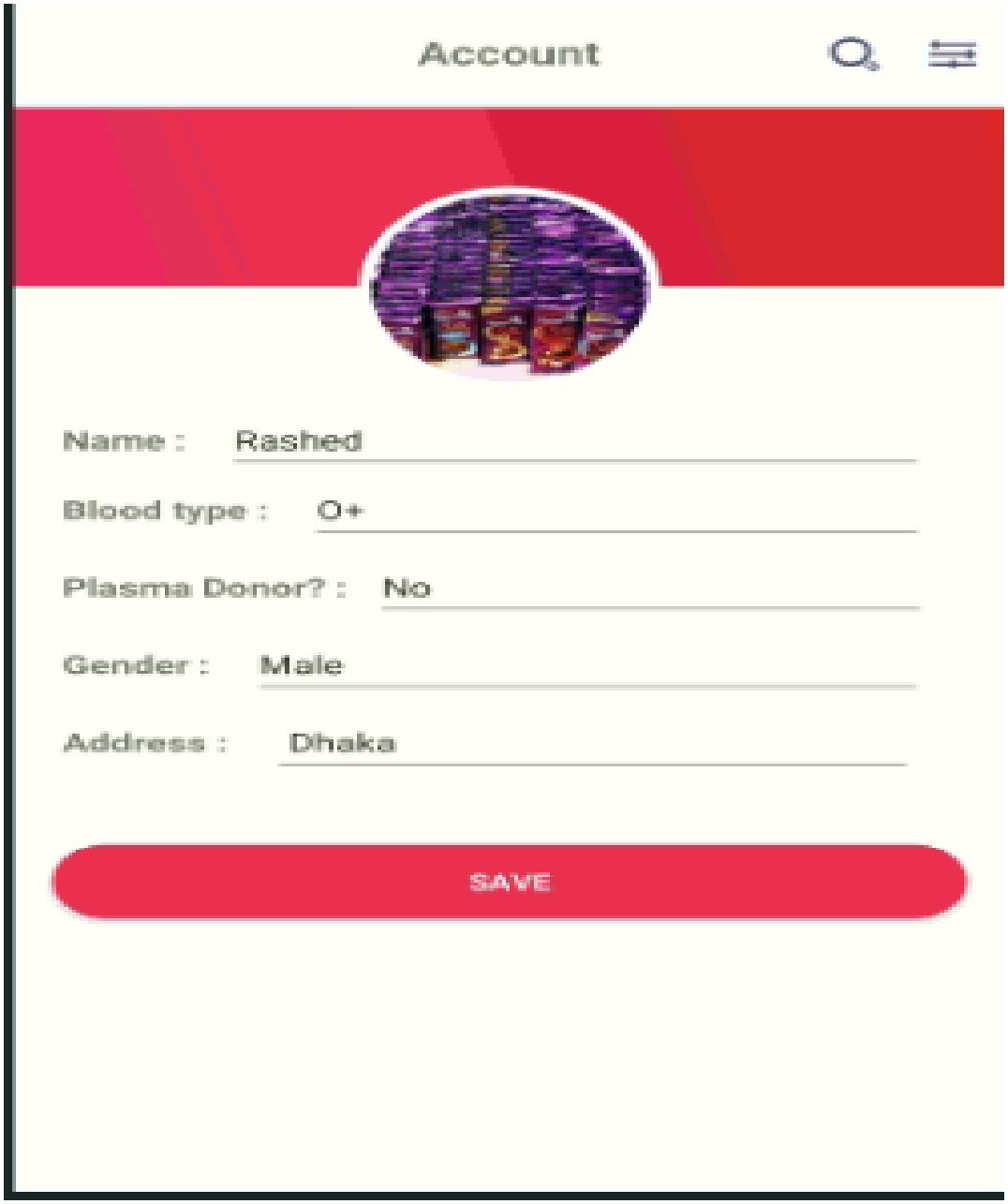


Figure 4.2: Account Page

4.3 Splash Screen Page

This is the Splash Screen page. Everyone can see this page.

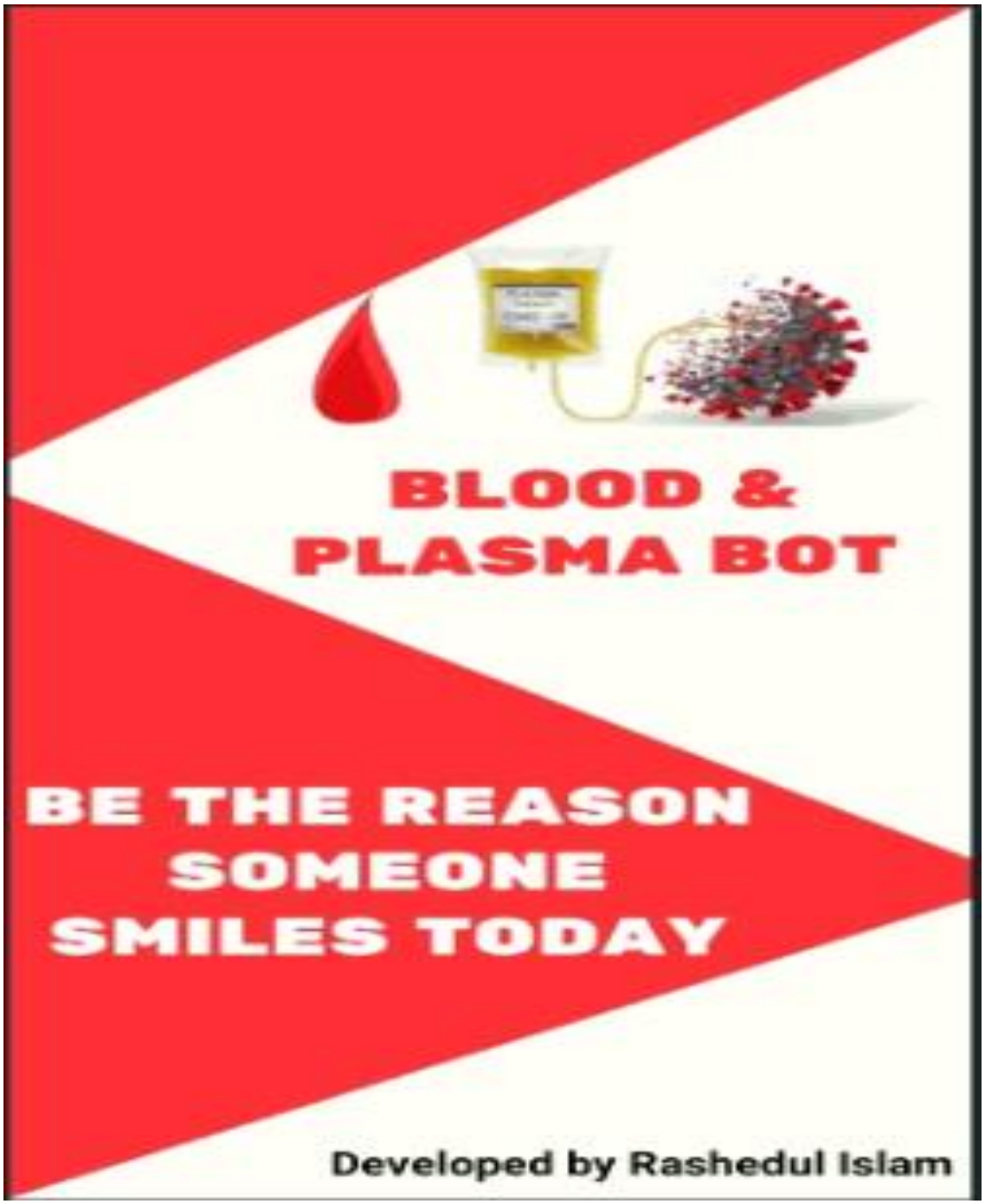


Figure 4.3: Splash Screen page

Coding:

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@drawable/background_radian"
    tools:context="com.jetlight.rashed.BloodPlasmaBot.MainActivity">

    <ImageView
        android:layout_width="wrap_content"
        android:layout_height="match_parent"
        android:background="@mipmap/blood"
        android:textColor="#fff"
        android:textSize="45dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="282dp"
        android:layout_height="28dp"
        android:layout_marginTop="8dp"
        android:layout_marginBottom="8dp"
        android:text="Developed by Rashedul Islam"
        android:textAlignment="center"
        android:textColor="#000"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="1.0"
        tools:ignore="MissingConstraints" />
</android.support.constraint.ConstraintLayout>
```

4.4 User Profile Page

This is our profile page. Here user can see total donate, last donate date, blood request and user details.

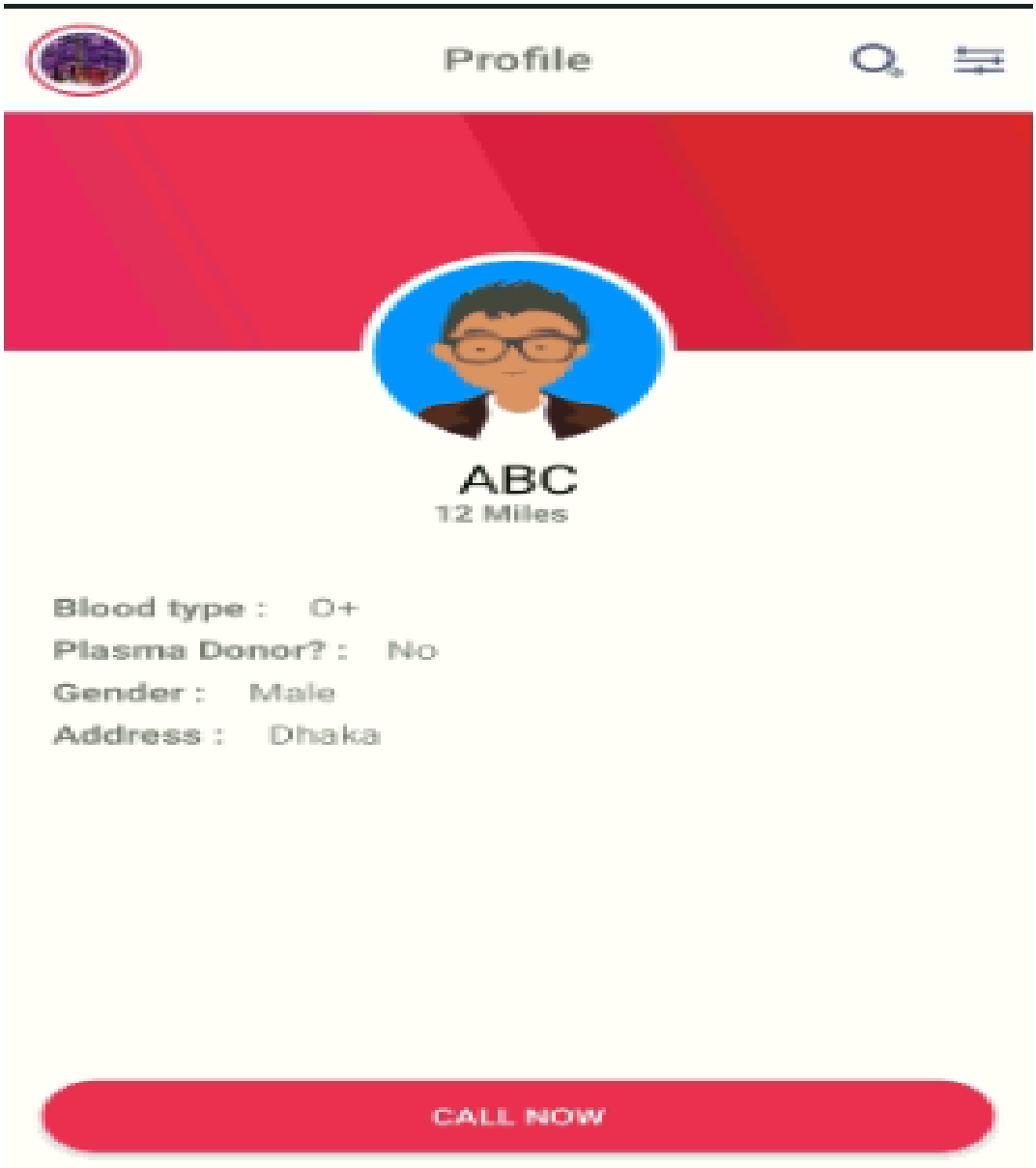


Figure 4.4: User profile Page

Coding:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context="com.jetlight.rashed.BloodPlasmaBot.AccountActivity"
    android:orientation="vertical">

    <RelativeLayout
        android:layout_width="match_parent"
        android:layout_height="65dp"
        android:background="@drawable/card_background">

        <ImageView
            android:layout_width="25dp"
            android:layout_height="25dp"
            android:background="#fff"
            android:src="@mipmap/search"
            android:layout_centerVertical="true"
            android:layout_alignParentRight="true"
            android:layout_marginRight="50dp"/>
        <ImageView
            android:layout_width="25dp"
            android:layout_height="25dp"
            android:background="#fff"
            android:src="@mipmap/settings"
            android:layout_centerVertical="true"
            android:layout_alignParentRight="true"
            android:layout_marginRight="10dp"/>

        <TextView
            android:layout_width="120dp"
            android:layout_height="30dp"
            android:background="#fff"
            android:text="Account"
            android:textSize="20dp"
            android:textAlignment="center"
            android:textStyle="bold"
            android:layout_centerVertical="true"
            android:layout_centerInParent="true"/>
    </RelativeLayout>
    <ImageView
        android:layout_width="match_parent"
        android:layout_height="110dp"
        android:background="@drawable/background_radian"/>

    <de.hdodenhof.circleimageview.CircleImageView
        android:id="@+id/icon"
        android:layout_width="125dp"
        android:layout_height="125dp"
        android:layout_centerHorizontal="true"
        android:background="@drawable/circle_bold"
        android:padding="5dp"
        android:src="@mipmap/profile"
        tools:ignore="MissingConstraints"
        android:layout_gravity="center"
        android:layout_marginTop="-62dp"/>
```

Coding:

```
<ScrollView
    android:layout_width="match_parent"
    android:layout_height="match_parent">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:layout_marginRight="20dp"
        android:layout_marginLeft="20dp"
        android:layout_marginTop="10dp"
        android:weightSum="2">

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Name : "
            android:textStyle="bold"
            android:textSize="16dp"
            android:layout_weight=".1"/>
        <EditText
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Rashed"
            android:textSize="16dp"
            android:layout_weight="1.8"/>
    </LinearLayout>

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:layout_marginRight="20dp"
        android:layout_marginLeft="20dp"
        android:weightSum="2">

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Blood type : "
            android:textStyle="bold"
            android:textSize="16dp"
            android:layout_weight=".1"/>
        <EditText
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="O+"
            android:textSize="16dp"
            android:layout_weight="1.8"/>
    </LinearLayout>
```

Coding:

```
<LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:layout_marginRight="20dp"
        android:layout_marginLeft="20dp"
        android:layout_marginTop="5dp"
        android:weightSum="2">

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Plasma Donor? :"
            android:textStyle="bold"
            android:textSize="16dp"
            android:layout_weight=".1"/>
        <EditText
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="No"
            android:textSize="16dp"
            android:layout_weight="1.8"/>
</LinearLayout>
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:layout_marginRight="20dp"
    android:layout_marginLeft="20dp"
    android:layout_marginTop="5dp"
    android:weightSum="2">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Gender : "
        android:textSize="16dp"
        android:textStyle="bold"
        android:layout_weight=".1"/>
    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Male"
        android:textSize="16dp"
        android:layout_weight="1.8"/>
</LinearLayout>
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:layout_marginRight="20dp"
    android:layout_marginLeft="20dp"
    android:layout_marginTop="5dp"
    android:weightSum="2">
```

Coding:

```
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Address : "
            android:textStyle="bold"
            android:textSize="16dp"
            android:layout_weight=".05"
            android:layout_marginRight="8dp"/>
        <EditText
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:textSize="16dp"
            android:text=" Dhaka "
            android:layout_weight="1.8"/>
    </LinearLayout>
        <Button
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_gravity="bottom"
            android:background="@drawable/shapelogin_red"
            android:layout_marginRight="15dp"
            android:layout_marginLeft="15dp"
            android:text="Save"
            android:textColor="#fff"
            android:onClick="Save"
            android:layout_marginTop="40dp"
            android:layout_marginBottom="10dp"/>
    </LinearLayout>
</ScrollView>
</LinearLayout>
```

4.5 Registration Page

This is the Registration page.

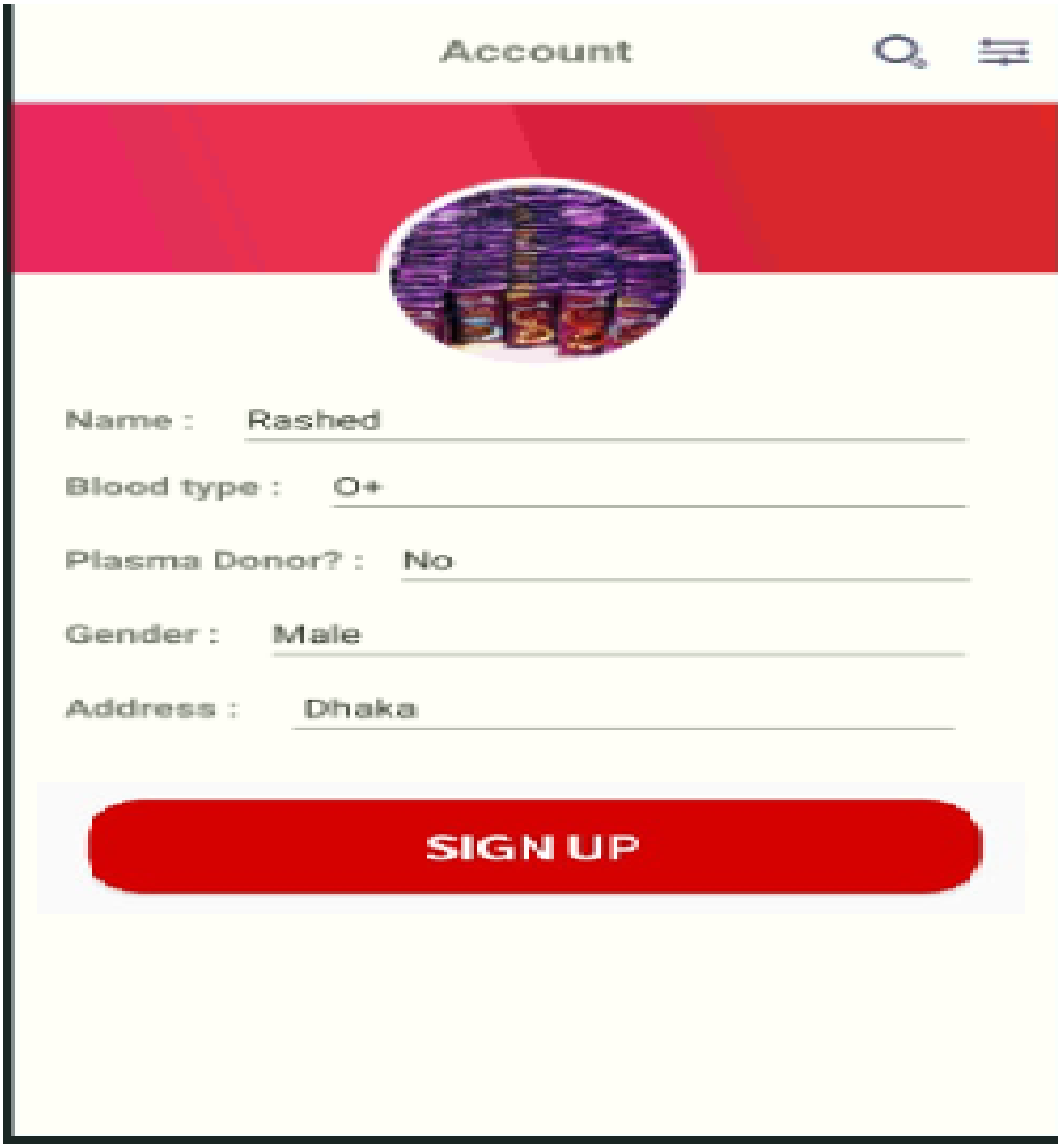


Figure 4.5: Registration Page

Coding:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context="com.jetlight.rashed.BloodPlasmaBot.ProfileActivity"
    android:orientation="vertical">

    <RelativeLayout
        android:layout_width="match_parent"
        android:layout_height="65dp"
        android:background="@drawable/card_background">

        <de.hdodenhof.circleimageview.CircleImageView
            android:layout_width="45dp"
            android:layout_height="45dp"
            android:background="@drawable/circle"
            android:padding="5dp"
            android:src="@mipmap/profile"
            android:layout_centerVertical="true"
            android:layout_marginLeft="10dp"
            android:onClick="MyProfile"/>

        <ImageView
            android:layout_width="25dp"
            android:layout_height="25dp"
            android:background="#fff"
            android:src="@mipmap/search"
            android:layout_centerVertical="true"
            android:layout_alignParentRight="true"
            android:layout_marginRight="50dp"/>
        <ImageView
            android:layout_width="25dp"
            android:layout_height="25dp"
            android:background="#fff"
            android:src="@mipmap/settings"
            android:layout_centerVertical="true"
            android:layout_alignParentRight="true"
            android:layout_marginRight="10dp"/>

        <TextView
            android:layout_width="120dp"
            android:layout_height="30dp"
            android:background="#fff"
            android:text="Profile"
            android:textSize="20dp"
            android:textAlignment="center"
            android:textStyle="bold"
            android:layout_centerVertical="true"
            android:layout_centerInParent="true"/>
    </RelativeLayout>

<ScrollView
    android:layout_width="match_parent"
    android:layout_height="wrap_content">
```

Coding:

```
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical">
        <ImageView
            android:layout_width="match_parent"
            android:layout_height="150dp"
            android:background="@drawable/background_radian"/>

        <de.hdodenhof.circleimageview.CircleImageView
            android:id="@+id/icon"
            android:layout_width="125dp"
            android:layout_height="125dp"
            android:layout_centerHorizontal="true"
            android:background="@drawable/circle_bold"
            android:padding="5dp"
            android:src="@mipmap/avatar2"
            tools:ignore="MissingConstraints"
            android:layout_gravity="center"
            android:layout_marginTop="-62dp"/>
        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="ABC"
            android:textColor="#000"
            android:textSize="25dp"
            android:textAlignment="center"/>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="33dp"
    android:layout_marginTop="-5dp"
    android:orientation="horizontal"
    android:weightSum="2">

    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_weight=".08"/>

    <TextView
        android:layout_width="386dp"
        android:layout_height="match_parent"
        android:layout_weight=".97"
        android:gravity="left"
        android:text="12 Miles"
        android:textAlignment="center"
        android:textStyle="bold"/>
</LinearLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:layout_marginRight="20dp"
    android:layout_marginLeft="20dp"
    android:layout_marginTop="25dp"
    android:weightSum="2">
```

Coding:

```
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Blood type : "
        android:textStyle="bold"
        android:textSize="16dp"
        android:layout_weight=".1"/>
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="O+"
        android:textSize="16dp"
        android:layout_weight="1.8"/>
</LinearLayout>
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:layout_marginRight="20dp"
    android:layout_marginLeft="20dp"
    android:layout_marginTop="5dp"
    android:weightSum="2">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Plasma Donor? : "
        android:textStyle="bold"
        android:textSize="16dp"
        android:layout_weight=".1"/>
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="No"
        android:textSize="16dp"
        android:layout_weight="1.8"/>
</LinearLayout>

     <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="horizontal"
            android:layout_marginRight="20dp"
            android:layout_marginLeft="20dp"
            android:layout_marginTop="5dp"
            android:weightSum="2">

            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="Gender : "
                android:textSize="16dp"
                android:textStyle="bold"
                android:layout_weight=".1"/>
```

Coding:

```
            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="Male"
                android:textSize="16dp"
                android:layout_weight="1.8"/>
        </LinearLayout>
        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="horizontal"
            android:layout_marginRight="20dp"
            android:layout_marginLeft="20dp"
            android:layout_marginTop="5dp"
            android:weightSum="2">

            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="Address : "
                android:textStyle="bold"
                android:textSize="16dp"
                android:layout_weight=".05"
                android:layout_marginRight="8dp"/>
            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:textSize="16dp"
                android:text="Dhaka "
                android:layout_weight="1.8"/>
        </LinearLayout>
    </LinearLayout>
</ScrollView>
<RelativeLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent">
        <Button
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_gravity="bottom"
            android:background="@drawable/shapelogin_red"
            android:layout_marginRight="15dp"
            android:layout_marginLeft="15dp"
            android:layout_marginBottom="10dp"
            android:text="Call Now"
            android:textColor="#fff"
            android:layout_alignParentBottom="true"
            android:onClick="CallHim"/>
    </RelativeLayout>
</LinearLayout>
```

4.6 Donor List

This is the Donor List.

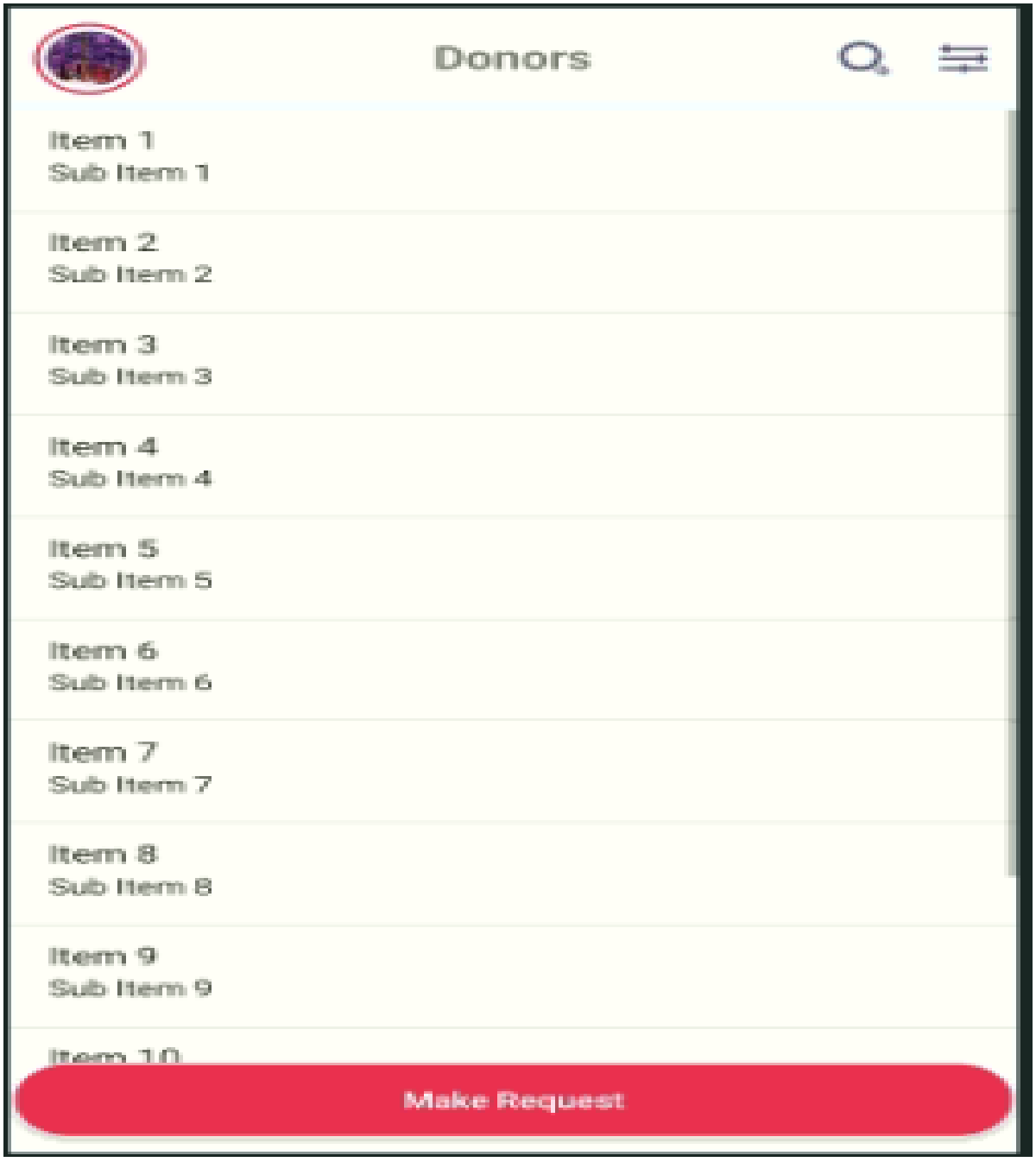


Figure 4.6: Donor List

Coding:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context="com.jetlight.rashed.BloodPlasmaBot.DonorActivity"
    android:orientation="vertical">

    <RelativeLayout
        android:layout_width="match_parent"
        android:layout_height="65dp"
        android:background="@drawable/card_background">

        <de.hdodenhof.circleimageview.CircleImageView
            android:id="@+id/icon"
            android:layout_width="45dp"
            android:layout_height="45dp"
            android:background="@drawable/circle"
            android:padding="5dp"
            android:src="@mipmap/profile"
            android:layout_centerVertical="true"
            android:layout_marginLeft="10dp"
            android:onClick="MyProfile"/>

        <ImageButton
            android:layout_width="25dp"
            android:layout_height="25dp"
            android:background="@mipmap/search"
            android:layout_centerVertical="true"
            android:layout_alignParentRight="true"
            android:layout_marginRight="50dp"
            android:onClick="GoSearch"
            />
        <ImageView
            android:layout_width="25dp"
            android:layout_height="25dp"
            android:background="#fff"
            android:src="@mipmap/settings"
            android:layout_centerVertical="true"
            android:layout_alignParentRight="true"
            android:layout_marginRight="10dp"/>

        <TextView
            android:layout_width="120dp"
            android:layout_height="30dp"
            android:background="#fff"
            android:text="Donors"
            android:textSize="20dp"
            android:textAlignment="center"
            android:textStyle="bold"
            android:layout_centerVertical="true"
            android:layout_centerInParent="true"/>
    </RelativeLayout>
```

Coding:

```
    <RelativeLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent">
        <ListView
            android:id="@+id/list"
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:layout_marginBottom="48dp"
            />
        <Button
            android:id="@+id/btnRequest"
            android:layout_alignParentBottom="true"
            android:background="@drawable/shapelogin_red"
            android:textColor="#fff"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:textAllCaps="false"
            android:layout_marginLeft="1dp"
            android:layout_marginRight="1dp"
            android:text="Make Request"
            android:layout_marginBottom="10dp"
            android:onClick="Request"
            />
    </RelativeLayout>
</LinearLayout>
```

4.7 Status List

This is the Status List.

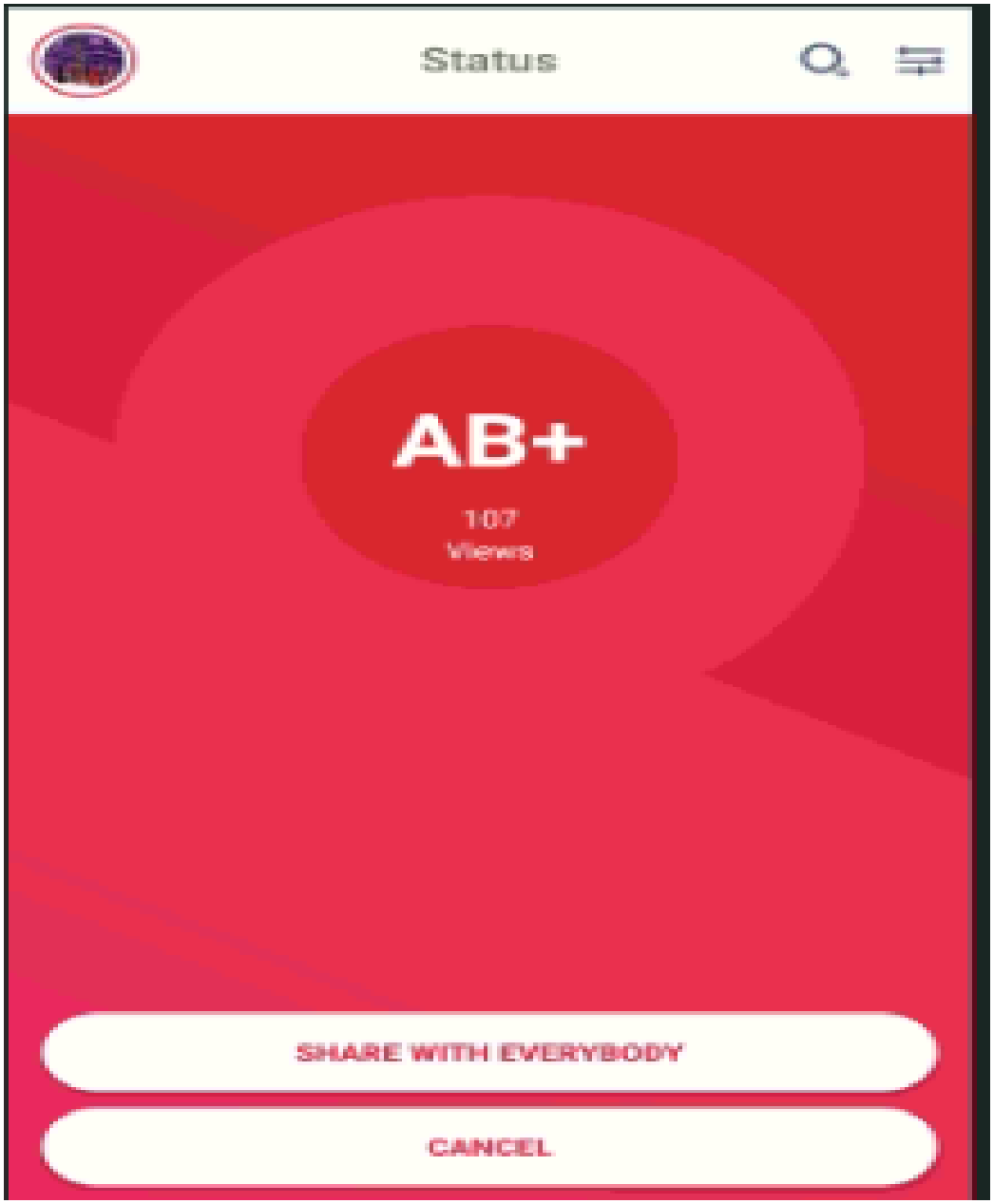


Figure 4.7: Status List

Coding:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:background="@drawable/background_radian"
    tools:context="com.jetlight.rashed.BloodPlasmaBot.StatusActivity">
    <RelativeLayout
        android:layout_width="match_parent"
        android:layout_height="65dp"
        android:background="@drawable/card_background">

        <de.hdodenhof.circleimageview.CircleImageView
            android:layout_width="45dp"
            android:layout_height="45dp"
            android:background="@drawable/circle"
            android:padding="5dp"
            android:src="@mipmap/profile"
            android:layout_centerVertical="true"
            android:layout_marginLeft="10dp"
            android:onClick="MyProfile"/>

        <ImageView
            android:layout_width="25dp"
            android:layout_height="25dp"
            android:background="#fff"
            android:src="@mipmap/search"
            android:layout_centerVertical="true"
            android:layout_alignParentRight="true"
            android:layout_marginRight="50dp"/>
        <ImageView
            android:layout_width="25dp"
            android:layout_height="25dp"
            android:background="#fff"
            android:src="@mipmap/settings"
            android:layout_centerVertical="true"
            android:layout_alignParentRight="true"
            android:layout_marginRight="10dp"/>

        <TextView
            android:layout_width="120dp"
            android:layout_height="30dp"
            android:background="#fff"
            android:text="Status"
            android:textSize="20dp"
            android:textAlignment="center"
            android:textStyle="bold"
            android:layout_centerVertical="true"
            android:layout_centerInParent="true"/>
    </RelativeLayout>
```

Coding:

```
<RelativeLayout
    android:layout_width="320dp"
    android:layout_height="320dp"
    android:layout_gravity="center"
    android:layout_marginTop="50dp"
    android:gravity="center">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
        android:background="@drawable/circle_red_no_border_lighter"
        android:layout_centerInParent="true"
        android:layout_centerVertical="true">
        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:orientation="vertical"
            android:layout_margin="40dp"
            android:background="@drawable/circle_red_no_border">
            <LinearLayout
                android:layout_width="match_parent"
                android:layout_height="match_parent"
                android:orientation="vertical"
                android:layout_margin="40dp"
                android:background="@drawable/circle_red_no_border_darker"
                android:gravity="center">
                <TextView
                    android:layout_width="match_parent"
                    android:layout_height="wrap_content"
                    android:text="AB+"
                    android:textSize="45dp"
                    android:gravity="center"
                    android:textStyle="bold"
                    android:textColor="#fff"
                    android:layout_marginTop="25dp"
                    android:layout_gravity="center" />
                <TextView
                    android:layout_width="match_parent"
                    android:layout_height="wrap_content"
                    android:text="107"
                    android:gravity="center"
                    android:textColor="#fff"
                    android:layout_marginTop="10dp"
                    android:layout_gravity="bottom" />
                <TextView
                    android:layout_width="match_parent"
                    android:layout_height="wrap_content"
                    android:text="Views"
                    android:gravity="center"
                    android:textColor="#fff"
                    android:layout_gravity="bottom" />
            </LinearLayout>
        </LinearLayout>
    </LinearLayout>
```

Coding:

```
    </RelativeLayout>
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text=""/>
    <RelativeLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent">
        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="vertical"
            android:layout_alignParentBottom="true">
            <Button
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:layout_gravity="bottom"
                android:background="@drawable/shapelogin_grey"
                android:layout_marginRight="15dp"
                android:layout_marginLeft="15dp"
                android:layout_marginBottom="10dp"
                android:text="Share with everybody"
                android:textStyle="bold"
                android:textColor="#DE2D48"
                android:onClick="SocialMedia"/>
            <Button
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:layout_gravity="bottom"
                android:background="@drawable/shapelogin_grey"
                android:layout_marginRight="15dp"
                android:layout_marginLeft="15dp"
                android:layout_marginBottom="10dp"
                android:text="Cancel"
                android:textStyle="bold"
                android:textColor="#DE2D48"
                android:onClick="GoToDonnors"/>
        </LinearLayout>

    </RelativeLayout>
</LinearLayout>
```

4.8 Search Menu

This is the Search Menu.

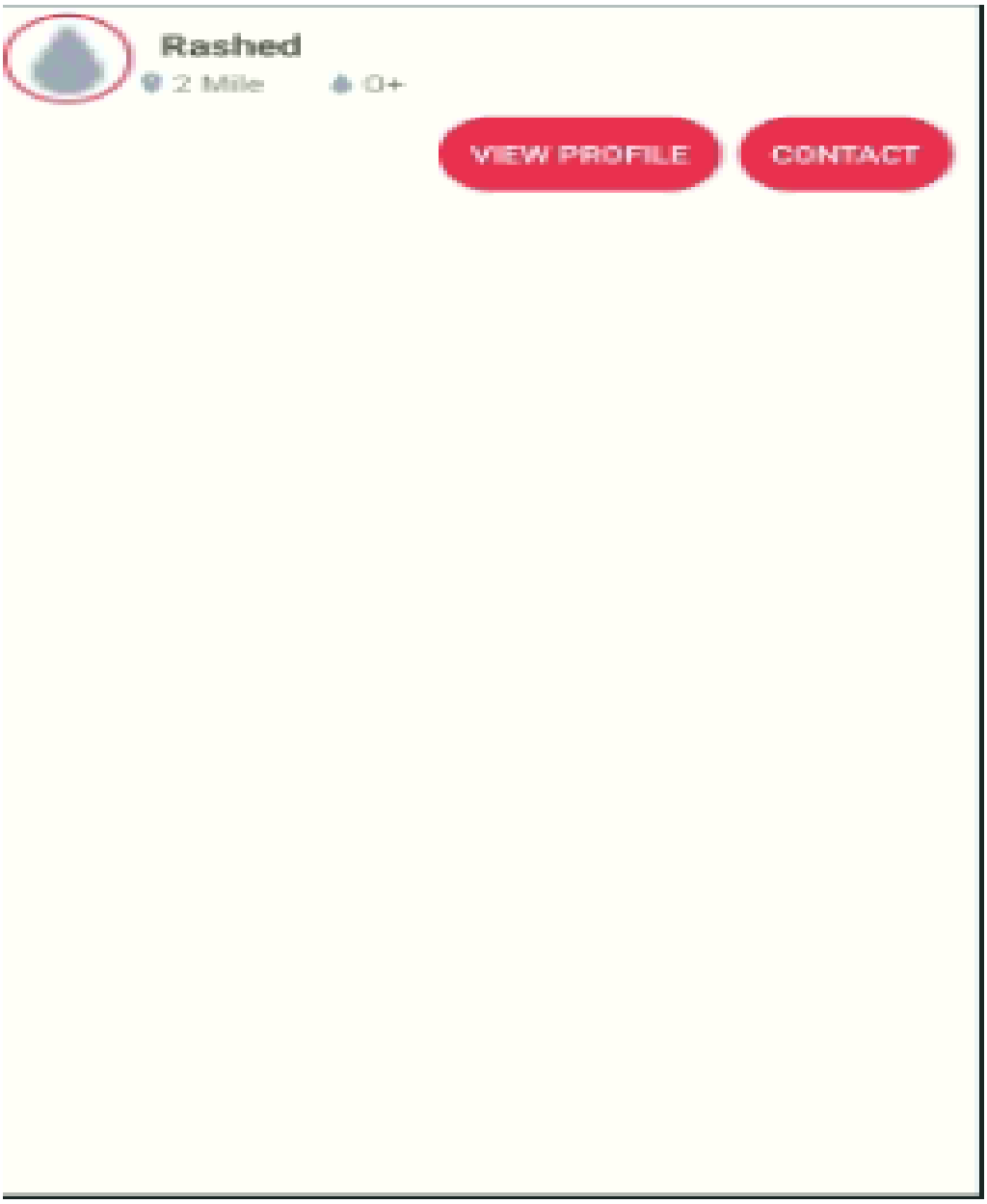


Figure 4.8.1: Search menu

Coding:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="horizontal"
    android:paddingTop="5dp">

    <de.hdodenhof.circleimageview.CircleImageView
        android:id="@+id/icon"
        android:layout_width="55dp"
        android:layout_height="55dp"
        android:src="@mipmap/blood_icon"
        android:background="@drawable/circle"
        android:padding="5dp" />

    <LinearLayout android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="vertical">

        <TextView
            android:id="@+id/title"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Rashed"
            android:textStyle="bold"
            android:textAppearance="?android:attr/textAppearanceMedium"
            android:layout_marginLeft="10dp"
            android:layout_marginTop="5dp"
            android:padding="2dp"
            android:textColor="#4d4d4d" />
        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="horizontal">
            <ImageView
                android:layout_width="15dp"
                android:layout_height="15dp"
                android:src="@mipmap/location"
                android:layout_gravity="center"
                android:layout_marginRight="-8dp"/>
            <TextView
                android:id="@+id/subtitle"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="2 Mile"
                android:layout_marginLeft="10dp"/>

            <ImageView
                android:layout_width="15dp"
                android:layout_height="15dp"
                android:src="@mipmap/blood_icon"
                android:layout_gravity="center"
                android:layout_marginLeft="25dp"
                android:layout_marginRight="2dp"/>
            <TextView
```

Coding:

```
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="0+"/>
        </LinearLayout>

        <RelativeLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content">
            <LinearLayout
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:orientation="horizontal"
                android:layout_alignParentRight="true"
                android:layout_marginTop="10dp">
                <Button
                    android:layout_width="wrap_content"
                    android:layout_height="wrap_content"
                    android:text="View Profile"
                    android:layout_marginRight="5dp"
                    android:textColor="#fff"
                    android:background="@drawable/shapelogin_red"
                    android:onClick="ViewProfile"/>
                <Button
                    android:layout_width="wrap_content"
                    android:layout_height="wrap_content"
                    android:text="Contact"
                    android:layout_marginRight="10dp"
                    android:layout_marginBottom="8dp"
                    android:textColor="#fff"
                    android:background="@drawable/shapelogin_red"
                    android:onClick="CallHim"/>
            </LinearLayout>
        </RelativeLayout>
    </LinearLayout>
</LinearLayout>
```

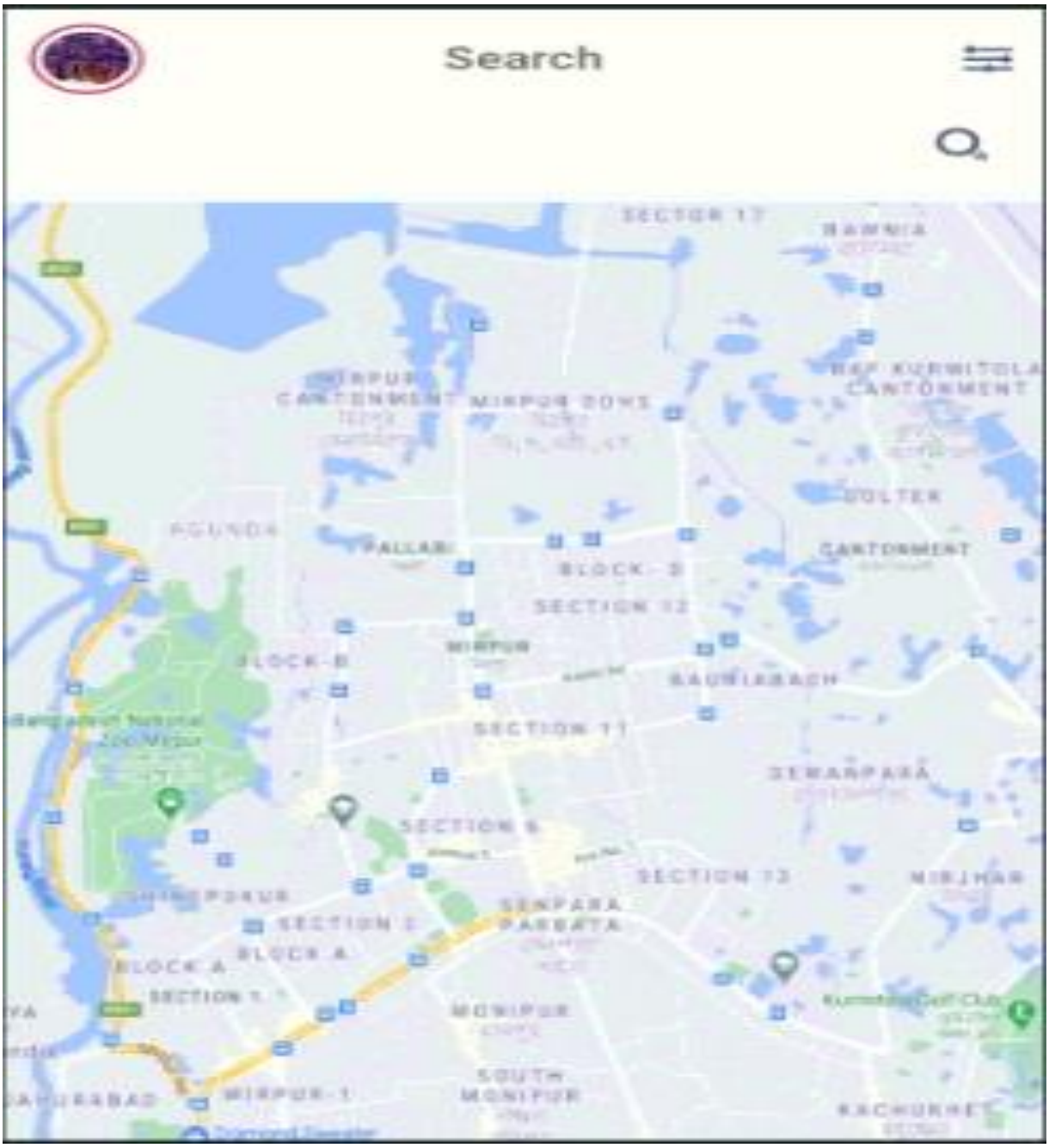


Figure 4.8.2: Google Location menu

Coding:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context="com.jetlight.rashed.BloodPlasmaBot.SearchActivity"
    android:orientation="vertical">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="vertical"
        android:background="@drawable/card_background">

        <RelativeLayout
            android:layout_width="match_parent"
            android:layout_height="65dp">

            <de.hdodenhof.circleimageview.CircleImageView
                android:layout_width="45dp"
                android:layout_height="45dp"
                android:background="@drawable/circle"
                android:padding="5dp"
                android:src="@mipmap/profile"
                android:layout_centerVertical="true"
                android:layout_marginLeft="10dp"
                android:onClick="MyProfile"/>

            <ImageView
                android:layout_width="25dp"
                android:layout_height="25dp"
                android:background="#fff"
                android:src="@mipmap/settings"
                android:layout_centerVertical="true"
                android:layout_alignParentRight="true"
                android:layout_marginRight="10dp"/>

            <TextView
                android:id="@+id/section"
                android:layout_width="120dp"
                android:layout_height="30dp"
                android:background="#fff"
                android:text="Search"
                android:textSize="20dp"
                android:textAlignment="center"
                android:textStyle="bold"
                android:layout_centerVertical="true"
                android:layout_centerInParent="true"/>
        </RelativeLayout>
```

Coding:

```
        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:orientation="horizontal"
            android:layout_margin="10dp"
            android:layout_weight="2">
            <Spinner
                android:id="@+id/spinner"
                android:layout_width="wrap_content"
                android:layout_height="30dp"
                android:layout_marginBottom="10dp"
                android:layout_weight="1.2"/>
            <Spinner
                android:id="@+id/spinner2"
                android:layout_width="wrap_content"
                android:layout_height="30dp"
                android:layout_marginBottom="10dp"
                android:layout_weight=".4"/>
            <ImageView
                android:layout_width="25dp"
                android:layout_height="25dp"
                android:background="#fff"
                android:src="@mipmap/search"
                android:layout_marginRight="10dp"/>
        </LinearLayout>
    </LinearLayout>
    <ImageView xmlns:android="http://schemas.android.com/apk/res/android"
        android:id="@+id/webview"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:background="@mipmap/map"
        />
</LinearLayout>
```

CHAPTER 5

TOOLS AND TECHNOLOGY USED

5.1 Development Tools

Many tools are used to develop the Application. Some of them are used for development purpose and some of them are part of this application. Without them Blood Plasma Bot Application cannot work properly.

5.2 Android Studio

Android Studio is the official integrated development environment (IDE) for Google's Android operating system, built on JetBrains' IntelliJ IDEA software and designed specifically for Android development. It is available for download on Windows, macOS and Linux based operating systems. It is a replacement for the Eclipse Android Development Tools (ADT) as the primary IDE for native Android application development.

The following features are provided in the current stable version:

- Gradle-based build support
- Android-specific refactoring and quick fixes
- Lint tools to catch performance, usability, version compatibility and other problems
- ProGear integration and app-signing capabilities
- Template-based wizards to create common Android designs and components
- A rich layout editor that allows users to drag-and-drop UI components, option to preview layouts on multiple screen configurations
- Support for building Android Wear apps
- Built-in support for Google Cloud Platform, enabling integration with Firebase Cloud Messaging (Earlier 'Google Cloud Messaging') and Google App Engine
- Android Virtual Device (Emulator) to run and debug apps in the Android studio.

Android Studio supports all the same programming languages of IntelliJ (and CLion) e.g., Java, C++, and Kotlin etc. But we use java in Blood Finder application. Because java is a general-purpose programming language that is class-based, object-oriented, and designed to have as few implementation dependencies as possible.

5.3 Firebase Realtime Database

The Firebase Realtime Database lets you build rich, collaborative applications by allowing secure access to the database directly from client-side code. Data is persisted locally, and even while offline, Realtime events continue to fire, giving the end user a responsive experience. When the device regains connection, the real-time Database synchronizes the local data changes with the remote updates that occurred while the client was offline, merging any conflicts automatically.

The Realtime Database provides a flexible, expression-based rules language, called Firebase Realtime Database Security Rules, to define how your data should be structured and when data can be read from or written to. When integrated with Firebase Authentication, developers can define who has access to what data, and how they can access it.

The Realtime Database is a NoSQL database and as such has different optimizations and functionality compared to a relational database. The Realtime Database API is designed to only allow operations that can be executed quickly. This enables you to build a great real-time experience that can serve millions of users without compromising on responsiveness. Because of this, it is important to think about how users need to access your data and then structure it accordingly.

5.3.1 Key capabilities

I. **Real-time:** Instead of typical HTTP requests, the Firebase Realtime Database uses data synchronization every time data changes, any connected device receives that update within milliseconds. Provide collaborative and immersive experiences without thinking about networking code.

II. **Offline:** Firebase apps remain responsive even when offline because the Firebase Realtime Database SDK persists your data to disk. Once connectivity is re-established, the client device receives any changes it missed, synchronizing it with the current server state.

III. **Accessible from Client Devices:** The Firebase Realtime Database can be accessed directly from a mobile device or web browser; there's no need for an application server. Security and data validation are available through the Firebase Realtime Database Security Rules, expression-based rules that are executed when data is read or written.

IV. **Scale across multiple databases:** With Firebase Realtime Database on the Blaze pricing plan, you can support your app's data needs at scale by splitting your data across multiple database instances in the same Firebase project. Streamline authentication with Firebase Authentication on your project and authenticate users across your database instances. Control access to the data in each database with custom Firebase Realtime Database Rules for each database instance.

CHAPTER 6

CONCLUSION

6.1 introduction

Technology is introducing new innovations day by day, thus reducing the time required to do things. The proposed system can be used to reduce the time required to deliver required blood to the needy in cases of emergency. The Android application can be used by the people interested in donating their blood. The application provides a way of communication and synchronization between the seekers and the blood donor. It also provides them with the facility of communicating with the nearby donors in emergency. The database is a vital aspect of the system. The Android application is developed using Android Studio & Kotlin these are the open-source software, hence the system developed is quite feasible.

6.2 Limitations

There are some drawbacks and limitations in this software as it is a beta release and under future development process.

i. Need to install first on android before using.
ii. Platform is not independent. So, it may not run on different operating systems like iOS.
iii. Some minor bugs exist
iv. Limited features, need to explore.

6.3 Future Goals

In future, the above concept can be utilized for large scale blood plasma donation management system. Further the application will be featured with the independent and manual location tracking of donor and receiver, verification of the donor can be done with more authenticated process. the message publication or the broadcasting of advertisement process can be introduced in all the popular social media rather than only on social websites like Facebook, WhatsApp, television radio etc.

- We can update our user interface.
- Adding chat option in our system for live communication.
- We can also add chat bot services for notify every donor.
- Add google map for patient exact location.

REFFERENCES

1. En.wikipedia.org. *Android Studio.* https://en.wikipedia.org/wiki/Android_Studio
2. En.wikipedia.org. (2018). https://en.wikipedia.org/wiki/IText