CSE1901 - Technical Answers to Real World Problems (TARP)

Project Report

Anti-Bullying/ Ragging prevention App

By

19BCE1027	ARYAMAN MISHRA
19BCE1121	HASHWANTH S

B. Tech Computer Science and Engineering

Submitted to

Harini S

School of Computer Science and Engineering

VIT®

Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

April 2022

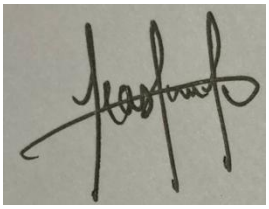
DECLARATION

I hereby declare that the report titled "**Anti bullying/Ragging Prevention App"** submitted by me to VIT Chennai is a record of bona-fide work undertaken by me under the supervision of **Harini S**, School of Computer Science and Engineering, Vellore Institute of Technology, Chennai.

Signature of the Candidate

Aryaman Mishra

19BCE1027



Hashwanth S

19BCE1121

CERTIFICATE

Certified that this project report entitled "**Anti bullying/Ragging Prevention App"** is a bonafide work of **Aryaman Mishra (19BCE1027), Hashwanth S(19BCE1121),** and they carried out the Project work under my supervision and guidance for CSE1901 - Technical Answers to Real World Problems (TARP).

Harini S

SCOPE, VIT Chennai

ACKNOWLEDGEMENT

I Would like to express my deepest gratitude to my Teacher **Harini S** Mam for contributing their valuable time and efforts in helping me out with this project. Their suggestions and feedback have helped me a lot in improving the quality of the project.

I would also like to thank my friends and family for their constant encouragement and support throughout the project. Lastly, I like to thank all my supporters who have motivated me to fulfill their project before the timeline.

ABSTRACT

Bullying is a common phenomenon in schools and universities throughout the country and there has been a concerted effort to put an end to bullying and ragging in our educational institutions. But the first step to end bullying is the students being able to report this matter to the authorities, students fear that their bullies will get to know that they have filed a complaint on them which leads to more bullying and harassing of the student, our project will try to deal with this issue.

CONTENTS

1. Introduction

1.1 Objective and goal of the project

The main objective of this project is to make an application to mitigate bullying or ragging in a way such that the user remains anonymous. Any kinds of ragging or bullying practices can be altered or shared using this project platform. The anonymous feature is to make sure that the identity of the user is safe and secure. The overall goal is to make the students to develop trust in the school or college department and turn up in order to report any harmful activities.

1.2 Problem Statement

Bullying or ragging is becoming common in most of the colleges or schools. The students being ragged or bullied is afraid of taking that issue to the staffs seeking their future revolt. This platform lets them anonymously report the activity without revealing their identity. The anti-bullying module comes under the guise of an anonymous blog posting app such that the user doesn't feel insecure about installing an app. Underneath the blog module, we will have an emergency portal which will generate address and time of usage to send out a beacon of distress or violence to curb bullying/ragging and authorities will be notified. Our application will have an report uploading option where a victim/party can upload any sort of proof that they might have to help in catching the perpetrators.

2. Literature Survey

Bullying behaviours are frequent regardless of international variation and the randomized data of the study maintains the ambiguity to quantize bullying and it’s effective anti-measures **[1]**. Safe2Tell program which is a public-private collaboration led by Colorado Attorney General John Suthers. Its objective is to provide a secure and anonymous means for all Colorado children, parents, teachers, and community members to report any concerns about their own or others' safety, with a focus on early intervention and prevention via awareness and education **[2]**.

this paper fails to validate the submitted report and the report is taken in the form of a tip rather than a proper report. **[3]** The article had researchers analyzing data from 12 databases and narratively synthesize the data to implement changes brought by parent involvement and policy changes in school/college administration which included impact of interventions which was soon ruled out to be effective yet temporary in terms of solution.The article switches to drug-use and smoking which contribute in bullying nature in people and ruled it as arbitrary evidence but still concluded that health interventions could be used in preventing bullying. **[4]** Cyber Bullying is a similar act increasing day to day. With respect to that this research was made to create a computer model that can detect and quantify cyberbullying on social networking sites. In this article, they proposed and illustrated BullyBlocker, a Facebook software that detects cyberbullying and alerts parents when it occurs. Here, this paper limits its boundary only to cyberbullying. **[5]** This study explores the edge cases of anonymous reporting channels in successfully uncovering corporate fraud. This paper explores the effectiveness of anonymous reporting systems in corporate fraud. **[6]** Bullying prevention programs can be effective in reducing bullying and victimization among school-aged youth, there is a great need for more work to increase the acceptability, fidelity, and sustainability of the existing programs in order to improve bullying-related outcomes for youth. The findings from this review are intended to inform both policy and public health practice related to bullying prevention. **[7]** This article can be used as a template for most anti-bullying applications freely available on today's devices.It is remarkable that the paper's core depth analyzes the impact and the need of such applications and yet the implementation is contrary to it's principles and usage.The paper suggests that the application will not be responsible for solving conflict or counsel it's users.The application would not moderate the contents of user's complaints and will not be responsible or liable for the content and action taken on behalf of users and his/her complaints. **[8]** This study examines the worldwide scope of corruption, discusses its social and economic effects, and presents a methodology for preventing corruption that includes corporate governance procedures, internal controls, and red flag analysis. This study limits its scope within the corruption sector. **[9]** Most principals understand the global realities of the problem—

that an estimated 15% to 30% of students nationwide are either bullies or victims; that bullying encompasses a spectrum of aggressive behaviours ranging from overt acts of physical violence to far more subtle, yet equally destructive. Paper **[10]** evaluates the effects of an anti-bullying intervention programme targeting the group as a whole. Class teachers who attended a 1-year training course carried out the interventions in school classes. **[11]** Differences in bullying rates between schools could be explained by school efficacy. This study examined the relationships among teachers' perceptions of principals' practices, school climate, and school collective efficacy to prevent bullying. The sample comprises 403 Mexican elementary-school teachers; 35% were male, and 65% were female. **[12]** The anonymous applications allow users to send messages to other users while concealing their true identities. People can debate or exchange unusual or unwelcome messages with others anonymously, which may be subject to greater scrutiny if shared on other traditional forums.

3 Requirements Specification

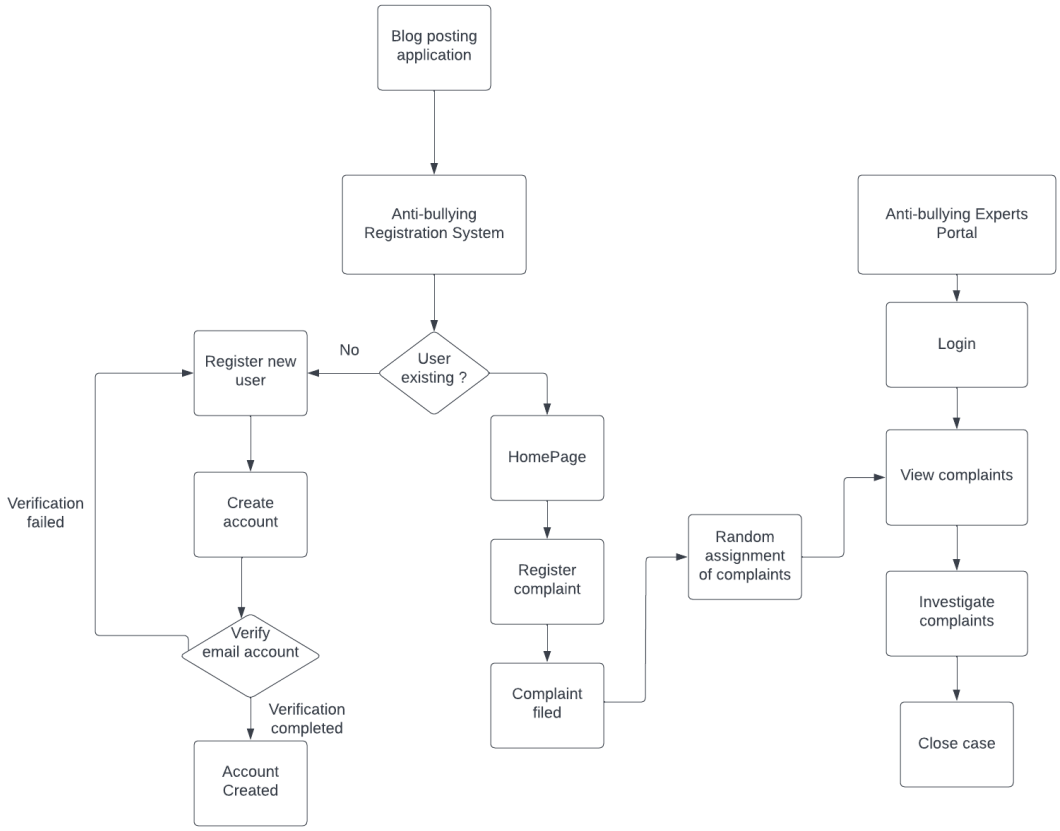
3.1 Hardware Requirements

- Windows 7 or higher, Smart phone (android version 11 or higher) with internet connectivity

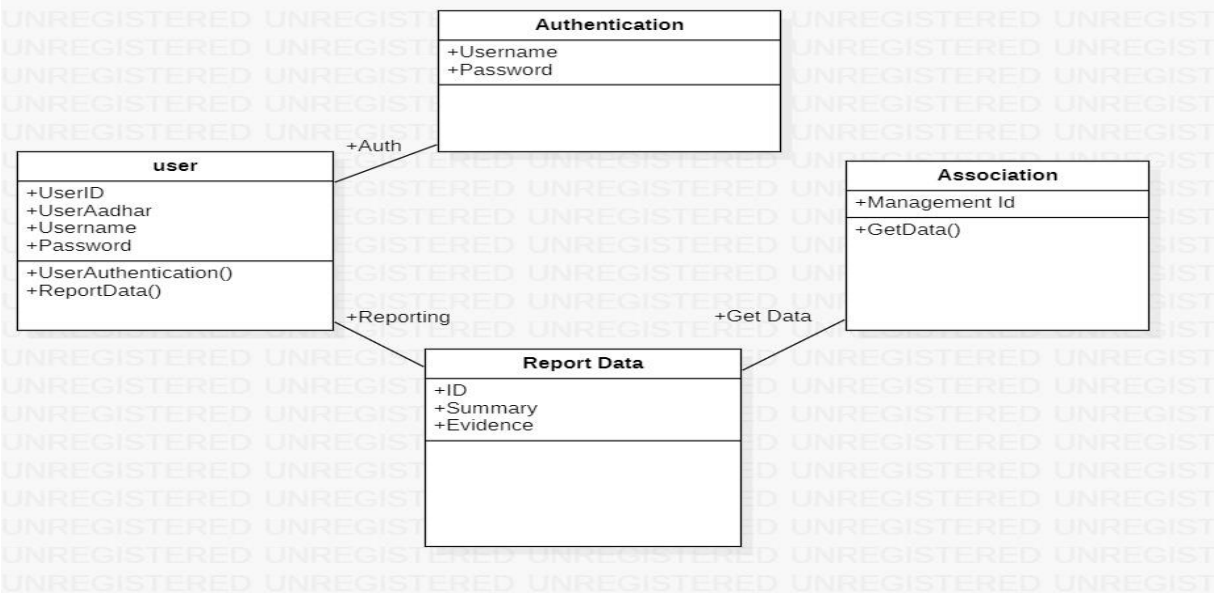
3.2 Software Requirements

- Android studio
- Firebase
- Java jdk 8.1

4 System Design



5 Implementation of System



6. Results and Discussion

The Application allows the user to report any kind of bullying or ragging activity. Once the user tries to report a crime, certain details are collected including personal details along with register number. The personal details and Register number is for future safety purpose in case of any submission of fake or false data, the reporter will be subjected to punishment. Once the user submits the details, the details are stored in the cloud storage and is assigned to a specific staff. Now, the staff can login in the application and view the list of assigned reports specific and exclusive to them. They can access the reports and Once they open and see a report, the user's report status turns to seen state. Thus confirming that the staff has seen the report. The staff can change the status of the report to either completed or investigating based on the current process. Later, when the action is taken over the report and the case is closed, the report status is then turned to case closed which confirms that the activity of ragging/bullying is taken into concern and the needful is done. Thus the application works efficiently. The whole module of report is disguised under the blog module. In the blog module, students can post their view and use it as a normal usual blog application. The posted blog data can also be verified manually by the staff in case of any disgraceful blog posts.

7. Conclusion and Future Work

Using Anti-bullying application we provide the users a safe and secure way to register their complaints anonymously. The users identity remains hidden even to the expert who handles the complaints.

Future work would include an AI assisted chatbot, providing 24/7 service to users Complete application would be hosted on a cloud platform to reduce the storage, handle traffic and increase the performance and reduce latency of the application.

8. REFERENCES

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[11] Reyes Rodriguez, Ana & Valdés, Angel & Vera Noriega, Jose & Parra-Perez, Lizeth G. Principal's Practices and School's Collective Efficacy to Preventing Bullying: The Mediating Role of School Climate. 2021

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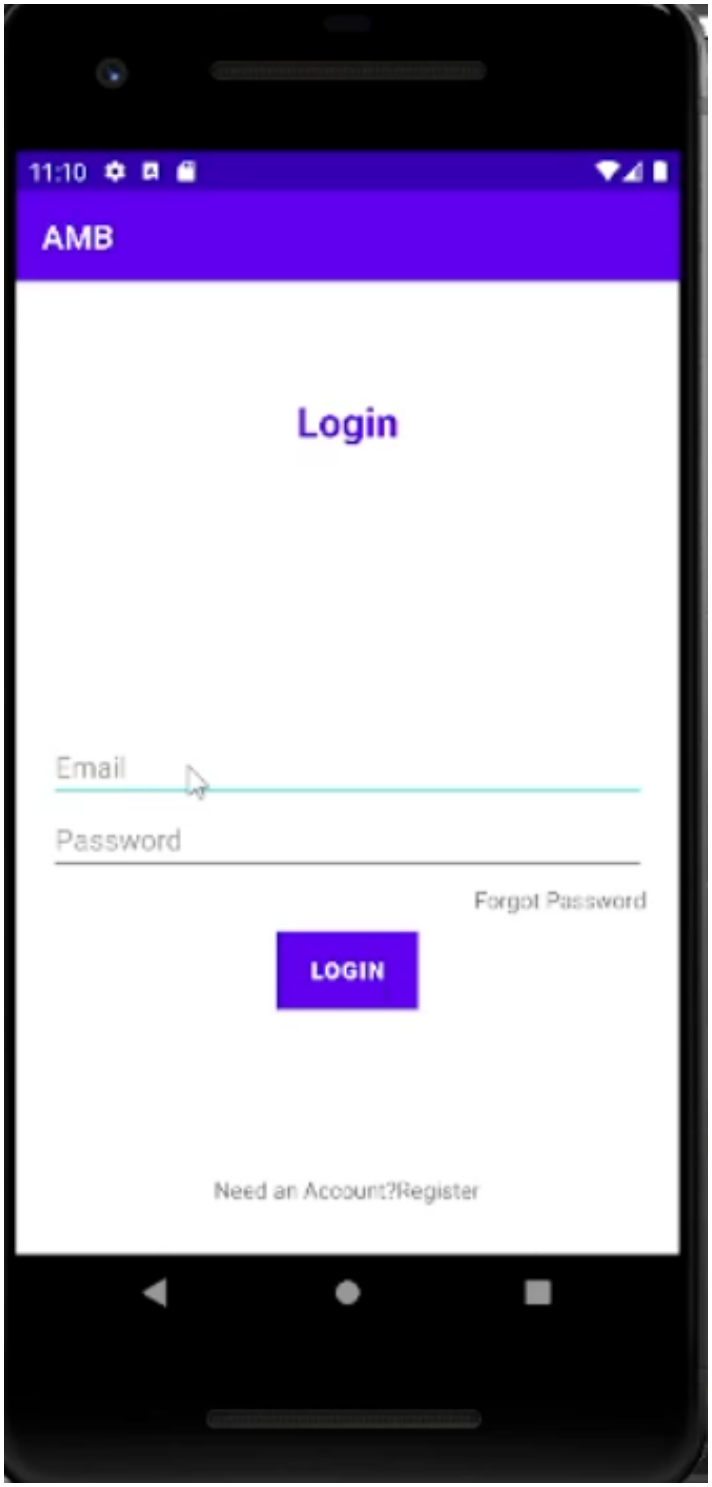
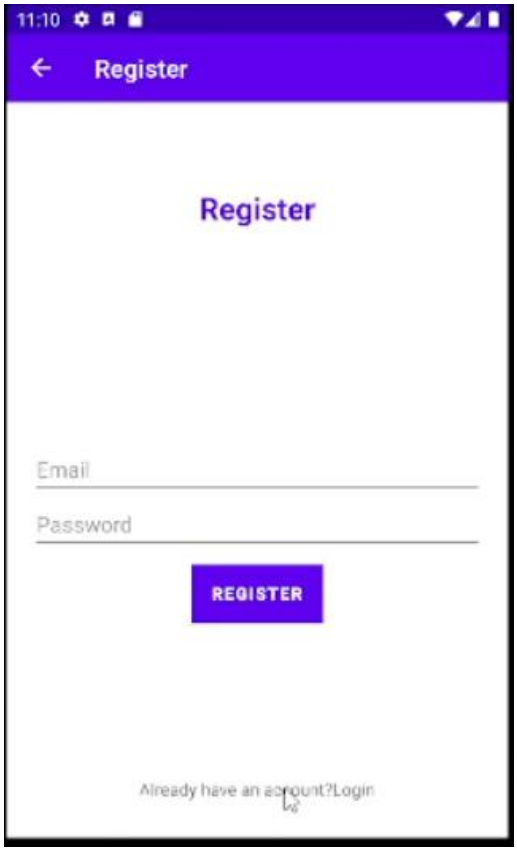
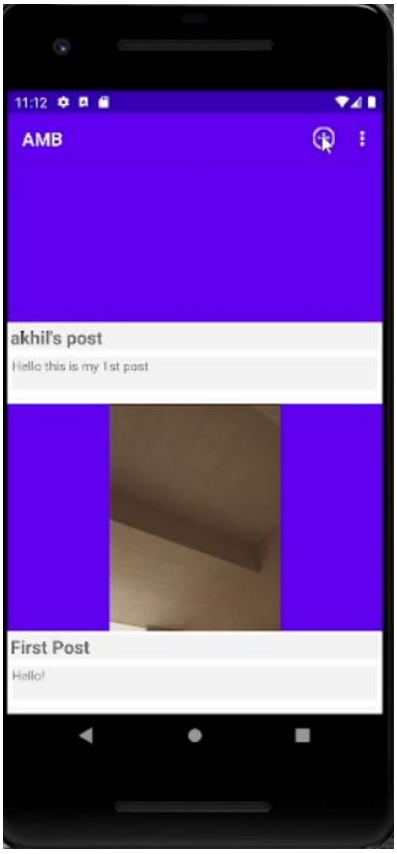
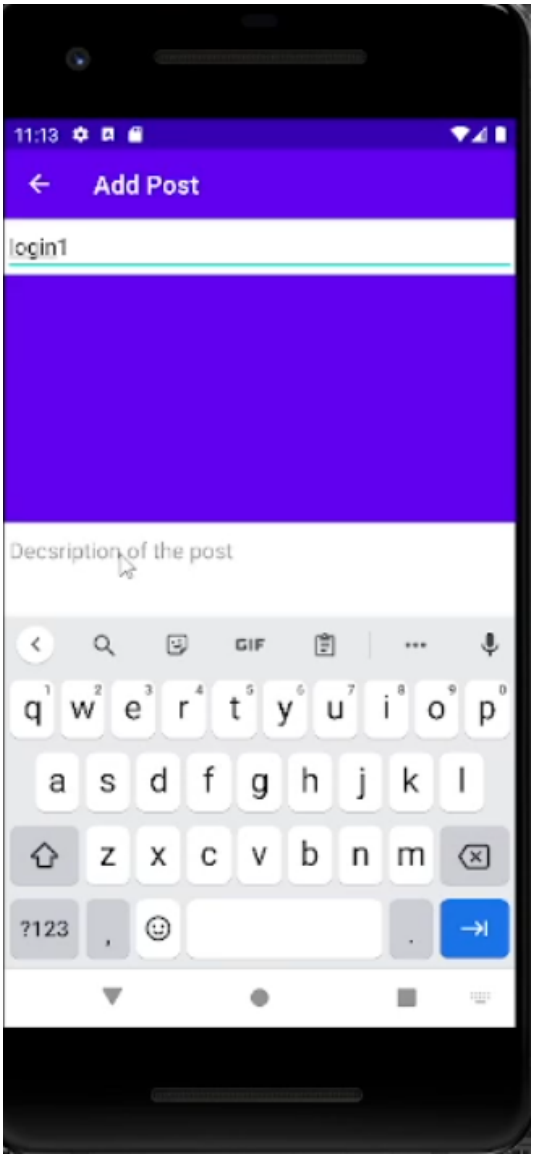
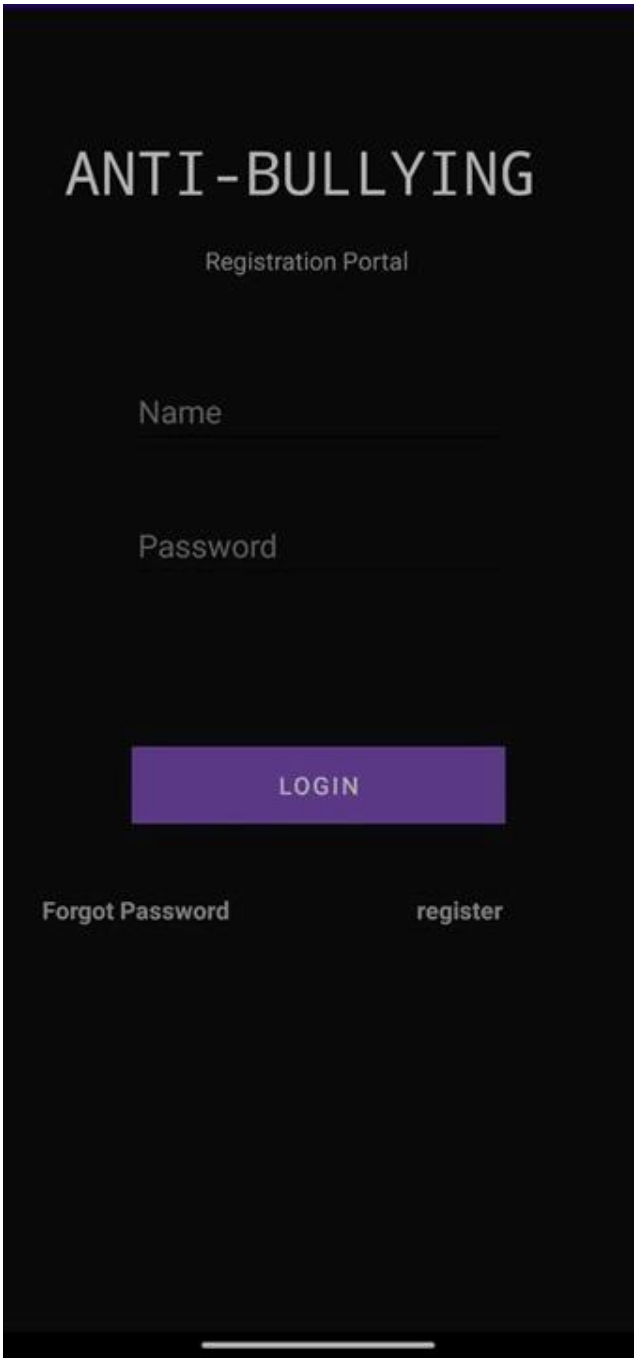
APPENDIX

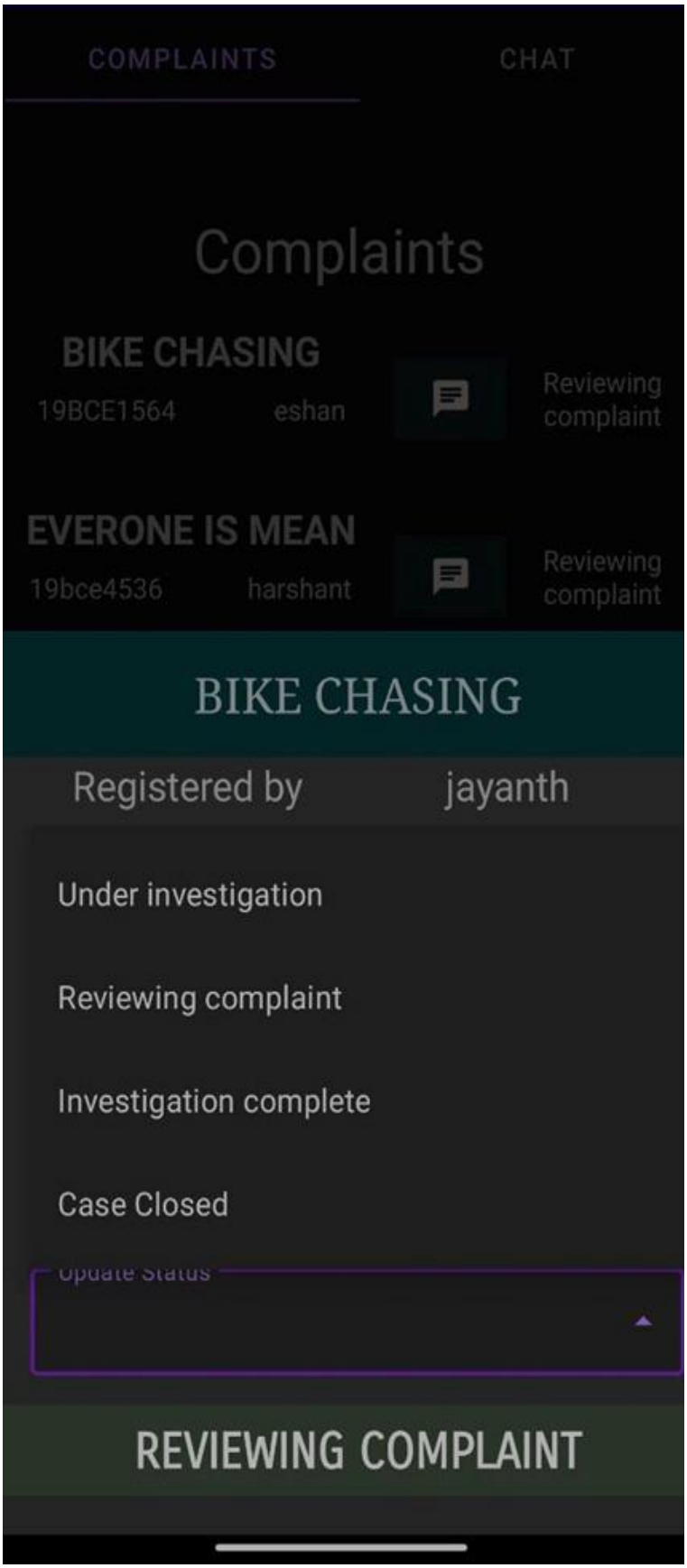

11:10
AMB
Login
Email
Password
Forgot Password
LOGIN
Need an Account?Register

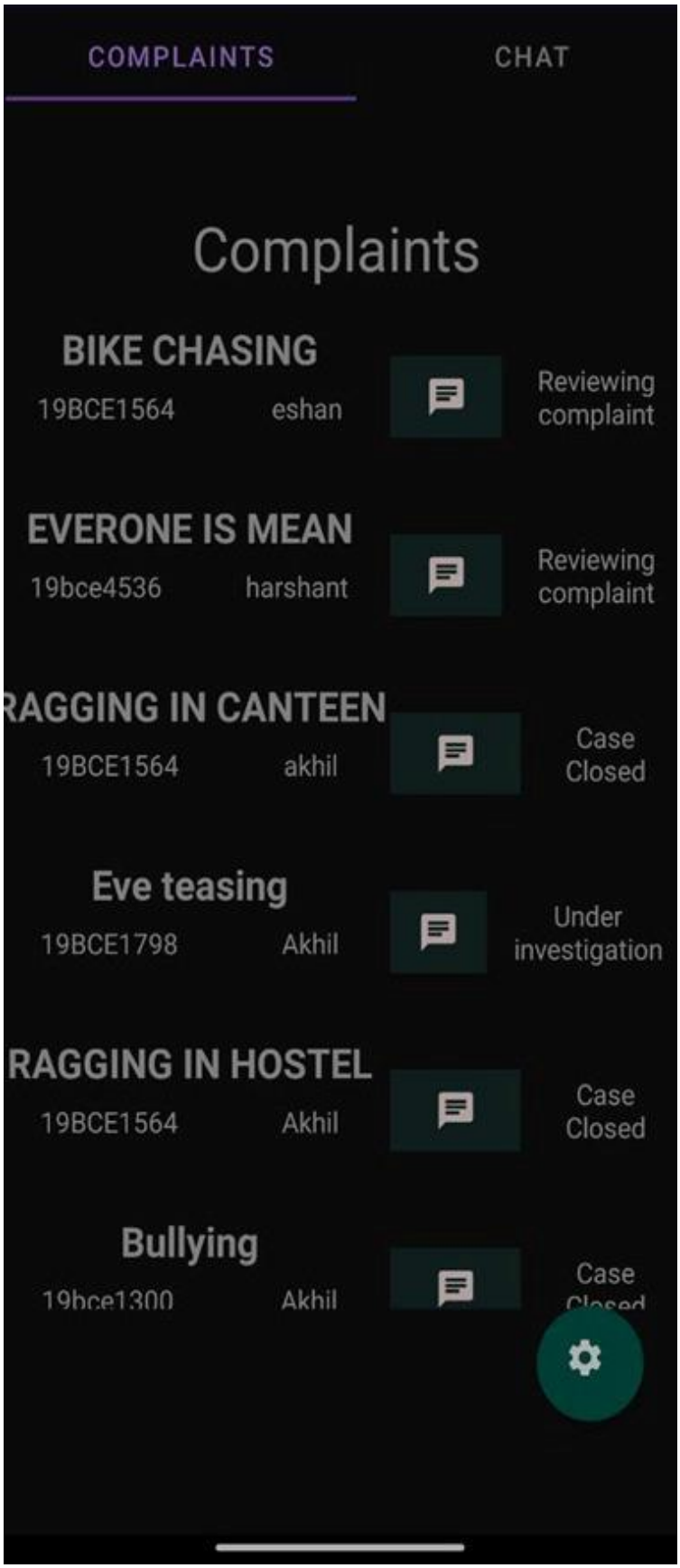

11:10
Register
Register
Email
Password
REGISTER
Already have an account?Login

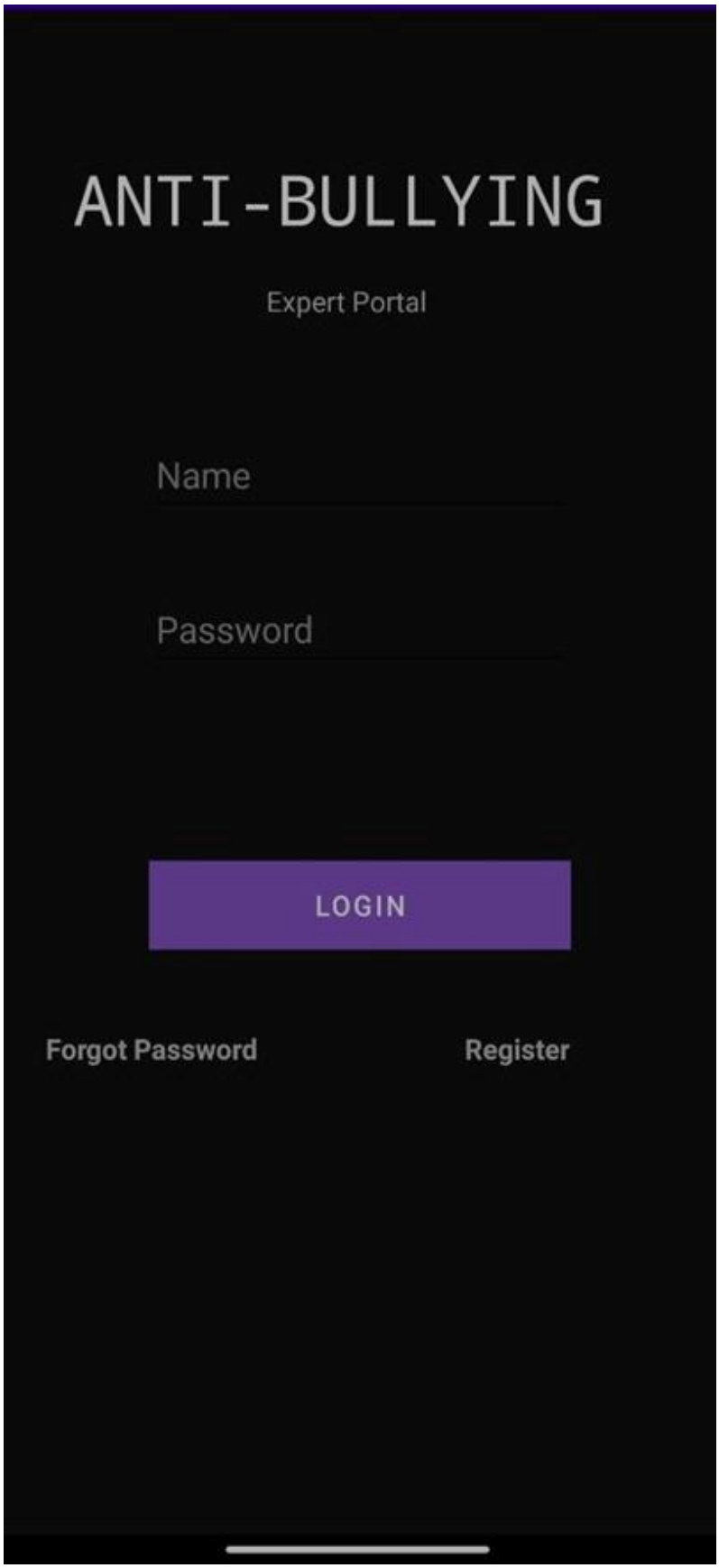

11:12
AMB
akhil's post
Hello this is my 1st post
First Post
Hello!

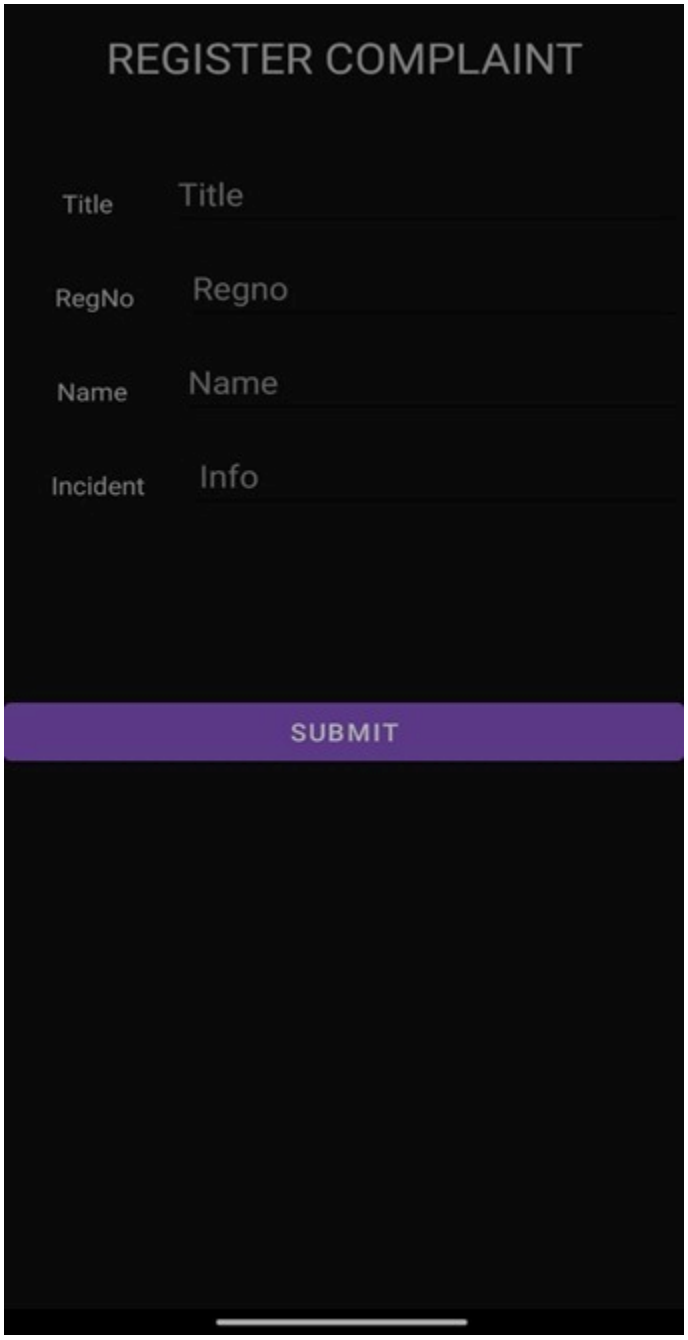

11:13
Add Post
login1
Decsription of the post
GIF
q w e r t y u i o p
a s d f g h j k l
z x c v b n m
?123

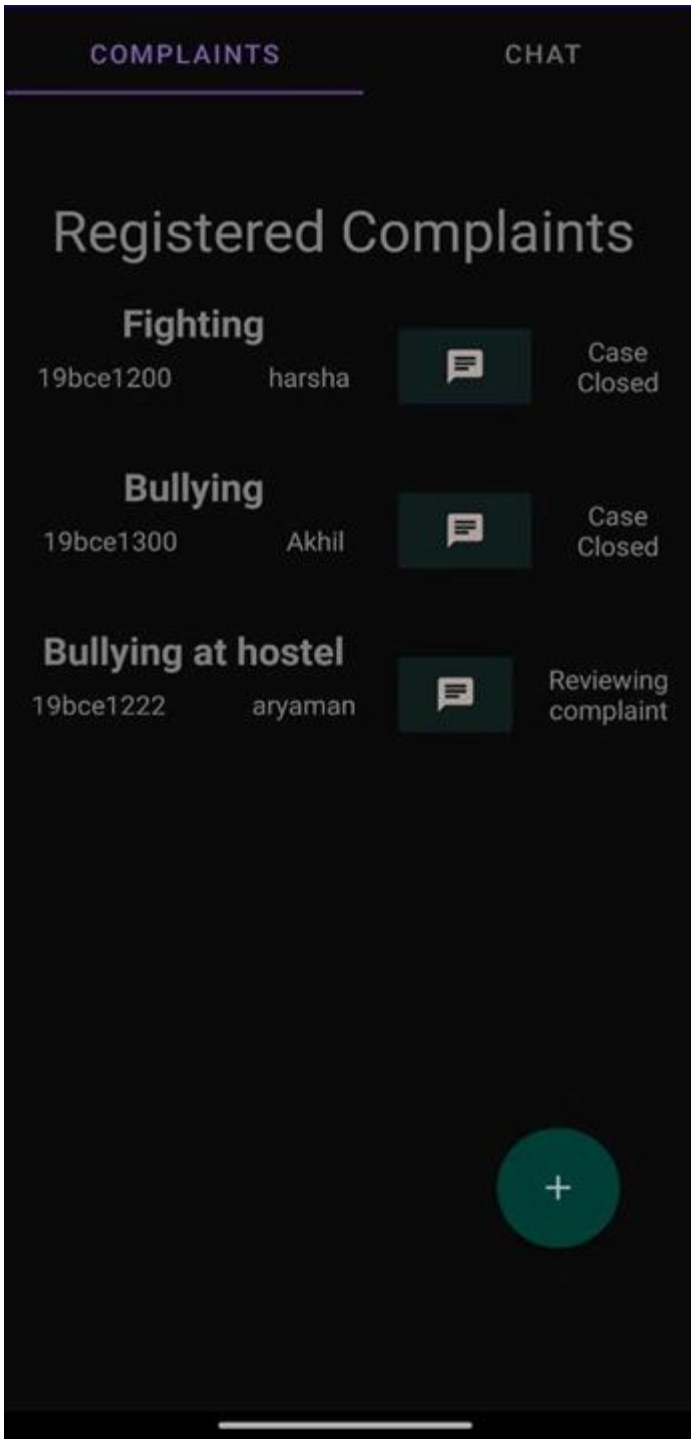

ANTI-BULLYING
Registration Portal
Name
Password
LOGIN
Forgot Password
register


COMPLAINTS
CHAT
Complaints
BIKE CHASING
19BCE1564
eshan
Reviewing complaint
EVERONE IS MEAN
19bce4536
harshant
Reviewing complaint
BIKE CHASING
Registered by
jayanth
Under investigation
Reviewing complaint
Investigation complete
Case Closed
Update Status
REVIEWING COMPLAINT


COMPLAINTS
CHAT
Complaints
BIKE CHASING
19BCE1564 eshan
Reviewing complaint
EVERONE IS MEAN
19bce4536 harshant
Reviewing complaint
RAGGING IN CANTEEN
19BCE1564 akhil
Case Closed
Eve teasing
19BCE1798 Akhil
Under investigation
RAGGING IN HOSTEL
19BCE1564 Akhil
Case Closed
Bullying
19bce1300 Akhil
Case


ANTI-BULLYING
Expert Portal
Name
Password
LOGIN
Forgot Password
Register


REGISTER COMPLAINT
Title
Title
RegNo
Regno
Name
Name
Incident
Info
SUBMIT



Homeactivity.java

```
package com.example.amb;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
```

```
import androidx.recyclerview.widget.LinearLayoutManager;
import androidx.recyclerview.widget.RecyclerView;

import android.content.Intent;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.widget.Toast;

import com.example.amb.Adapter.PostAdapter;
import com.example.amb.Model.PostModel;
import com.google.firebase.auth.FirebaseAuth;
import com.google.firebase.database.DataSnapshot;
import com.google.firebase.database.DatabaseError;
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;
import com.google.firebase.database.ValueEventListener;

import java.util.ArrayList;
import java.util.List;

public class HomeActivity extends AppCompatActivity {

    FirebaseAuth auth;
    RecyclerView recyclerView;
    PostAdapter postAdapter;
    List<PostModel> postModelList;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_home);
```

```
    auth=FirebaseAuth.getInstance();
    recyclerView=findViewById(R.id.recyclerView);

    LinearLayoutManager layoutManager=new LinearLayoutManager(this);
    layoutManager.setStackFromEnd(true);
    layoutManager.setReverseLayout(true);

    recyclerView.setLayoutManager(layoutManager);
    postModelList=new ArrayList<>();

    //get data from firebase
    loadPosts();
}

private void loadPosts() {

    DatabaseReference ref = FirebaseDatabase.getInstance().getReference("Posts");
    ref.addValueEventListener(new ValueEventListener() {
        @Override
        public void onDataChange(@NonNull DataSnapshot dataSnapshot) {
            postModelList.clear();
            for (DataSnapshot ds: dataSnapshot.getChildren()){
                PostModel postModel = ds.getValue(PostModel.class);
                postModelList.add(postModel);
                postAdapter = new PostAdapter(HomeActivity.this , postModelList);
                recyclerView.setAdapter(postAdapter);
            }
        }

        @Override
```

```
        public void onCancelled(@NonNull DatabaseError databaseError) {
            Toast.makeText(HomeActivity.this, ""+databaseError,
Toast.LENGTH_SHORT).show();
        }
    });
  }

  @Override
  public boolean onCreateOptionsMenu(Menu menu) {

    getMenuInflater().inflate(R.menu.main_menu,menu);
    return super.onCreateOptionsMenu(menu);
  }

  @Override
  public boolean onOptionsItemSelected(@NonNull MenuItem item) {

    if(item.getItemId()==R.id.action_logout){
      auth.signOut();
      startActivity(new Intent(HomeActivity.this,MainActivity.class));
    }
    if(item.getItemId()==R.id.action_add_post)
    {
      startActivity(new Intent(HomeActivity.this,AddPostActivity.class));
    }
    return super.onOptionsItemSelected(item);
  }

  @Override
  public void onBackPressed() {
    super.onBackPressed();
```

```
        finishAffinity();
        //back button to shutdown the app
    }
}
```

MainActivity.java

```
package com.example.amb;

import androidx.annotation.NonNull;
import
androidx.appcompat.app.AppCompatActivity;

import android.app.ProgressDialog;
import android.content.Intent;
import android.os.Bundle;
import android.text.TextUtils;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

import
com.google.android.gms.tasks.OnCompleteListe
ner;
import
com.google.android.gms.tasks.OnFailureListener
;
import com.google.android.gms.tasks.Task;
import com.google.firebase.auth.AuthResult;
import com.google.firebase.auth.FirebaseAuth;
import com.google.firebase.auth.FirebaseUser;
```

```
public class MainActivity extends
AppCompatActivity {

   private EditText loginEmail,loginPassword;
   Button loginBtn;
   TextView forgotPassword,needanAccount;
   FirebaseAuth auth;
   ProgressDialog progressDialog;

   @Override
   protected void onCreate(Bundle
savedInstanceState) {
       super.onCreate(savedInstanceState);
       setContentView(R.layout.activity_main);


loginEmail=findViewById(R.id.login_email);

loginPassword=findViewById(R.id.login_passw
ord);
       loginBtn=findViewById(R.id.login_btn);

forgotPassword=findViewById(R.id.forgot_pass
word);

needanAccount=findViewById(R.id.need_an_ac
count);

       progressDialog=new ProgressDialog(this);
       auth=FirebaseAuth.getInstance();
```

```
        //forgot password
        forgotPassword.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View view) {
                startActivity(new
Intent(MainActivity.this,ForgotPasswordActivity
.class));
            }
        });


        needanAccount.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View view) {
                startActivity(new
Intent(MainActivity.this,RegisterActivity.class));
            }
        });

        loginBtn.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String
email=loginEmail.getText().toString().trim();
```

```
            String
password=loginPassword.getText().toString().tri
m();

            if(TextUtils.isEmpty(email))
            {
               loginEmail.setError("Email is
Required.");
            }
            else if (TextUtils.isEmpty(password))
            {
              loginPassword.setError("Password is
Required.");
            }
            else
            {
               login(email,password);
            }
         }
      });



   }

   private void login(String email, String
password) {
      progressDialog.setTitle("Please Wait...");
      progressDialog.show();
```

```
        auth.signInWithEmailAndPassword(email,
password).addOnCompleteListener(new
OnCompleteListener<AuthResult>() {
            @Override
            public void onComplete(@NonNull
Task<AuthResult> task) {

                if(task.isSuccessful())
                {
                    progressDialog.dismiss();

Toast.makeText(MainActivity.this,"Login
Succesful",Toast.LENGTH_SHORT).show();
                    startActivity(new
Intent(MainActivity.this,HomeActivity.class));
                }
                else
                {
                    Toast.makeText(MainActivity.this,
"Login Failed",
Toast.LENGTH_SHORT).show();
                    progressDialog.dismiss();
                }
            }
        }).addOnFailureListener(new
OnFailureListener() {
            @Override
            public void onFailure(@NonNull
Exception e) {
```

```
            Toast.makeText(MainActivity.this,
"+e.getMessage()",
Toast.LENGTH_SHORT).show();
            progressDialog.dismiss();
          }
       });
   }

   //if user is already logged in take to home
activity
   @Override
   protected void onStart() {
      super.onStart();
      FirebaseUser user=auth.getCurrentUser();
      if(user!=null)
      {
         startActivity(new
Intent(MainActivity.this,HomeActivity.class));
      }
   }
}
```

ExpertModule Homepage.java

```
package com.example.expertportal;

import
androidx.appcompat.app.AppCompatActivity;
import
androidx.fragment.app.FragmentPagerAdapter;
import androidx.viewpager.widget.ViewPager;

import android.os.Bundle;
```

```
import
com.google.android.material.tabs.TabLayout;

public class HomePage extends
AppCompatActivity {

    private TabLayout tabLayout;
    private ViewPager viewPager;

    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);

setContentView(R.layout.activity_home_page);

        tabLayout=findViewById(R.id.tabLayout);

        viewPager=findViewById(R.id.viewpager);

tabLayout.setupWithViewPager(viewPager);

        VPAdapter vpAdapter= new
VPAdapter(getSupportFragmentManager(),
FragmentPagerAdapter.BEHAVIOR_RESUME_
ONLY_CURRENT_FRAGMENT);
        vpAdapter.addFragment(new
ComplaintFragment(),"Complaints");
        vpAdapter.addFragment(new
ChatFragment(),"chat");
```

```
            viewPager.setAdapter(vpAdapter);
        }
    }
```

Complaint Registration MainActivity.java

```
package com.example.registration;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import androidx.fragment.app.Fragment;
import androidx.fragment.app.FragmentPagerAdapter;
import androidx.viewpager.widget.ViewPager;

import android.content.Intent;
import android.os.Bundle;
import android.util.Log;
import android.util.Patterns;
import android.view.MenuItem;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ListView;
import android.widget.TextView;
import android.widget.Toast;

import com.google.android.gms.tasks.OnCompleteListener;
import com.google.android.gms.tasks.Task;
import com.google.android.material.bottomnavigation.BottomNavigationView;
import com.google.android.material.tabs.TabLayout;
```

```
import com.google.firebase.auth.AuthResult;
import com.google.firebase.auth.FirebaseAuth;
import com.google.firebase.auth.FirebaseUser;
import com.google.firebase.database.DataSnapshot;
import com.google.firebase.database.DatabaseError;
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;
import com.google.firebase.database.ValueEventListener;

import java.util.ArrayList;


public class MainActivity extends AppCompatActivity {

    /*public static ArrayList arrayList;
    private TabLayout tabLayout;
    private ViewPager viewPager;


    ArrayList<Expert> expertList;
    FirebaseDatabase rootNode;
    DatabaseReference referenceExpert;*/
    TextView register;
    EditText editTextName;
    EditText editTextPassword;
    Button login;

    FirebaseAuth mAuth;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
```

```
super.onCreate(savedInstanceState);
setContentView(R.layout.activity_main);

//rootNode = FirebaseDatabase.getInstance();

editTextName=findViewById(R.id.editTextName);

editTextPassword=findViewById(R.id.editTextPassword);

FirebaseUser user = FirebaseAuth.getInstance().getCurrentUser();
if(user!=null){
   Intent i = new Intent(getApplicationContext(),MainPage.class);
   startActivity(i);
}

login=findViewById(R.id.login);



register=findViewById(R.id.register);

mAuth=FirebaseAuth.getInstance();

register.setOnClickListener(new View.OnClickListener() {
   @Override
   public void onClick(View view) {
      Intent i = new Intent(getApplicationContext(),Register.class);
      startActivity(i);


   }
});
```

```
login.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {

        String email=editTextName.getText().toString().trim();

        String password=editTextPassword.getText().toString().trim();

        if(email.isEmpty()){
            editTextName.setError("Enter name");
            editTextName.requestFocus();
            return;
        }
        if(!Patterns.EMAIL_ADDRESS.matcher(email).matches()){
            editTextName.setError("Email is not correct");
            editTextName.requestFocus();
            return;
        }

        if(password.isEmpty()){
            editTextPassword.setError("Enter password");
            editTextPassword.requestFocus();
            return;
        }

        if(password.length()<6){
            editTextPassword.setError("password is too short ");
            editTextPassword.requestFocus();
            return;
        }
```

```
mAuth.signInWithEmailAndPassword(email,password).addOnCompleteListener(new
OnCompleteListener<AuthResult>() {
            @Override
            public void onComplete(@NonNull Task<AuthResult> task) {

               if(task.isSuccessful()){

                  FirebaseUser user=FirebaseAuth.getInstance().getCurrentUser();

                  if(user.isEmailVerified()){
                     Intent i = new Intent(getApplicationContext(),MainPage.class);
                     startActivity(i);
                  }
                  else{
                     user.sendEmailVerification();
                     Toast.makeText(getApplicationContext(), "Check your email to
verify", Toast.LENGTH_SHORT).show();
                  }



               }
               else{
                  Toast.makeText(getApplicationContext(), "Login failed",
Toast.LENGTH_SHORT).show();
               }

            }
         });
```

```
        }
    });

/*
    tabLayout=findViewById(R.id.tabLayout);

    viewPager=findViewById(R.id.viewpager);
    tabLayout.setupWithViewPager(viewPager);

    VPAdapter vpAdapter= new VPAdapter(getSupportFragmentManager(),
FragmentPagerAdapter.BEHAVIOR_RESUME_ONLY_CURRENT_FRAGMENT);
    vpAdapter.addFragment(new HomeFragment(),"Complaints");
    vpAdapter.addFragment(new ChatFragment(),"chat");

    viewPager.setAdapter(vpAdapter);*/


  }

}
```