**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**

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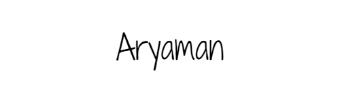
*April 2022*

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**DECLARATION**

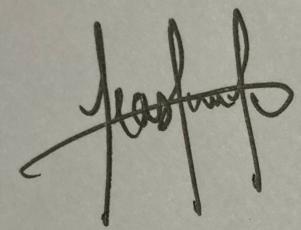
I hereby declare that the report titled “**Anti bullying/Ragging Prevention App”** submitted by me to VIT Chennai is a record of bona-fide work undertaken by me under the supervision of **Harini S**, School of Computer Science and Engineering, Vellore Institute of Technology, Chennai.

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.

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**1. Introduction**

* 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. **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**

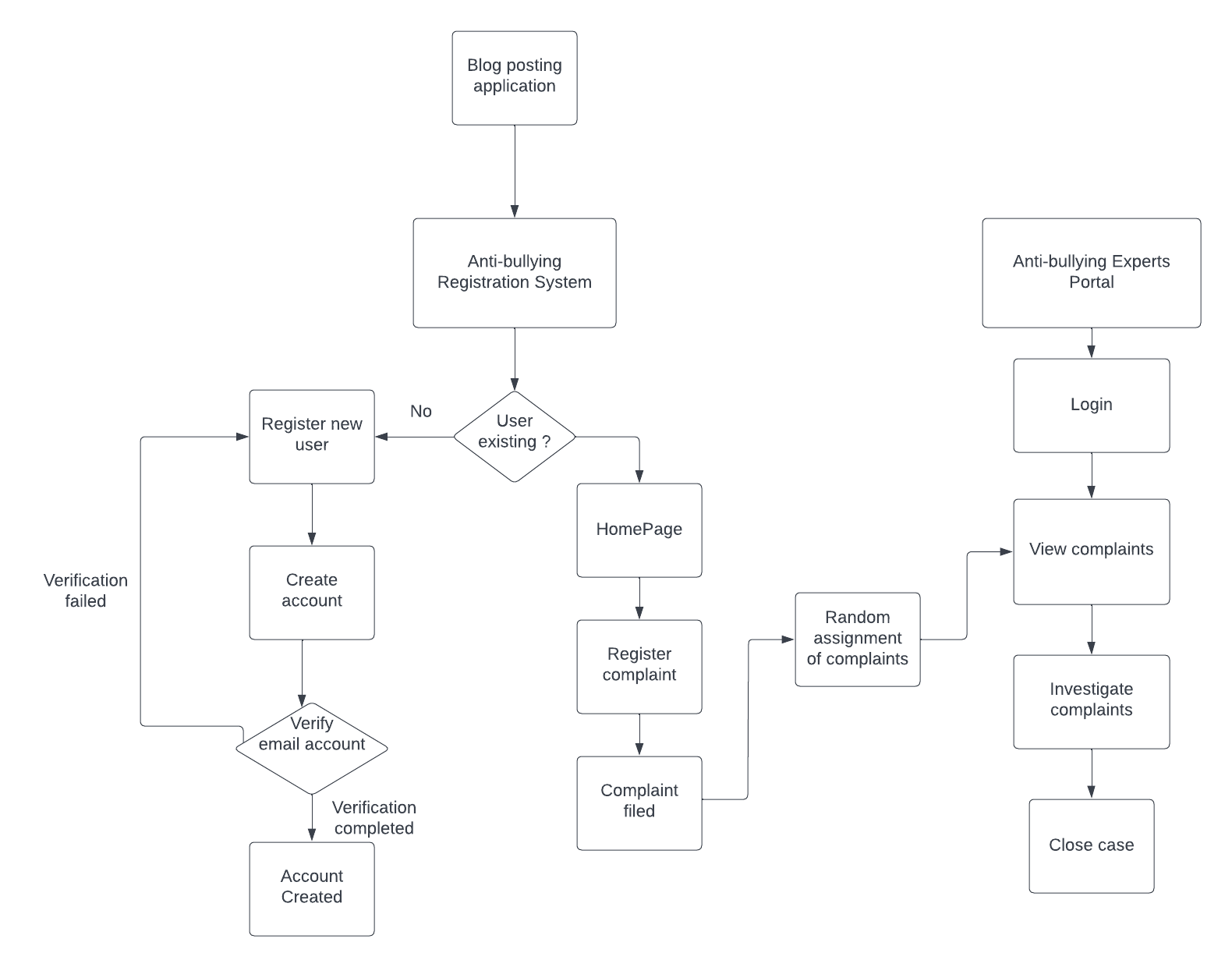
3.1 **Hardware Requirements**

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

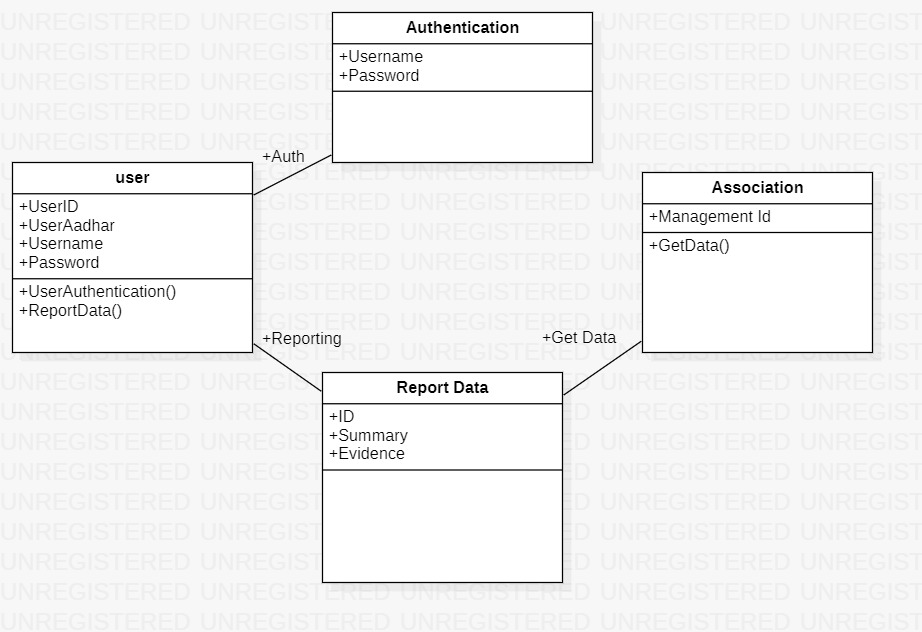
3.2 **Software Requirements**

* + - Android studio
    - Firebase
    - Java jdk 8.1

1. **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**

**[1]** Gaffney, H., Farrington, D.P. & Ttofi, M.M. Examining the Effectiveness of

School-Bullying Intervention Programs Globally: a Meta-analysis. *Int Journal of*

*Bullying Prevention* 1, 14–31 (2019).

**[2]** Payne SR, Elliott DS. Safe2Tell® : an anonymous, 24/7 reporting system for

preventing school violence. New Dir Youth Dev. 2011 Spring. **[BASE PAPER]**

**[3]** Shackleton N, Jamal F, Viner RM, Dickson K, Patton G, Bonell C. School-Based

Interventions Going Beyond Health Education to Promote Adolescent Health:

Systematic Review of Reviews. J Adolesc Health. 2016

**[4]** Y. N. Silva, C. Rich, J. Chon and L. M. Tsosie, "BullyBlocker: An app to identify

cyberbullying in facebook," 2016 IEEE/ACM International Conference on Advances

in Social Networks Analysis and Mining (ASONAM), 2016.

**[5]** Johansson, Elka & Carey, Peter, Detecting Fraud: The Role of the Anonymous

Reporting Channel, Journal of Business Ethics, 2015.

**[6]** Bradshaw CP. Translating research to practice in bullying prevention. Am Psychol.

2015

**[7]** Shah, Ayaan . Exploration of mobile app as a reporting solution to bullying in

Indian schools. International journal of computer application. 2020

**[8]** Peltier-Rivest, Dominic, A model for preventing corruption, Journal of Financial

Crime, 2018.

**[9]** Olweus, Dan. Bully/victim problems in school: Facts and intervention. European

Journal of Psychology of Education.1997.

**[10]** Salmivalli C, Kaukiainen A, Voeten M. Anti-bullying intervention:

implementation and outcome. Br J Educ Psychol. 2005

**[11]** Reyes Rodriguez, Ana & Valdés, Angel & Vera Noriega, Jose & Parra-Perez,

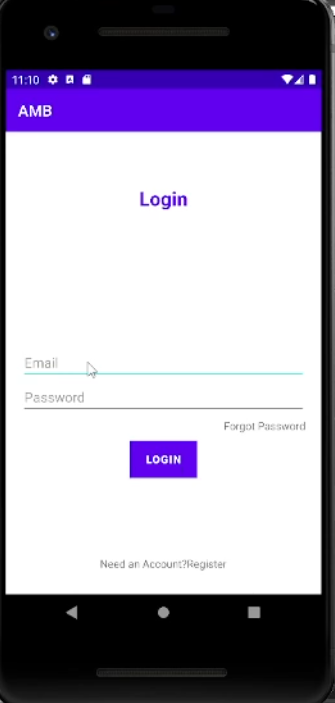
Lizeth G. Principal’s Practices and School’s Collective Efficacy to Preventing

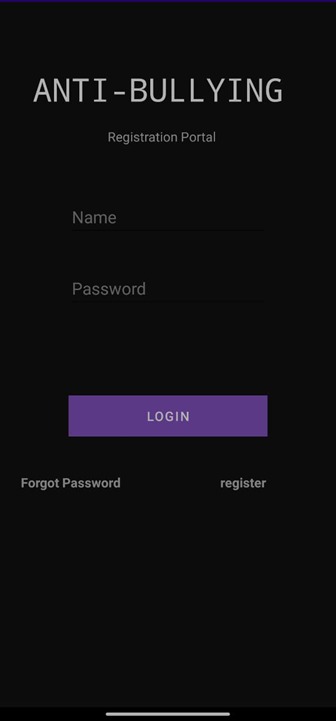
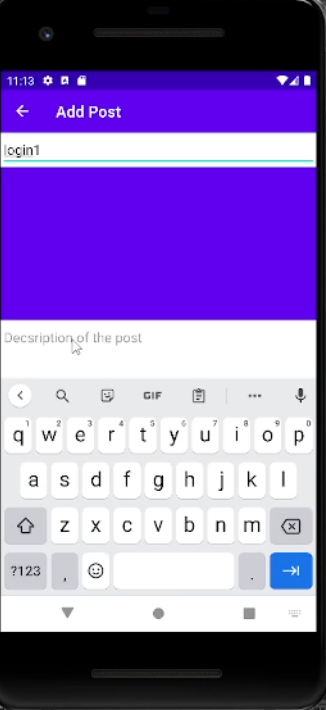
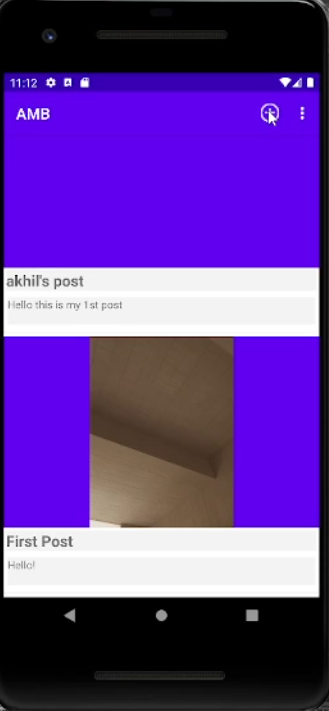
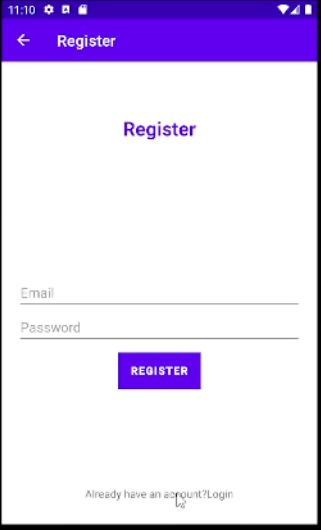
Bullying: The Mediating Role of School Climate. 2021

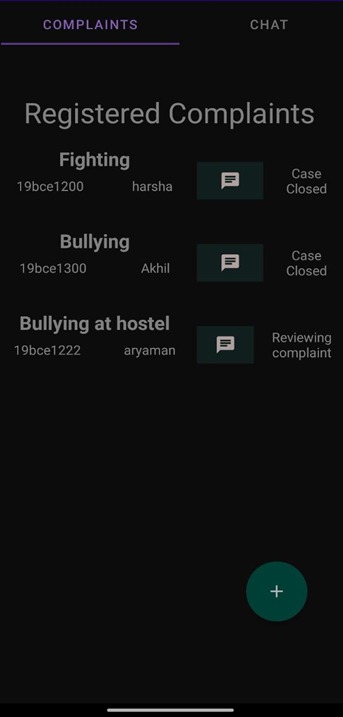
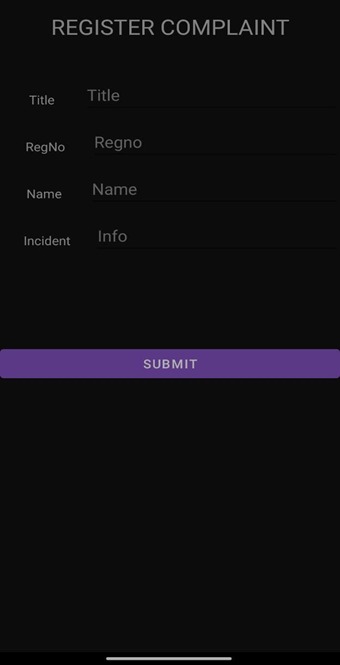
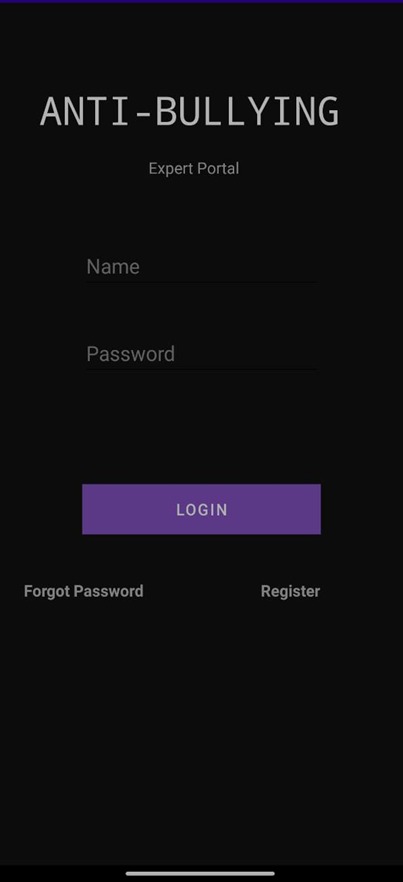
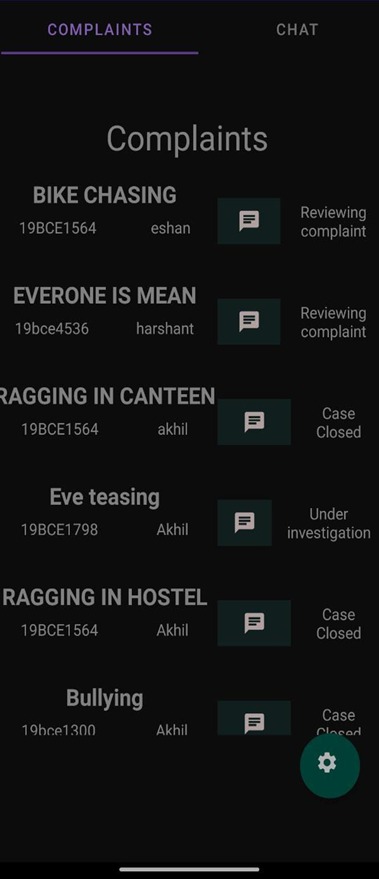
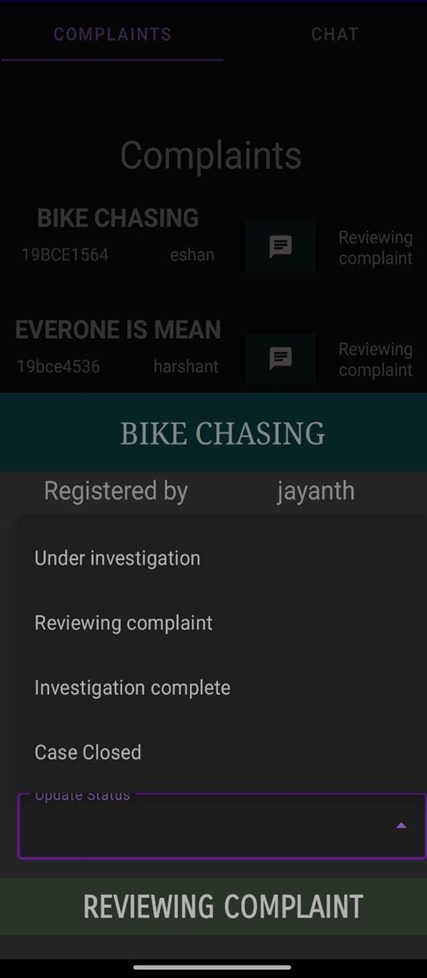
**[12]** R. Fernando, B. Bhargava and M. Linderman, "Private Anonymous Messaging,"

IEEE 31st Symposium on Reliable Distributed Systems, 2012.

**APPENDIX**







**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.OnCompleteListener;

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\_password);

loginBtn=findViewById(R.id.login\_btn);

forgotPassword=findViewById(R.id.forgot\_password);

needanAccount=findViewById(R.id.need\_an\_account);

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().trim();

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);\*/

}

}