**TABLE OF CONTENT**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ex No** | **Date** | **Name of the experiment** | **Page no** | **Signature** |
| 1 |  | Develop an application that uses GUI components, Font and Colors. |  |  |
| 2 |  | Develop an application that uses Layout Manager and event listeners. |  |  |
| 3 |  | Write an application that draws basic graphical primitives on the screen. |  |  |
| 4 |  | Develop an application that makes use of databases. |  |  |
| 5 |  | Develop an application that makes use of Notification Manager. |  |  |
| 6 |  | Implement an application that uses Multithreading. |  |  |
| 7 |  | Develop a native application that uses GPS location information |  |  |
| 8 |  | Implement an application that writes data to the SD card. |  |  |
| 9 |  | Implement an application that creates an alert upon receiving a message |  |  |
| 10 |  | Write a mobile application that makes use of RSS feed |  |  |
| 11 |  | Develop a mobile application to send an email. |  |  |
| 12 |  | Develop a Mobile application for simple needs (Mini Project) |  |  |

**Ex no: 01**

**Date:**

# Develop an application that uses GUI components, Font and Colors

**Aim:**

To develop an android Story Writing application that uses GUI Components, Font and colors.

**Algorithm:**

* Start the process.
* Open an android project and name your application name
* Design the MainActivity and set the font and color of the application.
* Run the application in Android Virtual Device(AVD).
* Stop the process.

**Program: activity\_main.xml**

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout 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=".MainActivity">

<EditText

android:id="@+id/email" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content"

android:ems="10" android:layout\_centerHorizontal="true" android:layout\_marginTop="300px"

android:hint="Email Id" android:inputType="textEmailAddress" />

<EditText

android:id="@+id/password" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content"

android:ems="10"

android:layout\_centerHorizontal="true" android:layout\_marginTop="500px" android:hint="Password"

android:inputType="textPassword" />

<Button

android:id="@+id/blogin" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_centerHorizontal="true" android:layout\_marginTop="700px"

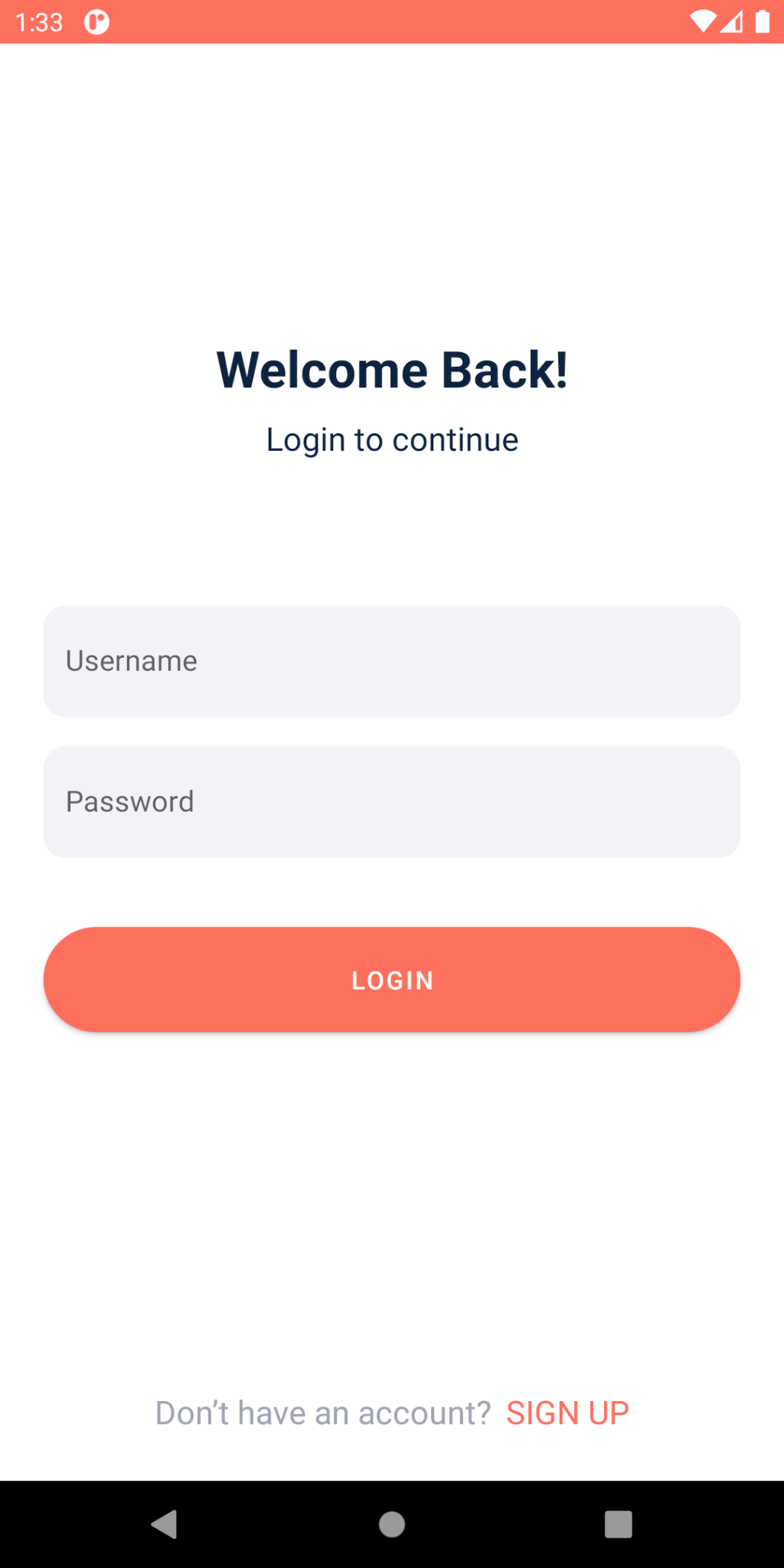
android:text="Login" />

<TextView

android:id="@+id/signUp" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_centerHorizontal="true" android:layout\_marginTop="850px" android:text="Don't Have an Account? SignUp" />

</RelativeLayout>

**Output:**



**Result:**

Thus, the program for android Story Writing application GUI Components, Font and colors was executed successfully.

**Ex no: 02**

**Date:**

**Develop an application that uses Layout Managers and Event**

# Listeners

**Aim:**

To develop an android Story Writing application that uses Layout Managers and event listeners.

**Algorithm:**

* Start the process
* Open the existing android application.
* Create a sign up activity, with four TextView field which gets the input of username, email password and confirm password, a signup button and link to the MainActivity.
* In MainActivity, give a link to the login activity using Intent object.
* Run the application in Android Virtual Device(AVD).
* Stop the process.

**Program: MainActivity.java**

package com.example.talkonline;

import androidx.annotation.NonNull;

import android.appcompat.app.AppCompatActivity; import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.TextView;

import android.widget.Toast;

public class MainActivity extends AppCompatActivity { private TextView signUpText;

private Button blogin;

private TextView email,password;

LoadingClass load; @Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_main);

load = new LoadingClass(MainActivity.this);

signUpText = findViewById(R.id.signUp);

blogin = findViewById(R.id.blogin);

email = findViewById(R.id.email);

password = findViewById(R.id.password); signUpText.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

Intent intent = new Intent(MainActivity.this,SignUpActivity.class); startActivity(intent);

}

});

}

}

**activity\_sign\_up.xml**

?xml version="1.0" encoding="utf-8"?>

<RelativeLayout 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=".SignUpActivity">

<EditText android:id="@+id/username" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:ems="10" android:inputType="textPersonName" android:hint="Username" android:layout\_centerHorizontal="true" android:layout\_marginTop="100px" tools:layout\_editor\_absoluteX="100dp" tools:layout\_editor\_absoluteY="134dp" />

<EditText

android:id="@+id/email1" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:ems="10"

android:hint="Email Id" android:layout\_centerHorizontal="true" android:layout\_marginTop="300px" android:inputType="textEmailAddress" tools:layout\_editor\_absoluteX="100dp" tools:layout\_editor\_absoluteY="251dp" />

<EditText

android:id="@+id/password1" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content"

android:ems="10"

android:hint="Password"

android:layout\_centerHorizontal="true" android:layout\_marginTop="500px" android:inputType="textPassword" tools:layout\_editor\_absoluteX="85dp" tools:layout\_editor\_absoluteY="343dp" />

<EditText

android:id="@+id/confirmPassword1" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:ems="10"

android:hint="Confirm Password"

<Button android:id="@+id/bsignup" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_centerHorizontal="true" android:layout\_marginTop="900px" android:text="SignUp" tools:layout\_editor\_absoluteX="124dp" tools:layout\_editor\_absoluteY="574dp" />

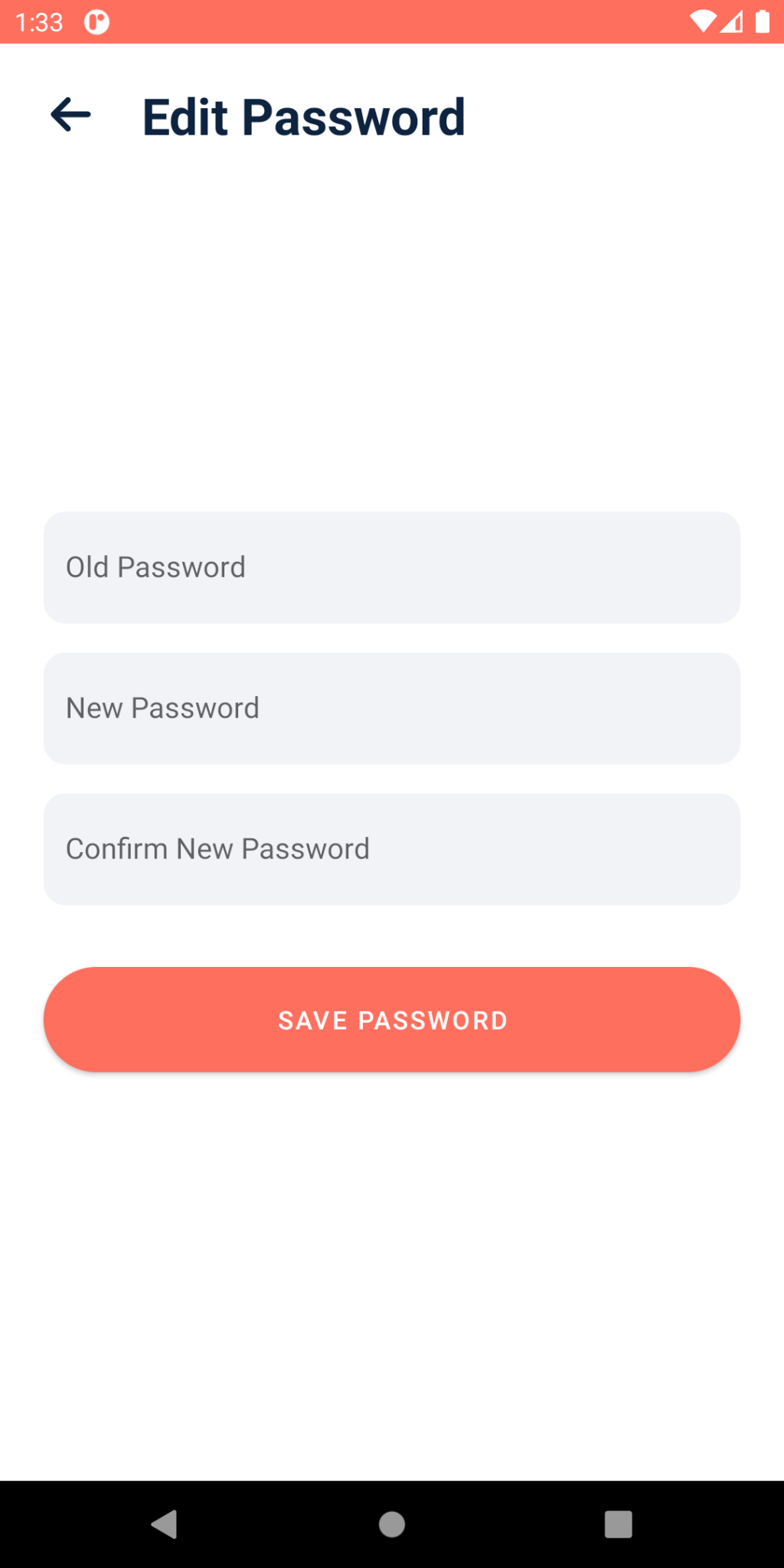
<TextView

android:id="@+id/login"

android:text="Do you have an account? Login" />

</RelativeLayout>

**Output:**

****

**Result:**

Thus, the program for android Story Writing application that uses layout managers and event listeners was executed successfully.

**Ex no: 03**

**Date:**

**Write an application that draws basic graphical primitives on the screen Aim:**

To develop an android Story Writing application that draws basic graphical primitives on the screen.

**Algorithm:**

* Start the process
* Open the existing android application project
* Try to use basic graphical primitives in the android application.
* A profile activity is created, which contains circular image view in which user can upload their profile image.
* Link the activity to the chat activity.
* Run the application in the Android Virtual Device(AVD).
* Stop the process.

**Program:**

**profile\_activity.xml**

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout 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=".ProfileActivity">

<androidx.cardview.widget.CardView

android:layout\_centerHorizontal="true" android:layout\_marginTop="150px" app:cardCornerRadius="90dp" tools:layout\_editor\_absoluteX="1dp" tools:layout\_editor\_absoluteY="203dp" >

<ImageView android:id="@+id/profile\_img" android:src="@drawable/account" android:layout\_width="match\_parent" android:layout\_height="match\_parent"/>

</androidx.cardview.widget.CardView>

<TextView android:id="@+id/username" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_centerHorizontal="true" android:textSize="70px" android:layout\_marginTop="700px" android:text="TextView" />

<Button

android:id="@+id/uploadimg" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content"

android:text="Upload Image" />

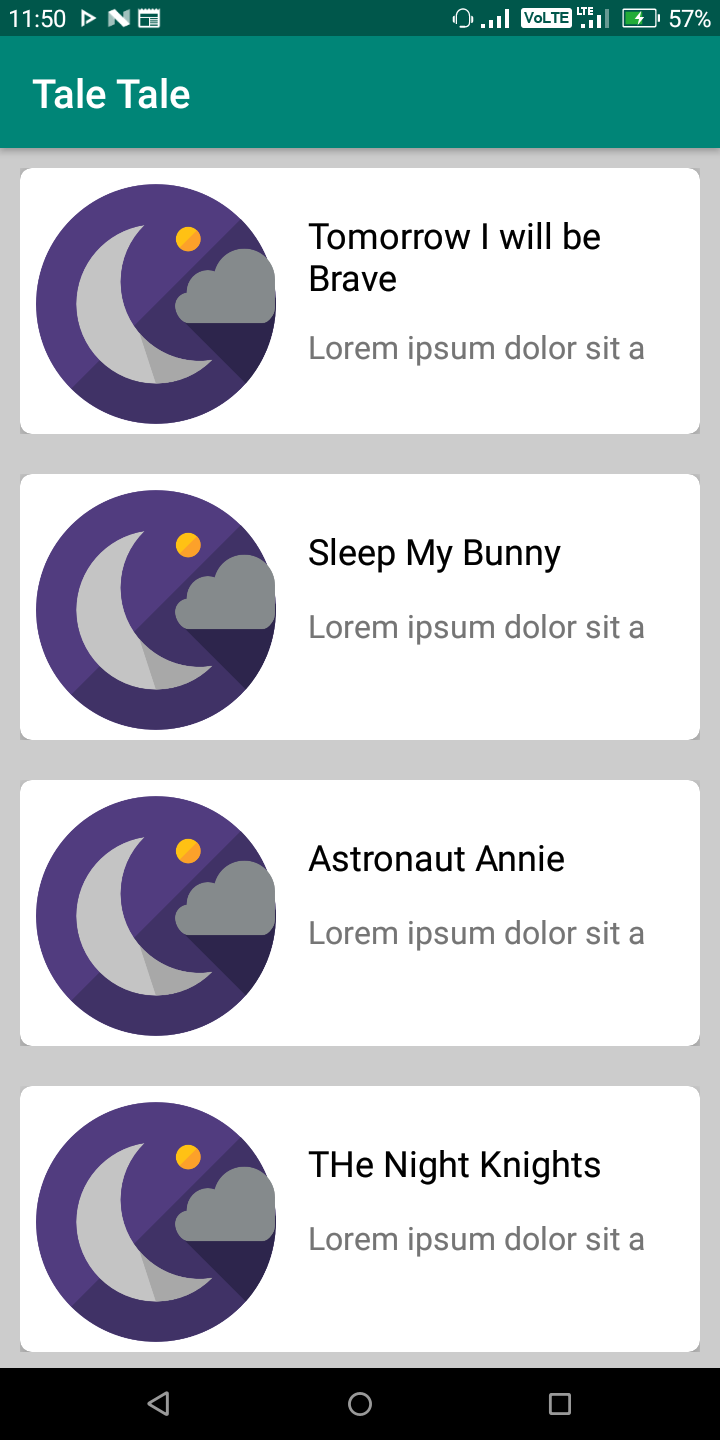
<Button

android:id="@+id/logout" android:layout\_centerHorizontal="true" android:layout\_height="wrap\_content"

android:text="Logout" />

</RelativeLayout>

**Output:**

****

**Result:**

Thus, the program for android Story Writing application that draws basic graphical primitives on the screen was executed successfully.

**Ex no: 04**

**Date:**

# Develop an application that makes use of database

**Aim:**

To develop an android Story Writing application that makes use of databases.

**Algorithm:**

* Start the process.
* Open the existing android project in the android studio.
* Create an account in the Google Firebase, and use this has the database for the application.
* Create a dashboard for the application in the firebase. Create authentication, real time database and cloud storage for the application.
* Connect the application with firebase by adding the correct dependencies in the gradle file.
* Build the project.
* Add the user information in the database.
* Run the application in the Android Virtual Device(AVD).
* Stop the process.

**Program: MainActivity.java**

package com.example.talkonline;

import androidx.annotation.NonNull;

importandroidx.appcompat.app.AppCompatActivity; import android.content.Intent; import android.os.Bundle; import android.view.View;

import android.widget.Button; 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.firebase.auth.AuthResult;

import com.google.firebase.auth.FirebaseAuth; public class MainActivity extends AppCompatActivity {

private TextView signUpText;

private Button blogin;

private TextView email,password;

LoadingClass load; @Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_main);

load = new LoadingClass(MainActivity.this); signUpText = findViewById(R.id.signUp);

blogin = findViewById(R.id.blogin);

email = findViewById(R.id.email);

password = findViewById(R.id.password); if(FirebaseAuth.getInstance().getCurrentUser()!=null){ load.startLoading();

}

signUpText.setOnClickListener(new View.OnClickListener() { @Override

public void onClick(View view) {

Intent intent = new Intent(MainActivity.this,SignUpActivity.class); startActivity(intent);

}

});

blogin.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) { load.startLoading();

FirebaseAuth.getInstance().signInWithEmailAndPassword(semail,spassword).a ddOnCompleteListener(new OnCompleteListener<AuthResult>() {

@Override

public void onComplete(@NonNull Task<AuthResult> task) { if(task.isSuccessful()){

load.dismissLoading();

Intent intent = new Intent(MainActivity.this,ChatScreenActivity.class);

startActivity(intent);

Toast.makeText(MainActivity.this, "Logged In Successfully",

Toast.LENGTH\_SHORT).show();

} else {

load.dismissLoading();

Toast.makeText(MainActivity.this, "Error in login",

Toast.LENGTH\_SHORT).show();

}

}

});

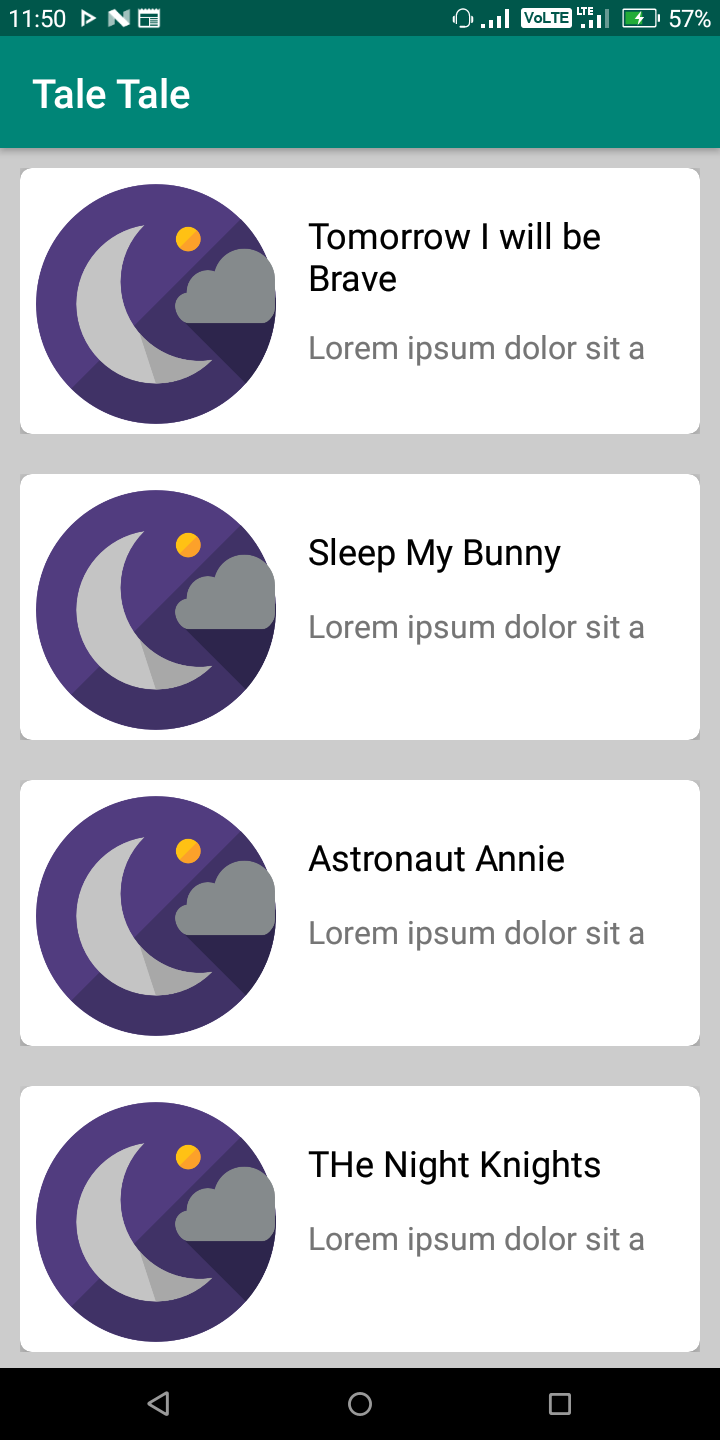
}

});

}

}

**Output:**

****

**Result:**

Thus, the program for the android Story Writing application that makes use of the database was executed successfully.

**Ex no: 05**

**Date:**

# Develop an application that make uses of Notification Manager

**Aim:**

To develop an Android Story Writing Application that makes use of Notification Manager.

**Algorithm:**

* Start the process.
* Open the existing project in the android studio.
* With help of Notification manager create a notification when the user try to logout the application.
* Edit the ProfileActivity.java to create notification.
* Run the application in the Android Virtual Device(AVD).
* Stop the process.

**Program:**

**ProfileActivity.java**

package com.example.talkonline;

import androidx.annotation.NonNull;

import android.annotation.Nullable;

import android.appcompat.app.AppCompatActivity; import android.core.app.NotificationCompat;

import android.core.app.NotificationManagerCompat; import android.annotation.SuppressLint;

import android.app.NotificationChannel;

import android.app.NotificationManager;

import android.app.ProgressDialog;

import android.content.Intent;

import android.graphics.Bitmap;

import android.graphics.BitmapFactory;

import android.net.Uri;

import android.os.Build;

import android.os.Bundle;

import android.provider.MediaStore;

import android.util.Log; import android.view.View;

import android.widget.Button;

import android.widget.ImageView;

import android.widget.TextView;

import android.widget.Toast;

import com.bumptech.glide.Glide;

import com.google.android.gms.tasks.OnCompleteListener; import com.google.android.gms.tasks.Task;

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 com.google.firebase.storage.FirebaseStorage; import com.google.firebase.storage.UploadTask;

import java.io.IOException; import java.io.InputStream; import java.net.MalformedURLException;

import java.net.URL;

import java.util.UUID;

public class ProfileActivity extends AppCompatActivity { private Button logout;

private ImageView imgProfile;

private Button uploadImage;

private TextView username;

private String susername;

public Uri imagePath;

@Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_profile); logout=findViewById(R.id.logout); imgProfile =findViewById(R.id.profile\_img); uploadImage = findViewById(R.id.uploadimg); username = findViewById(R.id.username);

logout.setOnClickListener(new View.OnClickListener() {

@SuppressLint("MissingPermission")

@Override

public void onClick(View v) {

FirebaseAuth.getInstance().signOut();

Intent intent = new

Intent(ProfileActivity.this,MainActivity.class).setFlags(Intent.FLAG\_ACTIVIT

Y\_CLEAR\_TASK|Intent.FLAG\_ACTIVITY\_CLEAR\_TOP); startActivity(intent);

NotificationCompat.Builder builder = new

NotificationCompat.Builder(ProfileActivity.this,"Logout Notification"); builder.setContentTitle(susername+"Logged Out Successfully"); builder.setContentText("It's Time to Say 'BYE!'."); builder.setSmallIcon(R.drawable.ic\_launcher\_foreground); builder.setAutoCancel(true);

NotificationManagerCompat compat =

NotificationManagerCompat.from(ProfileActivity.this);

compat.notify(1,builder.build()); finish();

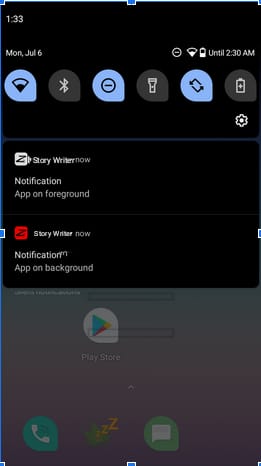
}

});

}

}

**Output:**

****

**Result:**

Thus, Android Story Writing Application that makes use of Notification Manager is developed and executed successfully.

**Ex no: 06**

**Date:**

**Implement an application that implements Multithreading**

**Aim:**

To develop an android Story Writing application that implements multithreading.

**Algorithm:**

* Start the process.
* Open the existing project in the android studio.
* Glide helps us to load image in a separate thread.
* With Glide we can upload the images effectively in the Cloud and real time database in Firebase.
* By this we can achieve multithreading in our project Run the application in the Android Virtual Device(AVD).
* Stop the process.

**Program:**

**ProfileActvity.java**

package com.example.talkonline;

import androidx.annotation.NonNull;

import androidx.annotation.Nullable;

import androidx.appcompat.app.AppCompatActivity; import androidx.core.app.NotificationCompat;

import androidx.core.app.NotificationManagerCompat; import android.annotation.SuppressLint;

import android.app.NotificationChannel;

import android.app.NotificationManager;

import android.app.ProgressDialog; import android.content.Intent;

import android.graphics.Bitmap;

importandroid.graphics.BitmapFactory; import android.net.Uri;

import android.os.Build;

import android.os.Bundle;

import android.provider.MediaStore; import android.util.Log;

import android.view.View;

import android.widget.Button;

import android.widget.ImageView; import android.widget.TextView; import android.widget.Toast;

import com.bumptech.glide.Glide;

import com.google.android.gms.tasks.OnCompleteListener; import com.google.android.gms.tasks.Task;

import com.google.firebase.auth.FirebaseAuth;

import java.io.IOException;

import java.io.InputStream;

import java.net.MalformedURLException;

import java.net.URL;

import java.util.UUID;

public class ProfileActivity extends AppCompatActivity{ private Button logout;

private ImageView imgProfile;

private Button uploadImage;

private TextView username;

private String susername;

public Uri imagePath;

@Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_profile); logout=findViewById(R.id.logout);

imgProfile =findViewById(R.id.profile\_img); uploadImage = findViewById(R.id.uploadimg); username = findViewById(R.id.username);

String id = FirebaseAuth.getInstance().getCurrentUser().getUid();

DatabaseReference dr =

FirebaseDatabase.getInstance().getReference("user/"+id); dr.addValueEventListener(new ValueEventListener() {

@Override

public void onDataChange(@NonNull DataSnapshot snapshot) { User value = snapshot.getValue(User.class); username.setText(value.getUsername()); susername = value.getUsername();

if(!value.getProfilePicture().equals("")){

Glide.with(getApplicationContext()).load(value.getProfilePicture()).into(imgPr

ofile);

}

}

@Override

public void onCancelled(@NonNull DatabaseError error) {

}

});

logout.setOnClickListener(new View.OnClickListener() {

@SuppressLint("MissingPermission")

@Override

public void onClick(View v) {

FirebaseAuth.getInstance().signOut();

Intent intent = new

Intent(ProfileActivity.this,MainActivity.class).setFlags(Intent.FLAG\_ACTIVIT

Y\_CLEAR\_TASK|Intent.FLAG\_ACTIVITY\_CLEAR\_TOP); startActivity(intent);

NotificationCompat.Builder builder = new

NotificationCompat.Builder(ProfileActivity.this,"Logout Notification"); builder.setContentTitle(susername+"Logged Out Successfully"); builder.setContentText("It's Time to Say 'BYE!'."); builder.setSmallIcon(R.drawable.ic\_launcher\_foreground); builder.setAutoCancel(true);

NotificationManagerCompat compat = NotificationManagerCompat.from(ProfileActivity.this); if(Build.VERSION.SDK\_INT>=Build.VERSION\_CODES.O){

NotificationChannel channel = new NotificationChannel("Logout Notification",

" It's Time to Say 'BYE!'",

NotificationManager.IMPORTANCE\_DEFAULT); channel.setDescription("Logout Notification "); compat.createNotificationChannel(channel);

}

compat.notify(1,builder.build());

finish();

}

}); imgProfile.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

Intent photoIntent = new Intent(Intent.ACTION\_PICK); photoIntent.setType("image/\*"); startActivityForResult(photoIntent,1);

} });

uploadImage.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) { uploadProfile();

} }); }

@Override

protected void onActivityResult(int requestCode, int resultCode, @Nullable Intent data) {

super.onActivityResult(requestCode, resultCode, data); if(requestCode ==1 && resultCode==RESULT\_OK && data!=null){ imagePath = data.getData();

getImageInImageView();

}

} FirebaseStorage.getInstance().getReference("images/"+

UUID.randomUUID().toString()).putFile(imagePath).addOnCompleteListener( new OnCompleteListener<UploadTask.TaskSnapshot>() {

@Override

public void onComplete(@NonNull Task<UploadTask.TaskSnapshot> task) { if(task.isSuccessful()){

progress.dismiss();

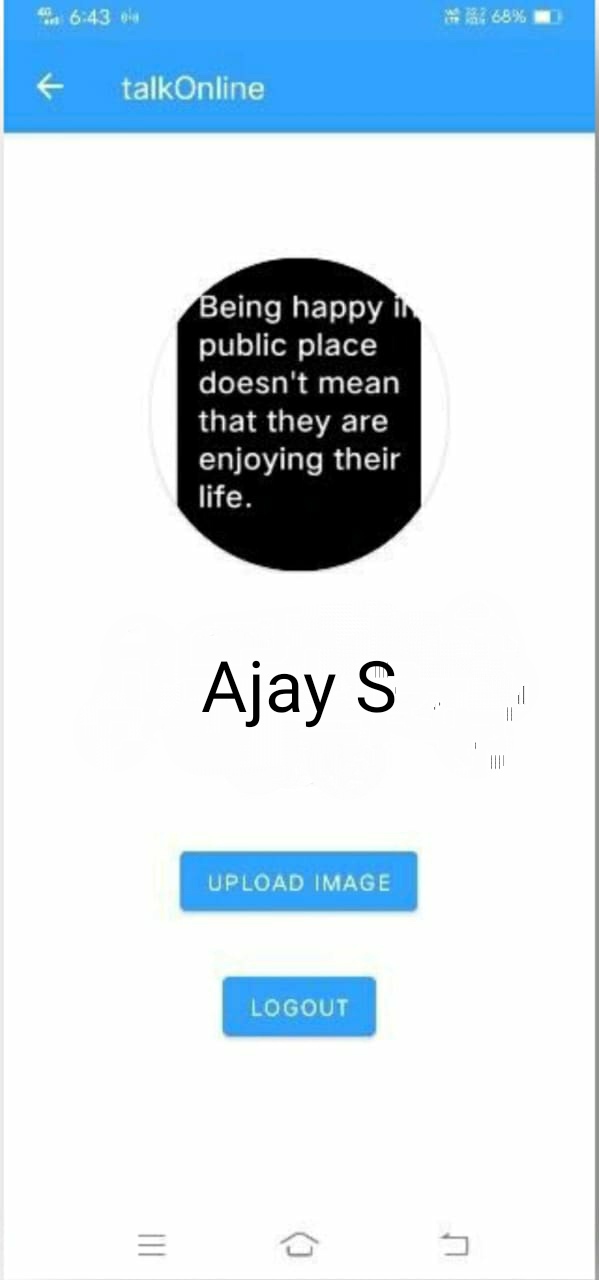
}

});

}

}

Output:



**Result:**

Thus, the program for android Story Writing application that makes use of multithreading was executed successfully.

**Ex no: 07**

**Date:**

# Develop a native application that uses GPS location information

**Aim:**

To develop an android Story Writing application that uses GPS location information.

**Algorithm:**

* Start the process
* Open the existing project in the android studio.
* LocationManager is class which help us to track the user’s location while using the application,
* The location is tracked when the user logged into the application. The application will be used only when the location sharing is accepted by the user.
* In ChatScreenActivity.java is edit to know the location.
* Run the application in the Android Virtual Device(AVD).
* Stop the process.

**Program:**

**ChatScreenActivity.java**

package com.example.talkonline;

import androidx.annotation.NonNull;

import android.appcompat.app.AppCompatActivity; import android.core.app.ActivityCompat;

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

import android.Manifest;

import android.content.ClipData;

import android.content.Context;

import android.content.Intent;

import android.content.pm.PackageManager;

import android.location.Criteria;

import android.location.Location;

import android.location.LocationListener;

import android.location.LocationManager;

import android.os.Bundle; import android.view.Menu; import android.view.MenuInflater;

import android.view.MenuItem;

import android.view.View;

import android.widget.Toast;

import android.widget.Toolbar;

import com.example.talkonline.Adapter.UserAdapter;

import com.google.firebase.auth.FirebaseAuth;

import com.google.firebase.auth.FirebaseUser;

import public class ChatScreenActivity extends AppCompatActivity implements LocationListener{

private RecyclerView recyclerView; private UserAdapter userAdapter;

private List<User> mUsers;

LoadingClass load; @Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_chat\_screen);

load = new LoadingClass(ChatScreenActivity.this); load.startLoading();

recyclerView = findViewById(R.id.recycle\_view); recyclerView.setHasFixedSize(true);

recyclerView.setLayoutManager(new LinearLayoutManager(this));

LocationManager locationManager = (LocationManager) getSystemService(Context.LOCATION\_SERVICE);

if(ActivityCompat.checkSelfPermission(ChatScreenActivity.this,

Manifest.permission.ACCESS\_FINE\_LOCATION)!=

PackageManager.PERMISSION\_GRANTED){

ActivityCompat.requestPermissions(ChatScreenActivity.this,new

String[]{Manifest.permission.ACCESS\_FINE\_LOCATION},100);

}

locationManager.requestLocationUpdates(LocationManager.GPS\_PROVIDER,

0,0,this);

mUsers = new ArrayList<>(); readUser(); load.dismissLoading();

}

private void readUser(){

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

DatabaseReference reference =

FirebaseDatabase.getInstance().getReference("user"); reference.addValueEventListener(new ValueEventListener() {

@Override

public void onDataChange(@NonNull DataSnapshot snapshot) { mUsers.clear();

for(DataSnapshot dataSnapshot : snapshot.getChildren()){ User user = dataSnapshot.getValue(User.class);

assert user!=null;

assert firebaseUser !=null;

if(!dataSnapshot.getKey().equals(firebaseUser.getUid())){ mUsers.add(user);

}

}

userAdapter = new UserAdapter(getApplicationContext(),mUsers); recyclerView.setAdapter(userAdapter);

}

@Override

public void onFlushComplete(int requestCode) {

LocationListener.super.onFlushComplete(requestCode);

}

@Override

public void onStatusChanged(String provider, int status, Bundle extras) { LocationListener.super.onStatusChanged(provider, status, extras);

}

@Override

public void onProviderEnabled(@NonNull String provider) {

LocationListener.super.onProviderEnabled(provider);

}

@Override

public void onProviderDisabled(@NonNull String provider) {

LocationListener.super.onProviderDisabled(provider);

}

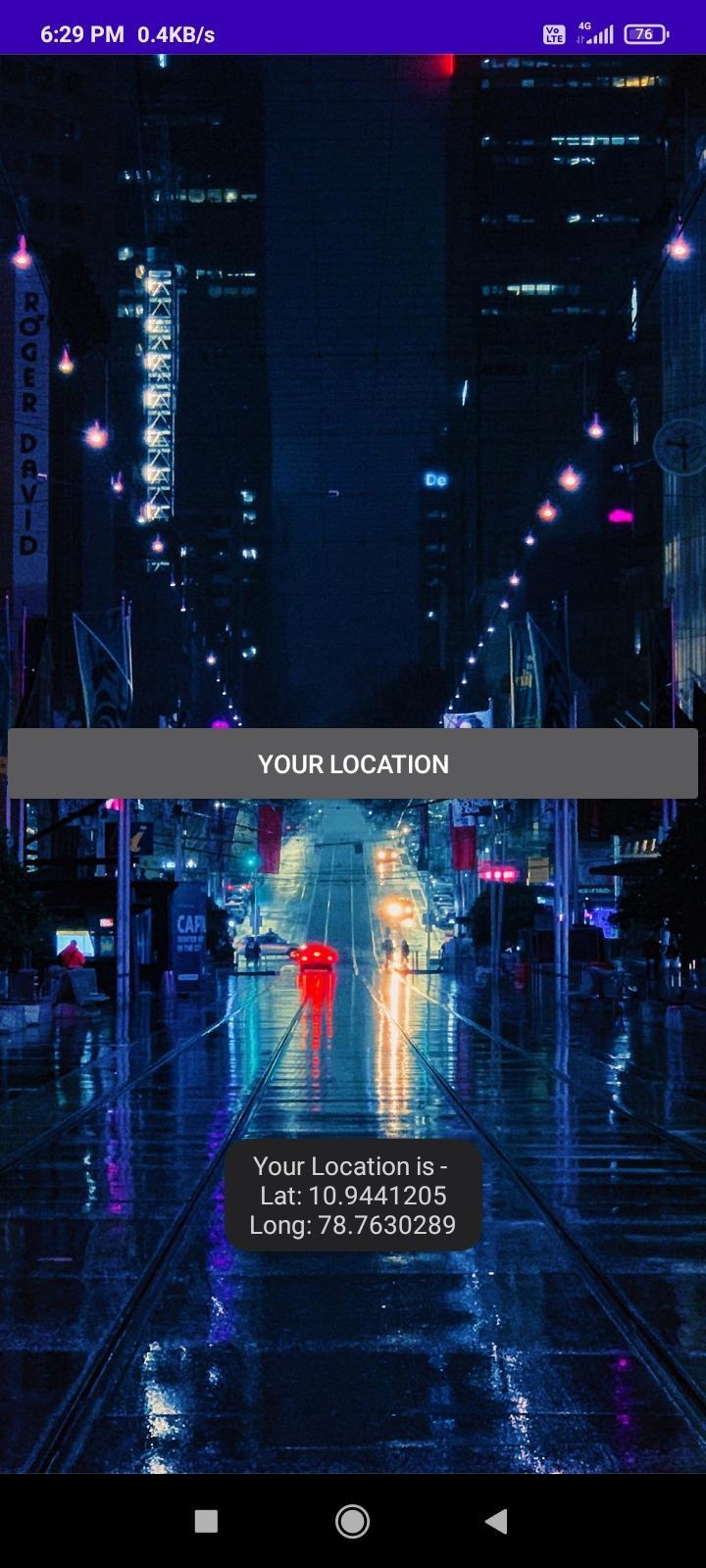
@Override

public void onPointerCaptureChanged(boolean hasCapture) { super.onPointerCaptureChanged(hasCapture);

}

}

**Output:**

****

**Result:**

Thus, the program for android Story Writing application that makes use of GPS information was executed successfully.

**Ex no: 08**

**Date:**

# Implement an application that writes data to the SD card

**Aim:**

To develop an android Story Writing application that writes data to the SD .

**Algorithm:**

* Start the process.
* Open the existing project in the android studio.
* Store the login time in the SD card mounted in the android system.
* Seek the permission to access the SD card.
* Open a text file with application name and enter the login time and date.
* Close the file.
* Make a toast message to user as “SD card accessed successfully”  Run the application in the Android Virtual Device(AVD).
* Stop the process.

**Program: MainActivity.java** package com.example.talkonline; importandroidx.annotation.NonNull;

import android.appcompat.app.AppCompatActivity; import android.core.app.ActivityCompat;

import android.Manifest; import android.content.Intent; import android.os.Bundle;

import android.os.Environment;

import android.view.View;

import android.widget.Button;

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.firebase.auth.AuthResult;

import com.google.firebase.auth.FirebaseAuth;

import java.io.File; import java.io.FileOutputStream;

import java.io.IOException; import java.util.Calendar;

public class MainActivity extends AppCompatActivity{

private TextView signUpText;

private Button blogin;

private TextView email,password;

LoadingClass load; @Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_main);

load = new LoadingClass(MainActivity.this); signUpText = findViewById(R.id.signUp);

blogin = findViewById(R.id.blogin);

email = findViewById(R.id.email);

password = findViewById(R.id.password); if(FirebaseAuth.getInstance().getCurrentUser()!=null){ load.startLoading();

Intent intent = new Intent(MainActivity.this,ChatScreenActivity.class); startActivity(intent);

load.dismissLoading(); finish();

}

signUpText.setOnClickListener(new View.OnClickListener() {

@Override

blogin.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) { load.startLoading();

Intent intent = new Intent(MainActivity.this,ChatScreenActivity.class);

startActivity(intent);

Toast.makeText(MainActivity.this, "Logged In Successfully",

Toast.LENGTH\_SHORT).show();

loginTimeStore();

} else { load.dismissLoadig();Toast.makeText(MainActivity.this, "Error in login",

Toast.LENGTH\_SHORT).show();

}

}

});

}

});

}

void loginTimeStore(){

ActivityCompat.requestPermissions(this, new

String[]{Manifest.permission.READ\_EXTERNAL\_STORAGE},

23);

File folder =

Environment.getExternalStoragePublicDirectory(Environment.DIRECTORY\_D

OCUMENTS);

File file = new File(folder,"talkonline.txt");

writeTextData(file, String.valueOf(Calendar.getInstance().getTime()));

}

else if(Environment.MEDIA\_MOUNTED\_READ\_ONLY.equals(state)){

Toast.makeText(this, "Can't access the sd card",

Toast.LENGTH\_SHORT).show();

} else{

Toast.makeText(this, "No sd card mounted",

Toast.LENGTH\_SHORT).show();

}

}

} catch (Exception e) {

e.printStackTrace(); } finally {

if (fileOutputStream != null) {

try {

fileOutputStream.close(); } catch (IOException e) {

e.printStackTrace();

}

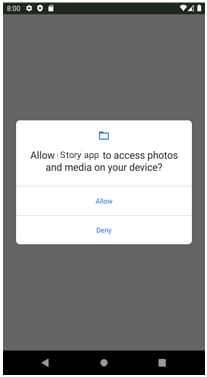
}

}

}

}

**Output:**

****

**Result:**

Thus, the program for android Story Writing application that writes data into the SD Card was executed successfully.

**Ex no: 09**

**Date:**

**Implement an application that creates an alert upon receiving a message Aim:**

To develop an android Story Writing application that creates an alert upon receiving a message.

**Algorithm:**

* Start the process.
* Open the existing project in the android studio.
* Toast is class which helps us to give alert message in the android application.
* These toast messages can be used while logging into the system, registering into the system, location access etc.,
* After adding the toast message, run the application in the Android Virtual Device(AVD).
* Stop the process.

**Program: MainActivity.java** package com.example.talkonline; importandroidx.annotation.NonNull;

importandroidx.appcompat.app.AppCompatActivity; import androidx.core.app.ActivityCompat;

import android.Manifest;

import android.content.Intent;

import android.os.Bundle;

import android.os.Environment;

import android.view.View;

import android.widget.Button;

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.firebase.auth.AuthResult;

import com.google.firebase.auth.FirebaseAuth;

import java.io.File; import java.io.FileOutputStream; import java.io.IOException; import java.util.Calendar;

public class MainActivity extends AppCompatActivity { private TextView signUpText; private Button blogin; private TextView email,password;

LoadingClass load; @Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_main);

load = new LoadingClass(MainActivity.this); signUpText = findViewById(R.id.signUp);

blogin = findViewById(R.id.blogin);

email = findViewById(R.id.email);

password = findViewById(R.id.password); if(FirebaseAuth.getInstance().getCurrentUser()!=null){ load.startLoading();

Intent intent = new Intent(MainActivity.this,ChatScreenActivity.class); startActivity(intent);

load.dismissLoading();

finish();

}

signUpText.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

Intent intent = new Intent(MainActivity.this,SignUpActivity.class); startActivity(intent);

}

});

blogin.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) { load.startLoading();

String semail = String.valueOf(email.getText());

String spassword = String.valueOf(password.getText());

FirebaseAuth.getInstance().signInWithEmailAndPassword(semail,spassword).a ddOnCompleteListener(new OnCompleteListener<AuthResult>() {

@Override

public void onComplete(@NonNull Task<AuthResult> task) { if(task.isSuccessful()){ load.dismissLoading();

Intent intent = new

Intent(MainActivity.this,ChatScreenActivity.class);

startActivity(intent);

Toast.makeText(MainActivity.this, "Logged In Successfully",

Toast.LENGTH\_SHORT).show();

loginTimeStore();

}

else {

load.dismissLoading();

Toast.makeText(MainActivity.this, "Error in login",

Toast.LENGTH\_SHORT).show();

}

}

});

XmlPullParser xpp = factory.newPullParser(); xpp.setInput(getInputStream(url), "UTF\_8");

boolean insideItem = false; if(Environment.MEDIA\_MOUNTED.equals(state)){

//Toast.makeText(MainActivity.this, "SD card",

Toast.LENGTH\_SHORT).show();

ActivityCompat.requestPermissions(this, new

String[]{Manifest.permission.READ\_EXTERNAL\_STORAGE},

23);

File folder =

Environment.getExternalStoragePublicDirectory(Environment.DIRECTORY\_D

OCUMENTS);

File file = new File(folder,"talkonline.txt");

writeTextData(file, String.valueOf(Calendar.getInstance().getTime()));

}

else if(Environment.MEDIA\_MOUNTED\_READ\_ONLY.equals(state)){

Toast.makeText(this, "Can't access the sd card",

if (fileOutputStream != null) {

try {

fileOutputStream.close(); } catch (IOException e) {

e.printStackTrace();

}

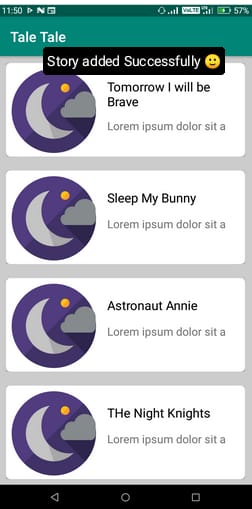
}

}

}

}

**Output:**

****

**Result:**

Thus, the program for android Story Writing application that creates an alert upon receiving a message was executed successfully.

**Ex no: 10**

**Date:**

**Develop an application that makes use of RSS Feed**

**Aim:**

To develop an android Story writing application that makes use of RSS (Rich Site Summary) Feed**.**

**Algorithm:**

* Start the process.
* Open a new project in the android studio by selecting the empty activity.
* Create a list view in the activity\_main.xml
* Get the feed from a website and display it in the list view.
* Run the application in the Android Virtual Studio(AVD).
* Stop the process.

**Program: MainActivity.java**

package com.example.rss feed;

import android.app.ListActivity;

import android.content.Intent;

import android.net.Uri;

import android.os.AsyncTask;

import android.os.Bundle;

import android.view.View;

import android.widget.ArrayAdapter;

import android.widget.ListView;

import org.xmlpull.v1.XmlPullParser;

importorg.xmlpull.v1.XmlPullParserException; import org.xmlpull.v1.XmlPullParserFactory; import java.io.IOException;

import java.io.InputStream;

import java.net.MalformedURLException; import java.net.URL;

import java.util.ArrayList; import java.util.List; public class MainActivity extends ListActivity

{

List headlines;

List links; @Override

protected void onCreate(Bundle savedInstanceState)

{

super.onCreate(savedInstanceState); new MyAsyncTask().execute();

}

class MyAsyncTask extends AsyncTask<Object,Void,ArrayAdapter>

{

@Override

protected ArrayAdapter doInBackground(Object[] params)

{

headlines = new ArrayList(); links = new ArrayList();

try

{

URL url = new URL("https://codingconnect.net/feed");

XmlPullParserFactory factory = XmlPullParserFactory.newInstance(); factory.setNamespaceAware(false);

XmlPullParser xpp = factory.newPullParser(); xpp.setInput(getInputStream(url), "UTF\_8"); boolean insideItem = false;

XmlPullParser xpp = factory.newPullParser(); xpp.setInput(getInputStream(url), "UTF\_8"); boolean insideItem = false;

xpp.setInput(getInputStream(url), "UTF\_8"); boolean insideItem = false;

int eventType = xpp.getEventType();

catch (XmlPullParserException e)

{

e.printStackTrace(); protected void onPostExecute(ArrayAdapter adapter)

{

adapter = new ArrayAdapter(MainActivity.this, android.R.layout.simple\_list\_item\_1, headlines); setListAdapter(adapter);

}

}

@Override

public InputStream getInputStream(URL url)

{ try

{

return url.openConnection().getInputStream();

}

catch (IOException e)

{

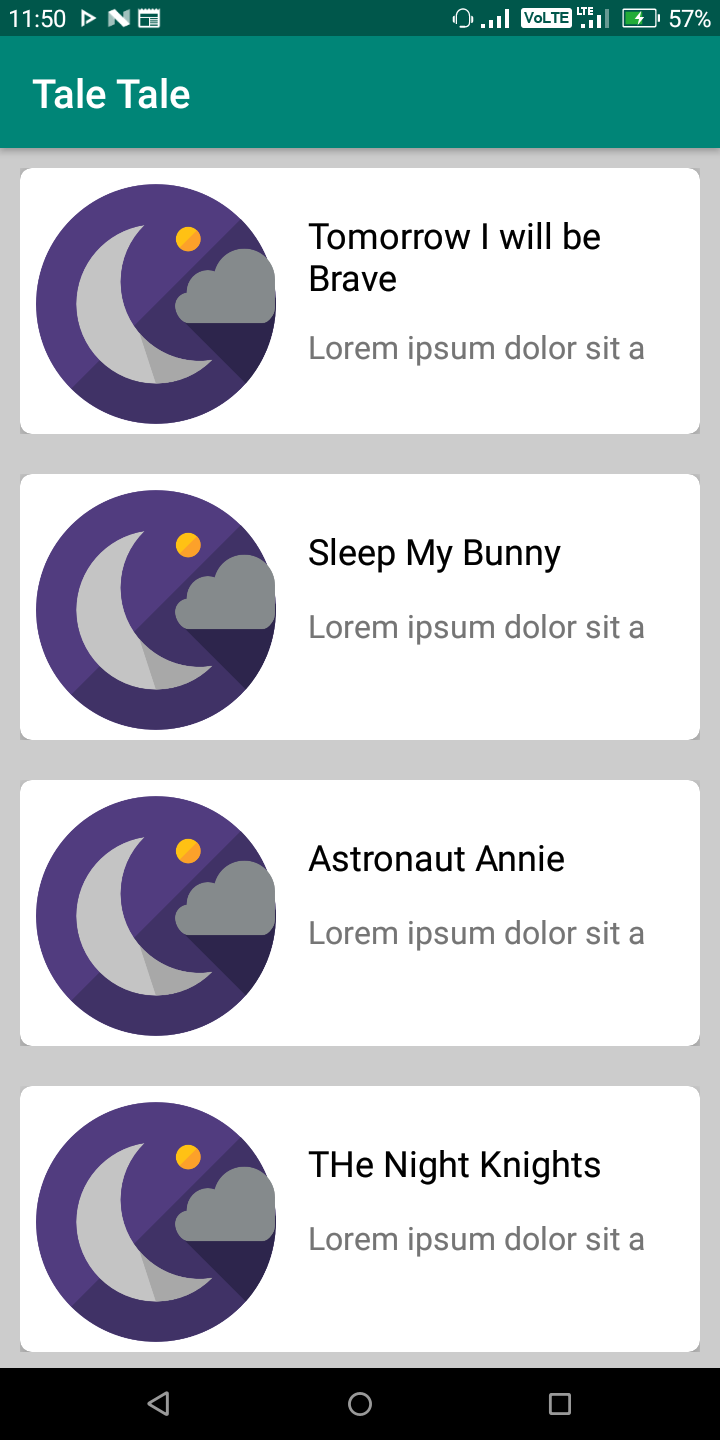
return null;

}

}

}

**Output:**

****

**Result:**

Thus, the program for android Story Writing application that makes use of RSS Feed was executed successfully.

**Ex no: 11**

**Date:**

# Develop a mobile application to send an email

**Aim:**

To develop an android Story Writing application that sends an email.

Algorithm:

* Start the process.
* Open the existing project in the android studio.
* Create function in the SignupActivity where an email is sent to the registered user.
* Email is sent with the help of Intent Class.
* Run the application in the Android Virtual Device(AVD).
* Stop the process.

**Program:**

**SignUpActivity.java**:

package com.example.talkonline; importandroidx.annotation.NonNull;

import android.appcompat.app.AppCompatActivity; import android.annotation.SuppressLint;

import android.content.Intent;

import android.net.Uri; import android.os.Bundle; 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.Task;

import com.google.firebase.auth.AuthResult;

import com.google.firebase.auth.FirebaseAuth;

import com.google.firebase.database.FirebaseDatabase; public class SignUpActivity extends AppCompatActivity { private TextView loginText;

private EditText username,email,password,cpassword; private Button signup;

@SuppressLint("MissingInflatedId")

@Override

protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_sign\_up); //Getting the values from the sign up activity.

loginText = findViewById(R.id.login);

username = findViewById(R.id.username);

email = findViewById(R.id.email1);

password = findViewById(R.id.password1); cpassword = findViewById(R.id.confirmPassword1); signup = findViewById(R.id.bsignup); if(FirebaseAuth.getInstance().getCurrentUser()!=null){

Intent intent = new

Intent(SignUpActivity.this,ChatScreenActivity.class);

startActivity(intent); finish();

}

//Moving the activity to main activity. loginText.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

Intent intent = new Intent(SignUpActivity.this,MainActivity.class); startActivity(intent);

}

});

//signup check

signup.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

String semail = String.valueOf(email.getText());

String spassword = String.valueOf(password.getText());

String scpassword = String.valueOf(cpassword.getText()); String susername = String.valueOf(username.getText()); if(!semail.isEmpty() && !susername.isEmpty()) { if(spassword.length()==7){ if(spassword.equals(scpassword)){

FirebaseAuth.getInstance().createUserWithEmailAndPassword(semail,spasswor d).addOnCompleteListener(new OnCompleteListener<AuthResult>() {

@Override

public void onComplete(@NonNull Task<AuthResult> task) { if(task.isSuccessful()){

FirebaseDatabase.getInstance().getReference("user/"+FirebaseAuth.getInstance(

).getCurrentUser().getUid()).setValue(new User(susername,semail,""));

Intent intent = new

Toast.makeText(SignUpActivity.this,"Password doesn't

match",Toast.LENGTH\_SHORT).show();

} else

Toast.makeText(SignUpActivity.this,"Password length should be

7.",Toast.LENGTH\_SHORT).show();

}

}

});

}

void emailSend(String email){

Intent emailIntent = new Intent(Intent.ACTION\_SEND); emailIntent.setData(Uri.parse("mailto:")); emailIntent.setType("text/plain");

emailIntent.putExtra(Intent.EXTRA\_EMAIL, email); emailIntent.putExtra(Intent.EXTRA\_SUBJECT, "Hi hello user!"); emailIntent.putExtra(Intent.EXTRA\_TEXT, "Welcome to talkonline application. Feel free to speak.");

try {

Toast.makeText(this, "Verify your mail please",

Toast.LENGTH\_SHORT).show();

}

catch (android.content.ActivityNotFoundException e){

}

}

}

**Output:**



**Result:**

Thus, the program for android Story Writing application to send an email was executed successfully.

**Ex no: 12**

**Date:**

**Develop a Mobile application for simple needs (Mini Project) Aim:**

To develop a mobile Story Writing application.

**Algorithm:**

* Start the process
* Open the existing project in the android application.
* Add the other features to the project.
* Add the required activity to the project.
* Run the application in the Android Virtual Device(AVD).
* Stop the process

**Program: User.java**

packagecom.example.talkonline;

public class User {

private String username; private String email;

private String profilePicture; public User(){

}

public User(String username,String email,String profilePicture){ this.username = username;

this.email = email;

this.profilePicture = profilePicture;

}

public String getUsername() {

return username;

}

public String getProfilePicture(){ return profilePicture;

}

}

**LoadingClass.java**

package com.example.talkonline; import android.app.Activity;

import android.app.AlertDialog; import android.view.LayoutInflater; public class LoadingClass { private Activity activity;

private AlertDialog alertDialog; LoadingClass(Activity activity){ this.activity= activity;

}

void startLoading(){

AlertDialog.Builder builder = new builder.setCancelable(false);

alertDialog.show();

}

void dismissLoading(){

alertDialog.dismiss();

}

}

**UserAdapter.java**

package com.example.talkonline.Adapter;

import android.content.Context;

import android.content.Intent;

import android.util.Log;

import android.view.LayoutInflater;

import android.view.View;

import android.view.ViewGroup;

import android.widget.ImageView;

import android.widget.TextView;

import androidx.annotation.NonNull;

import androidx.recyclerview.widget.RecyclerView;

import com.bumptech.glide.Glide;

import com.example.talkonline.ChatRoomActivity;

import com.example.talkonline.R;

import com.example.talkonline.User;

import com.google.firebase.database.ValueEventListener; import java.util.List; public class UserAdapter extends

this.mUsers=mUsers;

}

@NonNull @Override

public void onBindViewHolder(@NonNull ViewHolder holder, int position)

{

User user = mUsers.get(position); Log.d("Message", user.getUsername()); holder.username.setText(user.getUsername()); if(user.getProfilePicture().equals("")){

holder.profile\_url.setImageResource(R.drawable.account);

} holder.itemView.setOnClickListener(new View.OnClickListener() {

intent.addFlags(Intent.FLAG\_ACTIVITY\_NEW\_TASK); mContext.startActivity(intent);

}

});

}

@Override public int getItemCount() { return mUsers.size();

}

public class ViewHolder extends RecyclerView.ViewHolder{ public TextView username;

public ImageView profile\_url;

public ViewHolder(@NonNull View itemView) { super(itemView);

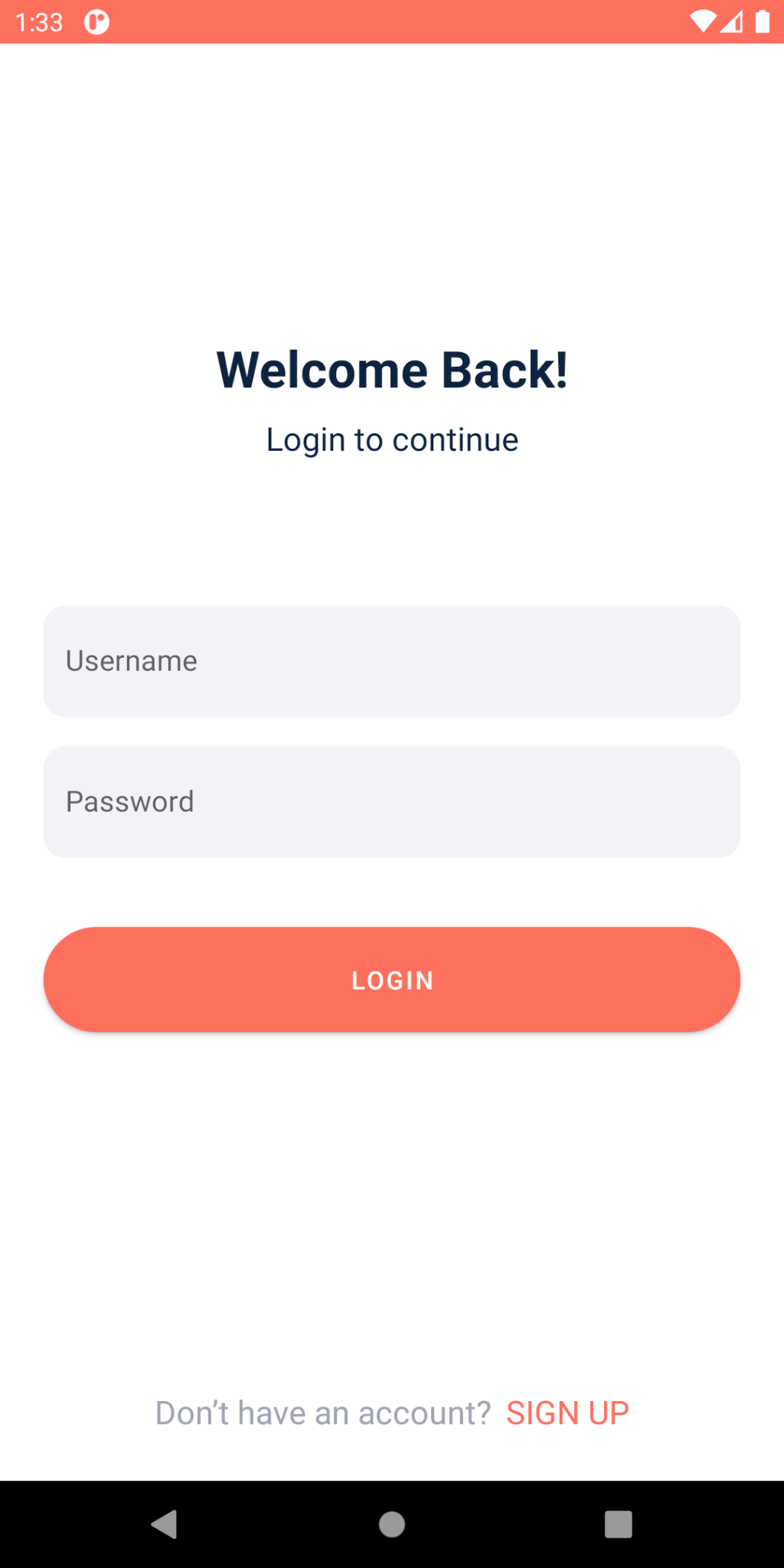
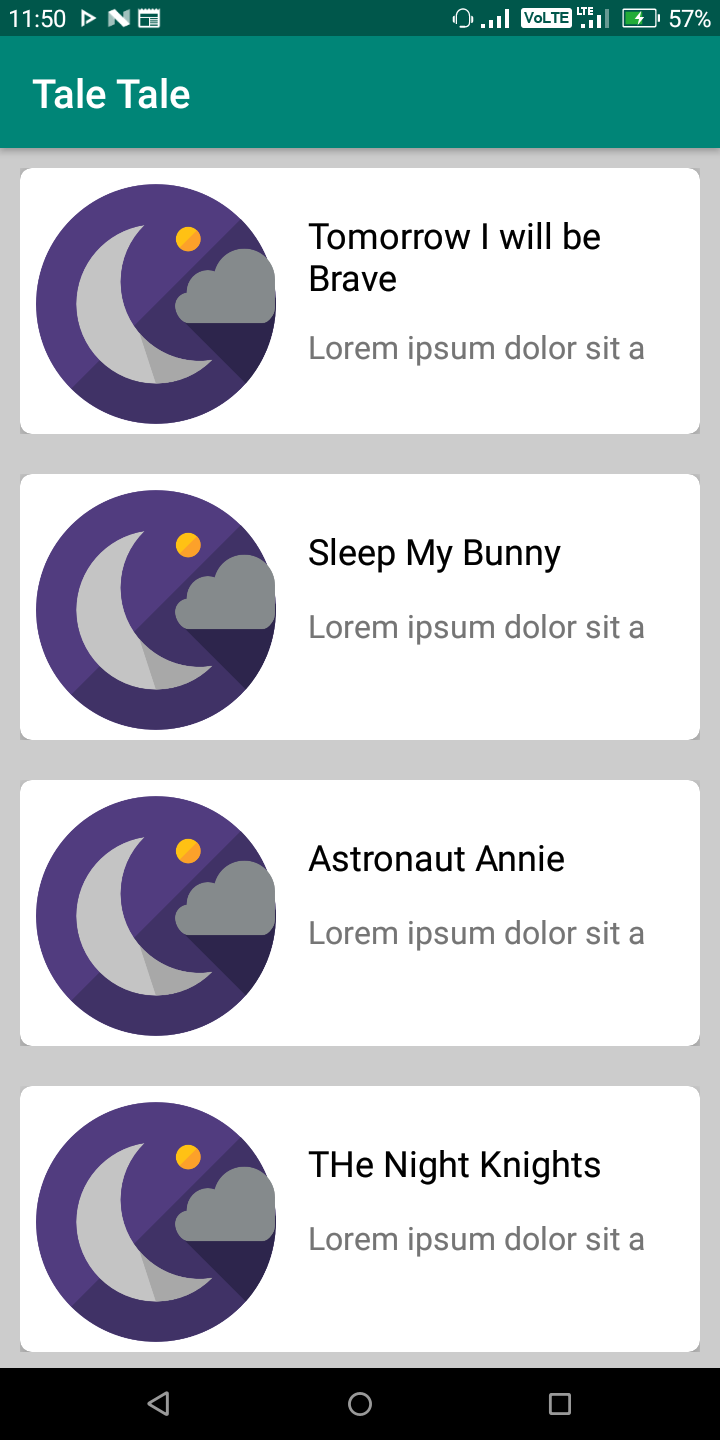
username = itemView.findViewById(R.id.otherUser); profile\_url = itemView.findViewById(R.id.profile\_url);

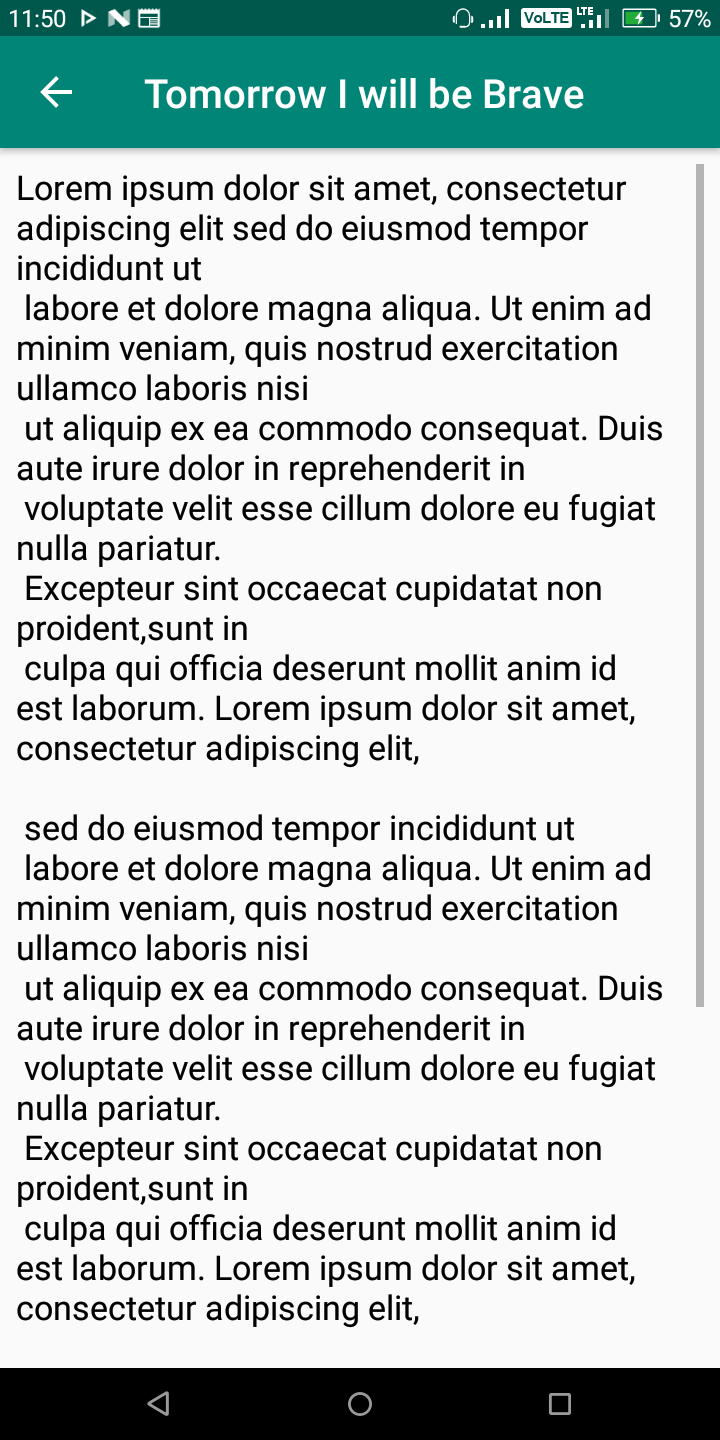
}

}

}

**Output:**

 ****

****

**Result:**

Thus, the Story Writing application was developed successfully and

verified