Index

PROJECT ON

ANDROID APP DEVELOPMENT

1.Registration Page

1 Here We Provide Two method For New Users-
   ### a) Register Via Otp(Phone)
   ### b) Register Via Email
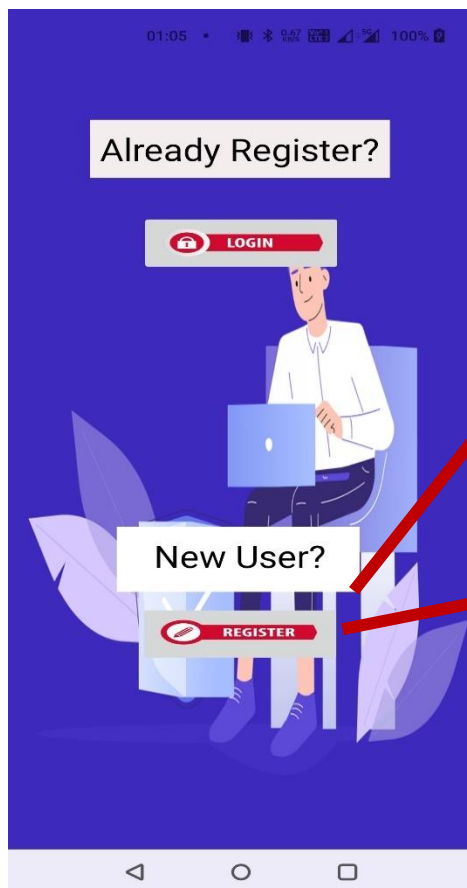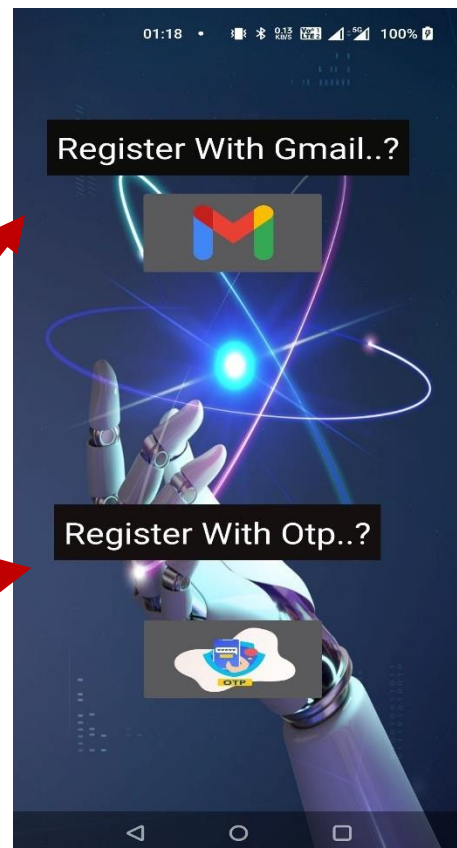
Fig-a   Fig-b

- For a New User Click For Register
- A Following Page Will be Open including Register With Email And Register With Otp
- Choose Your Preference And Register.

Fig b- XML Code For New User(ie-Register With Otp And Gmail)

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main12"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@drawable/ai"
    tools:context=".Second">

    <TextView
        android:id="@+id/loginRedirectText5"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_marginStart="60dp"
        android:layout_marginTop="460dp"
        android:layout_marginEnd="72dp"
        android:background="#171111"
        android:padding="8dp"
        android:text="Register With Otp..?"
        android:textColor="@color/white"
        android:textSize="30sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent">

    </TextView>

    <TextView
        android:id="@+id/loginRedirectText6"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_marginTop="72dp"
        android:layout_marginEnd="48dp"
        android:background="#100D0D"
        android:padding="8dp"
        android:text="Register With Gmail..?"
        android:textColor="@color/white"
        android:textSize="30sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toTopOf="parent">

    </TextView>

    <ImageButton
        android:id="@+id/imageButton7"
        android:layout_width="159dp"
        android:layout_height="90dp"
        android:layout_marginStart="120dp"
        android:layout_marginTop="11dp"
```

```xml
        android:layout_marginEnd="132dp"
        android:layout_marginBottom="227dp"
        android:scaleType="fitXY"
        app:layout_constraintBottom_toTopOf="@+id/loginRedirectText5"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/loginRedirectText6"
        app:srcCompat="@drawable/gmail" />

    <ImageButton
        android:id="@+id/imageButton8"
        android:layout_width="159dp"
        android:layout_height="90dp"
        android:layout_marginTop="17dp"
        android:layout_marginBottom="108dp"
        android:scaleType="fitXY"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.476"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/loginRedirectText5"
        app:srcCompat="@drawable/otp" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

Fig b-Java Code For New User(ie-Register With Otp And Gmail)

```java
package com.example.ankitapphome;

import android.annotation.SuppressLint;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.ImageButton;
import android.widget.TextView;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class Second extends AppCompatActivity {
    TextView t1,t2;
    ImageButton b1,b2;
    @SuppressLint("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_second);
        t1=(TextView)findViewById(R.id.loginRedirectText6);
        t2=(TextView)findViewById(R.id.loginRedirectText5);
```

```java
        b1=(ImageButton)findViewById(R.id.imageButton7);
        b2=(ImageButton)findViewById(R.id.imageButton8);




ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main12), (v,
insets) -> {
            Insets systemBars =
insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right,
systemBars.bottom);
            return insets;
        });
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent i=new Intent(Second.this, MainActivity.class);
                startActivity(i);
                finish();
            }
        });
        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent j=new Intent(Second.this, Third.class);
                startActivity(j);
                finish();
            }
        });
    }
}
```

2.Registration And Login With Email
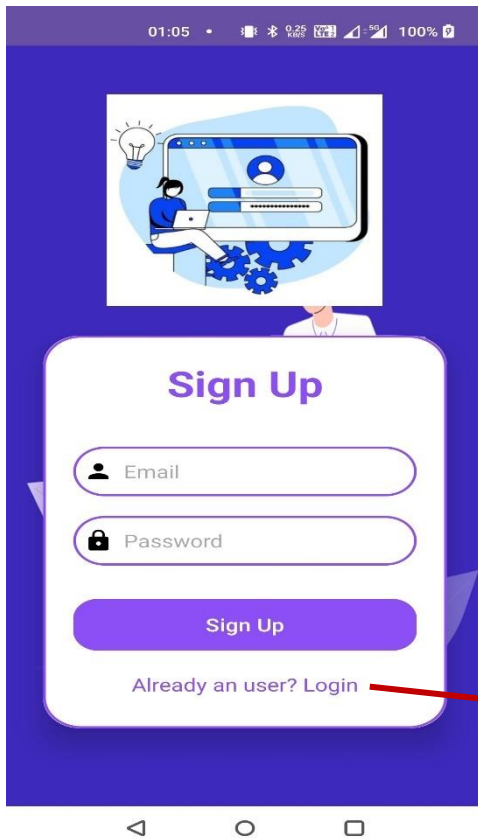
- Now We Can Register With Gmail Using Gmail And Password
- After Successful Registration the Page Will Redirected to The Login Page
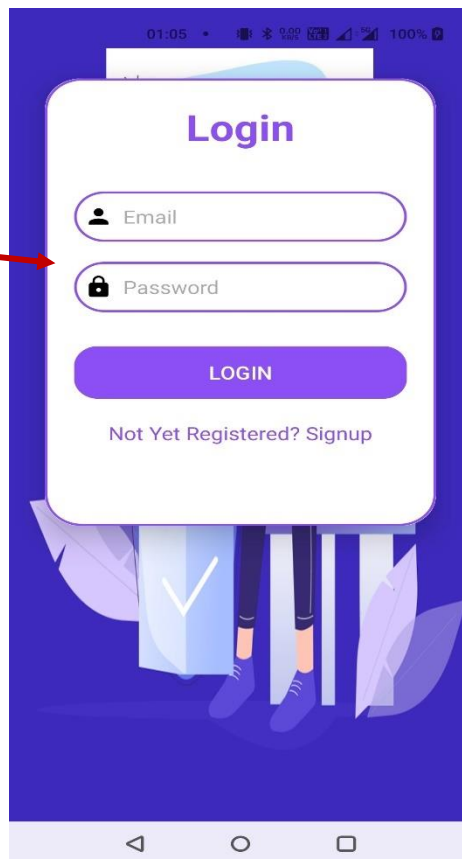
Fig-c

Fig-d

- After Login into the Application. It we Redirect to You On the Welcome Screen of the Application
- Now the Process for OTP Will be..

Fig-c XML Code For SignUp(Register With Gmail)

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    android:background="@drawable/log"
    tools:context=".MainActivity">

    <ImageView
        android:id="@+id/imageView2"
        android:layout_width="383dp"
        android:layout_height="214dp"
        app:srcCompat="@drawable/logos" />

    <androidx.cardview.widget.CardView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="30dp"
        app:cardCornerRadius="30dp"
        app:cardElevation="20dp">

        <LinearLayout
            android:id="@+id/textview4"
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:layout_gravity="center_horizontal"
            android:background="@drawable/custom_edittext"
            android:orientation="vertical"
            android:padding="24dp">

            <TextView
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:text="Sign Up"
                android:textAlignment="center"
                android:textColor="@color/lavender"
                android:textSize="36sp"
                android:textStyle="bold" />

            <EditText
                android:id="@+id/login_email2"
                android:layout_width="match_parent"
                android:layout_height="50dp"
                android:layout_marginTop="40dp"
                android:background="@drawable/custom_edittext"
                android:drawableLeft="@drawable/baseline_person_24"
                android:drawablePadding="8dp"
                android:hint="Email"
                android:padding="8dp"
                android:textColor="@color/black" />

            <EditText
                android:id="@+id/login_password2"
```

```xml
                android:layout_width="match_parent"
                android:layout_height="50dp"
                android:layout_marginTop="20dp"
                android:background="@drawable/custom_edittext"
                android:drawableLeft="@drawable/baseline_lock_24"
                android:drawablePadding="8dp"
                android:hint="Password"
                android:padding="8dp"
                android:textColor="@color/black" />

            <Button
                android:id="@+id/login_button2"
                android:layout_width="match_parent"
                android:layout_height="60dp"
                android:layout_marginTop="30dp"
                android:backgroundTint="@color/lavender"
                android:text="Sign Up"
                android:textSize="18sp"
                app:cornerRadius="20dp" />

            <TextView
                android:id="@+id/loginRedirectText4"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:layout_gravity="center"
                android:layout_marginTop="10dp"
                android:padding="8dp"
                android:text="Already an user? Login"
                android:textColor="@color/lavender"
                android:textSize="18sp" />

        </LinearLayout>

    </androidx.cardview.widget.CardView>

</LinearLayout>
```

Fig-c Java Code For SignUp(Register With Gmail)

```java
package com.example.ankitapphome;


import android.annotation.SuppressLint;
import android.content.Intent;
import android.os.Bundle;
import android.text.InputType;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
```

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

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 FirebaseAuth auth;
    private EditText signupEmail, signupPassword;
    private Button b1;
    private TextView loginRedirectText;
    @SuppressLint("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        auth = FirebaseAuth.getInstance();
        signupEmail = findViewById(R.id.login_email2);
        signupPassword = findViewById(R.id.login_password2);

signupPassword.setInputType(InputType.TYPE_CLASS_TEXT|InputType.TYPE_TEXT_V
ARIATION_PASSWORD);
        b1 = findViewById(R.id.login_button2);
        loginRedirectText = findViewById(R.id.loginRedirectText4);

        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String user = signupEmail.getText().toString().trim();
                String pass = signupPassword.getText().toString().trim();

                if (user.isEmpty()){

                    signupEmail.setError("Email cannot be empty");
                }
                if (pass.isEmpty()){

                    signupPassword.setError("Password cannot be empty");
                } else{
                    auth.createUserWithEmailAndPassword(user,
pass).addOnCompleteListener(new OnCompleteListener<AuthResult>() {
                        @Override
                        public void onComplete(@NonNull Task<AuthResult>
task) {
                            if (task.isSuccessful()) {

                                Toast.makeText(MainActivity.this, "SignUp
Successful Now Login ", Toast.LENGTH_SHORT).show();
                                Intent j=new Intent(MainActivity.this,
Login.class);
                                startActivity(j);
                                finish();
                            } else {

                                Toast.makeText(MainActivity.this, "SignUp
Failed" + task.getException().getMessage(), Toast.LENGTH_SHORT).show();
```

```
                }
            }
        });
    }

}
});

loginRedirectText.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        Intent l=new Intent(MainActivity.this, Login.class);
        startActivity(l);
        finish();
    }
});

    }
}
```

Fig-d XML Code For Login(Login With Gmail)

```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:id="@+id/main12"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@drawable/log"
    tools:context=".Login">

    <ImageView
        android:id="@+id/imageView2"
        android:layout_width="383dp"
        android:layout_height="214dp"
        app:srcCompat="@drawable/logos" />

    <androidx.cardview.widget.CardView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="30dp"
        app:cardCornerRadius="30dp"
        app:cardElevation="20dp">

        <LinearLayout
            android:id="@+id/textview4"
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:layout_gravity="center_horizontal"
            android:background="@drawable/custom_edittext"
            android:orientation="vertical"
            android:padding="24dp">
```

```xml
<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Login"
    android:textAlignment="center"
    android:textColor="@color/lavender"
    android:textSize="36sp"
    android:textStyle="bold" />

<EditText
    android:id="@+id/login_email2"
    android:layout_width="match_parent"
    android:layout_height="50dp"
    android:layout_marginTop="40dp"
    android:background="@drawable/custom_edittext"
    android:drawableLeft="@drawable/baseline_person_24"
    android:drawablePadding="8dp"
    android:hint="Email"
    android:padding="8dp"
    android:textColor="@color/black" />

<EditText
    android:id="@+id/login_password2"
    android:layout_width="match_parent"
    android:layout_height="50dp"
    android:layout_marginTop="20dp"
    android:background="@drawable/custom_edittext"
    android:drawableLeft="@drawable/baseline_lock_24"
    android:drawablePadding="8dp"
    android:hint="Password"
    android:padding="8dp"
    android:textColor="@color/black" />

<Button
    android:id="@+id/login_button2"
    android:layout_width="match_parent"
    android:layout_height="60dp"
    android:layout_marginTop="30dp"
    android:backgroundTint="@color/lavender"
    android:text="LOGIN"
    android:textSize="18sp"
    app:cornerRadius="20dp" />

<TextView
    android:id="@+id/loginRedirectText4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:layout_marginTop="10dp"
    android:padding="8dp"
    android:text="Not Yet Registered? Signup"
    android:textColor="@color/lavender"
    android:textSize="18sp" />

<ProgressBar
    android:id="@+id/progressBar"
    style="?android:attr/progressBarStyle"
    android:layout_width="293dp"
    android:layout_height="48dp"
    android:visibility="invisible" />
```

```
          </LinearLayout>
     </androidx.cardview.widget.CardView>
</RelativeLayout>
```

<mark>Fig-d</mark> <u>Java Code For Login(Login With Gmail)</u>

```java
package com.example.ankitapphome;

import android.annotation.SuppressLint;
import android.content.Intent;
import android.os.Bundle;
import android.text.InputType;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ProgressBar;
import android.widget.TextView;
import android.widget.Toast;

import androidx.activity.EdgeToEdge;
import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

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 Login extends AppCompatActivity {
    TextView t1;
    Button b1;
    EditText e1,e2;
    FirebaseAuth firebaseAuth;
    ProgressBar pb;


    @SuppressLint("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_login);
        t1=(TextView)findViewById(R.id.loginRedirectText4);
        b1=(Button)findViewById(R.id.login_button2);
        e1=(EditText)findViewById(R.id.login_email2);
        pb=(ProgressBar)findViewById(R.id.progressBar);
        e2=(EditText)findViewById(R.id.login_password2);

e2.setInputType(InputType.TYPE_CLASS_TEXT|InputType.TYPE_TEXT_VARIATION_PAS
SWORD);
        firebaseAuth=FirebaseAuth.getInstance();
```

```java
ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main12), (v,
insets) -> {
            Insets systemBars =
insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right,
systemBars.bottom);
            return insets;
        });
        t1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent i=new Intent(Login.this, MainActivity.class);
                startActivity(i);
            }
        });b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String s1=e1.getText().toString().trim();
                String s2=e2.getText().toString();
                pb.setVisibility(View.VISIBLE);
                if(s1.isEmpty()){
                    e1.setError("Fill Email");
                    return;
                }else {
                    if (s2.isEmpty()){
                        e2.setError("Fill Password");
                        return;
                    }else {
                        pb.setVisibility(View.VISIBLE);

firebaseAuth.signInWithEmailAndPassword(s1,s2).addOnCompleteListener(new
OnCompleteListener<AuthResult>() {
                            @Override
                            public void onComplete(@NonNull
Task<AuthResult> task) {
                                if(task.isSuccessful()){
                                    pb.setVisibility(View.INVISIBLE);
                                    Toast.makeText(Login.this, "Login
Successfull", Toast.LENGTH_SHORT).show();
                                    Intent k=new Intent(Login.this,
Fifth.class);
                                    startActivity(k);
                                    finish();
                                }else {
                                    pb.setVisibility(View.INVISIBLE);
                                    Toast.makeText(Login.this, "Error
Password", Toast.LENGTH_SHORT).show();
                                }
                            }
                        });
                    }
                }

            }
        });
    }
}
```

3.Login With OTP
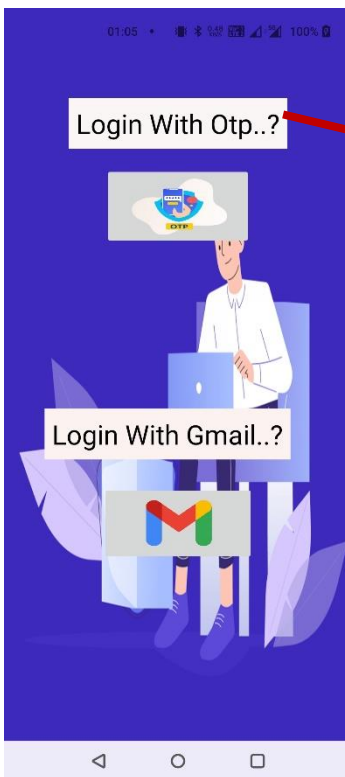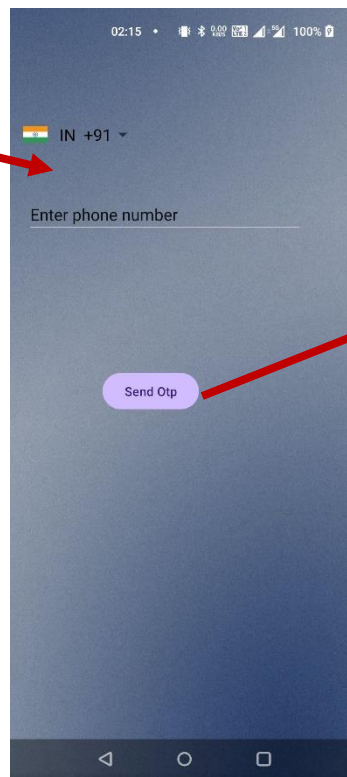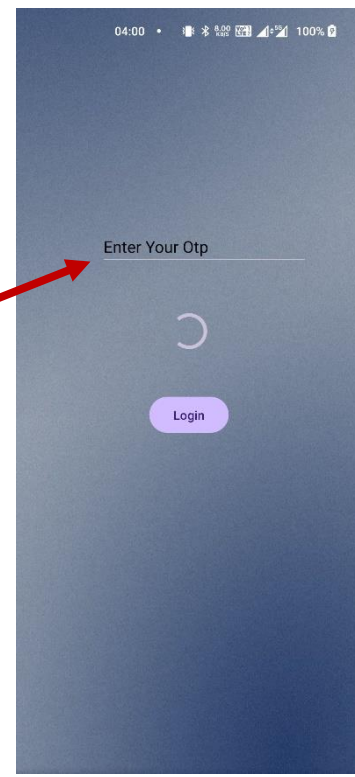
- Login With OTP is one of the best features
- Secure login system using OTP.
- This helps for enhance security of user authentication

2 Working Of Login

1. User enters their phone number.
2. The system sends an OTP to the entered phone number.
3. User inputs the received OTP.
4. The system verifies the OTP.
5. Upon successful verification, the user is logged in.

Fig-e XML for Login(Login With OTP and Gmail)

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main12"
    android:background="@drawable/log"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".Fourth">

    <TextView
        android:id="@+id/loginRedirectText7"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_marginTop="59dp"
        android:layout_marginBottom="21dp"
        android:background="#FBF6F6"
        android:padding="8dp"
        android:text="Login With Otp..?"
        android:textColor="@color/black"
        android:textSize="30sp"
        app:layout_constraintBottom_toTopOf="@+id/imageButton10"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent">

    </TextView>

    <TextView
        android:id="@+id/loginRedirectText8"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_marginTop="180dp"
        android:layout_marginEnd="68dp"
        android:background="#FBF2F2"
        android:padding="8dp"
        android:text="Login With Gmail..?"
        android:textColor="@color/black"
        android:textSize="30sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/imageButton10">

    </TextView>

    <ImageButton
        android:id="@+id/imageButton9"
        android:layout_width="168dp"
        android:layout_height="84dp"
        android:layout_marginTop="18dp"
        android:layout_marginBottom="77dp"
        android:scaleType="fitXY"
```

```xml
            app:layout_constraintBottom_toBottomOf="parent"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toBottomOf="@+id/loginRedirectText8"
            app:layout_constraintVertical_bias="0.079"
            app:srcCompat="@drawable/gmail">

    </ImageButton>

    <ImageButton
        android:id="@+id/imageButton10"
        android:layout_width="162dp"
        android:layout_height="87dp"
        android:layout_marginTop="20dp"
        android:layout_marginBottom="266dp"
        android:scaleType="fitXY"
        app:layout_constraintBottom_toTopOf="@+id/loginRedirectText8"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/loginRedirectText7"
        app:srcCompat="@drawable/otp">

    </ImageButton>


</androidx.constraintlayout.widget.ConstraintLayout>
```

Fig-e Java Code for Login(Login With OTP and Gmail)

```java
package com.example.ankitapphome;

import android.annotation.SuppressLint;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.ImageButton;
import android.widget.TextView;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class Fourth extends AppCompatActivity {
    TextView t1,t2;
    ImageButton b1,b2;
    @SuppressLint("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_fourth);
        t1=(TextView)findViewById(R.id.loginRedirectText7);
        t2=(TextView)findViewById(R.id.loginRedirectText8);
        b1=(ImageButton)findViewById(R.id.imageButton9);
        b2=(ImageButton)findViewById(R.id.imageButton10);
```

```
ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main12), (v,
insets) -> {
            Insets systemBars =
insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right,
systemBars.bottom);
            return insets;
        });
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent i=new Intent(Fourth.this, Login.class);
                startActivity(i);
                finish();
            }
        });
        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent j=new Intent(Fourth.this, Third.class);
                startActivity(j);
                finish();
            }
        });
    }
}
```

Fig-f XML for Enter Mobile(For OTP)

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main12"
    android:background="@drawable/call"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".Third">

    <EditText
        android:id="@+id/editTextPhoneNumber26"
        android:layout_width="306dp"
        android:layout_height="wrap_content"
        android:layout_marginStart="32dp"
        android:layout_marginTop="40dp"
        android:layout_marginEnd="73dp"
        android:layout_marginBottom="36dp"
        android:hint="Enter phone number"
        android:inputType="phone"
        android:textColor="#F1F1EB"
        android:textColorHint="#100F0F"
```

```xml
        app:layout_constraintBottom_toTopOf="@+id/buttonCall"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/cpp2" />

    <com.hbb20.CountryCodePicker
        android:id="@+id/cpp2"
        android:layout_width="307dp"
        android:layout_height="46dp"
        android:layout_marginStart="17dp"
        android:layout_marginTop="80dp"
        android:layout_marginEnd="71dp"
        android:layout_marginBottom="9dp"
        app:layout_constraintBottom_toTopOf="@+id/editTextPhoneNumber26"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="1.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.0" />

    <ProgressBar
        android:id="@+id/progressBar2"
        style="?android:attr/progressBarStyle"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="156dp"
        android:layout_marginTop="30dp"
        android:layout_marginEnd="207dp"
        android:layout_marginBottom="53dp"
        android:visibility="invisible"
        app:layout_constraintBottom_toTopOf="@+id/button18"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/editTextPhoneNumber26" />

    <Button
        android:id="@+id/button18"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="129dp"
        android:layout_marginEnd="175dp"
        android:text="Send Otp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="1.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.499" />

    <Button
        android:id="@+id/button24"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="135dp"
        android:layout_marginTop="62dp"
        android:layout_marginEnd="185dp"
        android:layout_marginBottom="232dp"
        android:text="Exit"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
```

```
                    app:layout_constraintTop_toBottomOf="@+id/button18" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

Fig-f Java Code for Enter Mobile(For OTP)

```java
package com.example.ankitapphome;

import android.annotation.SuppressLint;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ProgressBar;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

import com.hbb20.CountryCodePicker;

public class Third extends AppCompatActivity {
    EditText e1;
    CountryCodePicker cpp;
    Button b1,b2;
    ProgressBar pb;

    @SuppressLint("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_third);
        e1=(EditText)findViewById(R.id.editTextPhoneNumber26) ;
        pb=(ProgressBar)findViewById(R.id.progressBar2);
        cpp=(CountryCodePicker)findViewById(R.id.cpp2);
        b2=(Button)findViewById(R.id.button24);
        cpp.registerCarrierNumberEditText(e1);
        b1=(Button)findViewById(R.id.button18);

ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main12), (v,
insets) -> {
            Insets systemBars =
insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right,
systemBars.bottom);
            return insets;
        });
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                pb.setVisibility(View.VISIBLE);
```

```java
                Intent i=new Intent(Third.this,OtpVerify.class);
                i.putExtra("mobile",cpp.getFullNumberWithPlus().trim());
                startActivity(i);
            }
        });
        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent k=new Intent(Third.this, Login.class);
                startActivity(k);
                finish();
            }
        });
    }
}
```

Fig-g XML for Submit OTP

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:background="@drawable/call"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".OtpVerify">

    <EditText
        android:id="@+id/editTextText2"
        android:layout_width="231dp"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="93dp"
        android:layout_marginTop="162dp"
        android:layout_marginBottom="100dp"
        android:ems="10"
        android:hint="Enter Your Otp"
        android:inputType="text"
        android:textColorHint="#070606"
        app:layout_constraintBottom_toTopOf="@+id/button19"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/button19"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="376dp"
        android:text="Login"
        app:layout_constraintBottom_toBottomOf="parent"
```

```xml
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent" />

    <ProgressBar
        android:id="@+id/progressBar3"
        style="?android:attr/progressBarStyle"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="27dp"
        android:layout_marginBottom="25dp"
        app:layout_constraintBottom_toTopOf="@+id/button19"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/editTextText2" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Fig-g Java Code for Submit OTP

```java
package com.example.ankitapphome;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ProgressBar;
import android.widget.Toast;
import android.credentials.Credential;
import androidx.activity.EdgeToEdge;
import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

import com.google.android.gms.tasks.OnCompleteListener;
import com.google.android.gms.tasks.Task;
import com.google.firebase.FirebaseException;
import com.google.firebase.auth.AuthResult;
import com.google.firebase.auth.FirebaseAuth;
import com.google.firebase.auth.PhoneAuthCredential;
import com.google.firebase.auth.PhoneAuthProvider;

import java.util.concurrent.TimeUnit;

public class OtpVerify extends AppCompatActivity {
    Button b1;
    ProgressBar pb;
    EditText e1;
    String phone;
    String otp;
    FirebaseAuth firebaseAuth;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
```

```java
        setContentView(R.layout.activity_otp_verify);
        phone=getIntent().getStringExtra("mobile").toString();
        e1=(EditText)findViewById(R.id.editTextText2);
        pb=(ProgressBar)findViewById(R.id.progressBar3);
        b1=(Button)findViewById(R.id.button19);
        firebaseAuth=FirebaseAuth.getInstance();
        genotp();
        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main),
(v, insets) -> {
            Insets systemBars =
insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right,
systemBars.bottom);
            return insets;
        });
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String s1=e1.getText().toString().trim();
                //PhoneAuthCredential credential=
PhoneAuthProvider.getCredential(otp,s1);
                //SigninWithPhoneCredential(credential);
                //PhoneAuthCredential
credential=PhoneAuthProvider.getCredential(otp,s1);
                if (s1.isEmpty())
                {
                    Toast.makeText(OtpVerify.this, "Fill Otp",
Toast.LENGTH_SHORT).show();
                }
                else
                {
                    if(s1.length()!=6)
                    {
                        Toast.makeText(OtpVerify.this, "bad",
Toast.LENGTH_SHORT).show();
                    }
                    else
                    {
                        PhoneAuthCredential credential=
PhoneAuthProvider.getCredential(otp,s1);
                        SigninWithPhoneCredential(credential);
                    }
                }
            }
        });
    }private void genotp()
    {
        PhoneAuthProvider.getInstance().verifyPhoneNumber(
                phone,
                60,
                TimeUnit.SECONDS,
                this,
                new PhoneAuthProvider.OnVerificationStateChangedCallbacks()
{
                    @Override
                    public void onCodeSent(@NonNull String s, @NonNull
PhoneAuthProvider.ForceResendingToken forceResendingToken) {
                        super.onCodeSent(s, forceResendingToken);
                        otp=s;
                    }
```

```java
                @Override
                public void onVerificationCompleted(@NonNull
PhoneAuthCredential phoneAuthCredential) {
                    SigninWithPhoneCredential(phoneAuthCredential);
                }

                @Override
                public void onVerificationFailed(@NonNull
FirebaseException e) {
                    Toast.makeText(OtpVerify.this, "Otp Mismatched",
Toast.LENGTH_SHORT).show();
                }
            }
        );
    }private void SigninWithPhoneCredential(PhoneAuthCredential
credential){
        pb.setVisibility(View.VISIBLE);

firebaseAuth.signInWithCredential(credential).addOnCompleteListener(new
OnCompleteListener<AuthResult>() {
            @Override
            public void onComplete(@NonNull Task<AuthResult> task) {
                if (task.isSuccessful()){
                    pb.setVisibility(View.INVISIBLE);
                    Toast.makeText(OtpVerify.this, "Login Successfull",
Toast.LENGTH_SHORT).show();
                    Intent j=new Intent(OtpVerify.this,Fifth.class);
                    startActivity(j);
                    finish();
                }else {
                    pb.setVisibility(View.INVISIBLE);
                    Toast.makeText(OtpVerify.this, "Sorry",
Toast.LENGTH_SHORT).show();
                }
            }
        });
    }
}
```

4.Welcome Screen
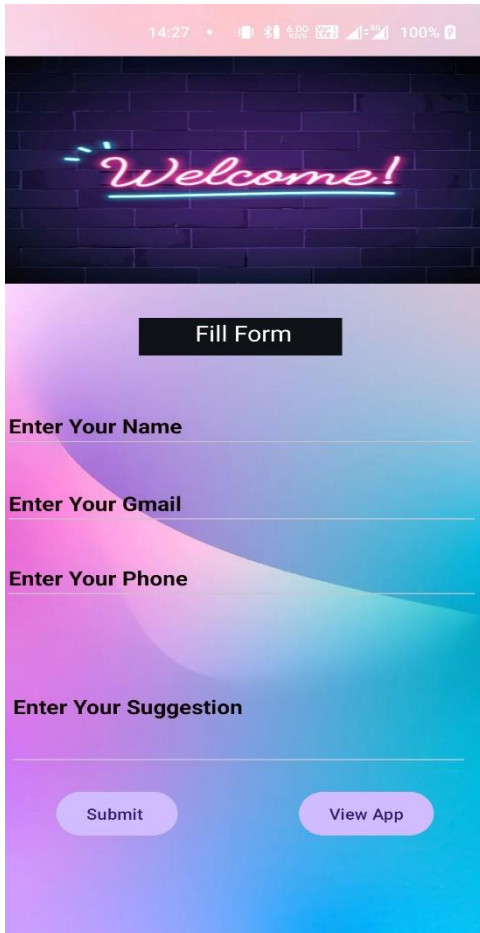
- In mobile applications, user registration is a crucial feature that allows users to create an account to access personalized services.
- Backend integration for storing user data and validation mechanisms to ensure data accuracy.
- Diagram Working

1) Open the registration form
2) Enters their details (name, email, password, Phone).
3) system validates the input
4) Upon successful validation, the data is sent to the backend server.

5) The server stores the data in the database.

6) user is notified of successful registration of form

7) After that user redirect in the application

Fig h Xml for Welcome Screen

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main12"
    android:background="@drawable/home"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".Fifth">

    <ImageView
        android:id="@+id/imageView3"
        android:layout_width="413dp"
        android:layout_height="208dp"
        android:layout_marginBottom="12dp"
        android:scaleType="fitXY"
        app:layout_constraintBottom_toTopOf="@+id/textView10"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:srcCompat="@drawable/wel" />


    <EditText
        android:id="@+id/editTextText10"
        android:layout_width="380dp"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="12dp"
        android:layout_marginEnd="19dp"
        android:ems="10"
        android:hint="Enter Your Gmail"
        android:inputType="text"
        android:textColorHint="#100707"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.513">

    </EditText>

    <EditText
        android:id="@+id/editTextText11"
        android:layout_width="380dp"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="12dp"
        android:layout_marginEnd="19dp"
        android:ems="10"
        android:hint="Enter Your Name"
        android:inputType="text"
        android:textColorHint="#100707"
        android:textStyle="bold"
```

```xml
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.421">

</EditText>

<EditText
        android:id="@+id/editTextText12"
        android:layout_width="380dp"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="12dp"
        android:layout_marginEnd="19dp"
        android:ems="10"
        android:hint="Enter Your Phone"
        android:inputType="text"
        android:textColorHint="#100707"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.602">

</EditText>

<EditText
        android:id="@+id/editTextText13"
        android:layout_width="368dp"
        android:layout_height="113dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="16dp"
        android:layout_marginEnd="27dp"
        android:ems="10"
        android:hint="Enter Your Suggestion"
        android:inputType="text"
        android:textColorHint="#100707"
        android:textStyle="bold"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.78">

</EditText>

<TextView
        android:id="@+id/textView10"
        android:layout_width="162dp"
        android:layout_height="34dp"
        android:layout_marginStart="45dp"
        android:layout_marginTop="12dp"
        android:layout_marginEnd="53dp"
        android:layout_marginBottom="35dp"
        android:background="#111517"
        android:text="        Fill Form "
        android:textColor="@color/white"
```

```xml
            android:textSize="20sp"
            app:layout_constraintBottom_toTopOf="@+id/editTextText11"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toBottomOf="@+id/imageView3" />

    <Button
            android:id="@+id/button12"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginTop="8dp"
            android:layout_marginBottom="80dp"
            android:text="Submit "
            app:layout_constraintBottom_toBottomOf="parent"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintHorizontal_bias="0.143"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toBottomOf="@+id/editTextText13" />

    <Button
            android:id="@+id/button13"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginStart="108dp"
            android:layout_marginTop="8dp"
            android:layout_marginEnd="53dp"
            android:layout_marginBottom="80dp"
            android:text="View App"
            app:layout_constraintBottom_toBottomOf="parent"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintStart_toEndOf="@+id/button12"
            app:layout_constraintTop_toBottomOf="@+id/editTextText13" />


</androidx.constraintlayout.widget.ConstraintLayout>
```

Fig h Java Code for Welcome Screen

```java
package com.example.ankitapphome;

import android.annotation.SuppressLint;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;
```

```java
public class Fifth extends AppCompatActivity {
    EditText e1,e2,e3,e4;
    Button b1,b2;
    FirebaseDatabase firebaseDatabase;
    DatabaseReference databaseReference;


    @SuppressLint("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_fifth);
        e1=(EditText)findViewById(R.id.editTextText10);
        e2=(EditText)findViewById(R.id.editTextText11);
        e3=(EditText)findViewById(R.id.editTextText12);
        e4=(EditText)findViewById(R.id.editTextText13);
        b1=(Button)findViewById(R.id.button12);
        b2=(Button)findViewById(R.id.button13);


        firebaseDatabase=FirebaseDatabase.getInstance();

ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main12), (v,
insets) -> {
            Insets systemBars =
insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right,
systemBars.bottom);
            return insets;
        });
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                databaseReference=firebaseDatabase.getReference("Users");
                String s1=e1.getText().toString();
                String s2=e2.getText().toString();
                String s3=e3.getText().toString();
                String s4=e4.getText().toString();
                if (s3.length()!=10){
                    Toast.makeText(Fifth.this, "Enter Valid Number",
Toast.LENGTH_SHORT).show();
                }else {
                    Users users=new Users(s1,s2,s3,s4);
                    databaseReference.setValue(users);
                    databaseReference.child(s1).setValue(users);

                }
            }
        });b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent i=new Intent(Fifth.this, Seven.class);
                startActivity(i);
                finish();

            }
        });
    }
}
```

5.Home Screen
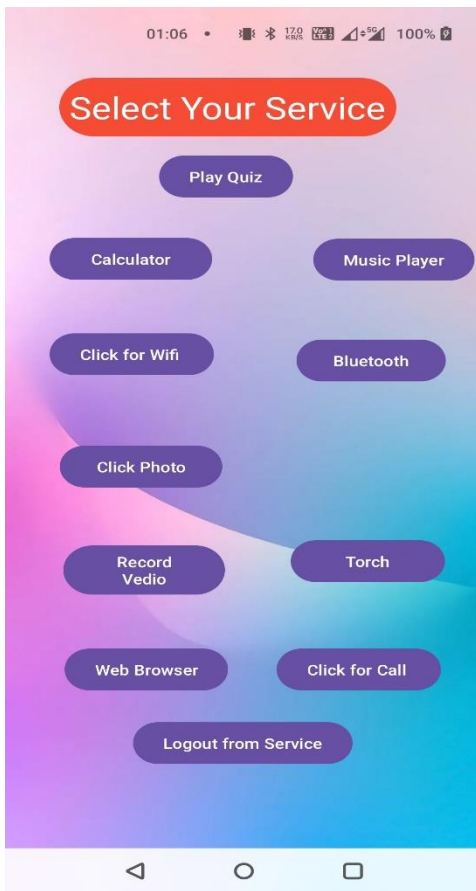
Project Report: Android Home Activity with Multiple Functionalities

1. Introduction:

This project demonstrates a basic Android application featuring a home screen that provides access to various functionalities such as Bluetooth, WiFi, Torch, Camera, Video Player, Calculator, Call, and Quiz. The home screen contains buttons for each functionality, which navigate the user to the respective activity when clicked.

2. Project Setup Technologies Used:

•Programming Language: Java

•IDE: Android Studio

•UI Components: Material Design Components

Fig i

Explanation:

•LinearLayout: The root view that aligns its children vertically.

 •Button: Each button corresponds to a different functionality (e.g., Bluetooth, WiFi, Torch, Camera, etc.) and has properties like width, height, text, margin, and background color.

3. Conclusion

 This project demonstrates the creation of a home activity in an Android application that provides access to various functionalities through buttons. Each button click navigates to a specific activity, showcasing modularity and separation of concerns. The app utilizes edge-to-edge display for a modern look and feel.

Fig i XML for Home Screen

```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:id="@+id/main12"
    android:background="@drawable/home"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".Seven">

    <TextView
        android:id="@+id/loginRedirectText13"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_gravity="center"
        android:layout_marginTop="28dp"
        android:layout_marginEnd="69dp"
        android:background="@drawable/custom_edittext"
        android:backgroundTint="#F64C35"
        android:padding="8dp"
        android:text="Select Your Service"
        android:textColor="@color/white"
        android:textSize="30sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        tools:layout_editor_absoluteY="52dp">

    </TextView>

    <Button
        android:id="@+id/calculator16"
        android:layout_width="131dp"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="36dp"
        android:layout_marginTop="178dp"

        android:text="Calculator"
        tools:layout_editor_absoluteX="31dp"
        tools:layout_editor_absoluteY="169dp" />

    <Button
        android:id="@+id/musicplayer17"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="248dp"
        android:layout_marginTop="179dp"
        android:text="Music Player" />

    <Button
        android:id="@+id/wifi18"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```xml
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="36dp"
        android:layout_marginTop="270dp"
        android:text="Click for Wifi " />

    <Button
        android:id="@+id/bluetooth19"
        android:layout_width="120dp"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_marginTop="276dp"
        android:layout_marginEnd="29dp"
        android:text="Bluetooth" />

    <Button
        android:id="@+id/camera20"
        android:layout_width="131dp"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentBottom="true"
        android:layout_marginStart="44dp"
        android:layout_marginBottom="343dp"
        android:text="Click Photo" />

    <Button
        android:id="@+id/torch21"
        android:layout_width="124dp"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="30dp"
        android:layout_marginBottom="252dp"
        android:text="Torch" />

    <Button
        android:id="@+id/web22"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentBottom="true"
        android:layout_marginStart="48dp"
        android:layout_marginBottom="148dp"
        android:text="Web Browser" />

    <Button
        android:id="@+id/call23"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="33dp"
        android:layout_marginBottom="148dp"
        android:text="Click for Call " />

    <Button
        android:id="@+id/playquiz15"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
```

```xml
        android:layout_alignParentEnd="true"
        android:layout_marginTop="99dp"
        android:layout_marginEnd="152dp"
        android:text="Play Quiz" />

    <Button
        android:id="@+id/logout24"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="104dp"
        android:layout_marginBottom="77dp"
        android:text="Logout from Service" />

    <Button
        android:id="@+id/button4"
        android:layout_width="130dp"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentBottom="true"
        android:layout_marginStart="47dp"
        android:layout_marginBottom="240dp"
        android:text="Record Vedio" />

</RelativeLayout>
```

Fig I Java Code for Home Screen

```java
package com.example.ankitapphome;

import android.annotation.SuppressLint;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class Seven extends AppCompatActivity {
Button b1,b2,b3,b4,b5,b6,b7,b8,b9,b10,b11;
    @SuppressLint("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_seven);
        b1=(Button)findViewById(R.id.playquiz15);
```

```java
        b2=(Button)findViewById(R.id.calculator16);
        b3=(Button)findViewById(R.id.musicplayer17);
        b4=(Button)findViewById(R.id.wifi18);//error
        b5=(Button)findViewById(R.id.bluetooth19);//error
        b6=(Button)findViewById(R.id.camera20);
        b7=(Button)findViewById(R.id.torch21);//done
        b8=(Button)findViewById(R.id.web22);//done
        b9=(Button)findViewById(R.id.call23); //done
        b10=(Button)findViewById(R.id.logout24);
        b11=(Button)findViewById(R.id.button4);


ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main12), (v,
insets) -> {
            Insets systemBars =
insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right,
systemBars.bottom);
            return insets;
        });
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent a=new Intent(Seven.this, Playquiz.class);
                startActivity(a);
                finish();
            }
        });
        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent b=new Intent(Seven.this, Calculator.class);
                startActivity(b);
                finish();
            }
        });
        b3.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent c=new Intent(Seven.this, MusicPlayer.class);
                startActivity(c);
                finish();
            }
        });
        b4.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent d=new Intent(Seven.this, Wifis.class);
                startActivity(d);
                finish();
            }
        });
        b5.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent d=new Intent(Seven.this, Bluetooth.class);
                startActivity(d);
                finish();
            }
        });
        b6.setOnClickListener(new View.OnClickListener() {
```

```java
            @Override
            public void onClick(View v) {
                Intent e=new Intent(Seven.this, Camera.class);
                startActivity(e);
                finish();
            }
        });
        b7.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent f=new Intent(Seven.this, Torch.class);
                startActivity(f);
                finish();
            }
        });
        b8.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent g=new Intent(Seven.this, Webbrowser.class);
                startActivity(g);
                finish();
            }
        });
        b9.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent h=new Intent(Seven.this, Call.class);
                startActivity(h);
                finish();
            }
        });
        b10.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent i=new Intent(Seven.this, First.class);
                startActivity(i);
                finish();
            }
        });
        b11.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent m=new Intent(Seven.this, Record.class);
                startActivity(m);
                finish();
            }
        });
    }
}
```
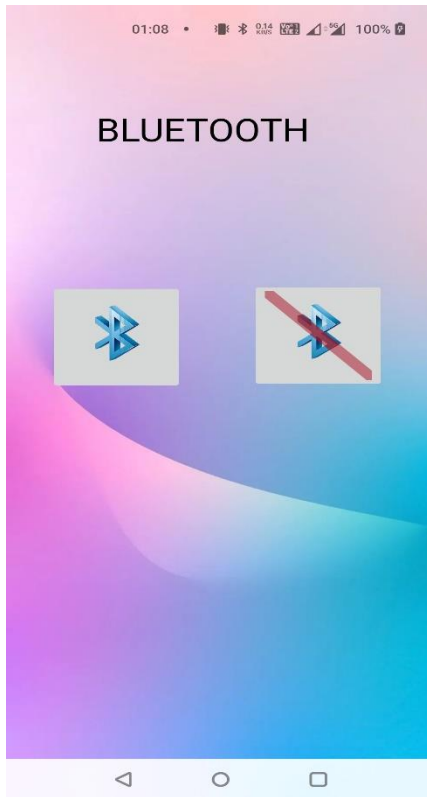
6.Bluetooth

BLUETOOTH

Project Report: Android WiFi Management Activity

1.   Introduction:

This project demonstrates a basic Android application featuring a WiFi management activity. It includes functionalities to enable and disable WiFi, as well as navigate to another activity. The activity features buttons to trigger these actions and provides user feedback using Toast messages

Project Setup Technologies Used:

- •Programming Language: Java
- •IDE: Android Studio
- •UI Components: Material Design Components

Fig j

Explanation:

•Initialization: The onCreate method sets up the activity, initializes UI components, and assigns click listeners to each button.

 •WiFi Enable/Disable: The buttons for enabling and disabling WiFi check the current WiFi status and toggle it accordingly, providing feedback via Toast messages.
•Navigation: The "Next" button navigates to the TorchActivity.

Fig j Xml Code for Bluetooth

```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"
```

```xml
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main12"
    android:background="@drawable/home"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".Bluetooth">

    <TextView
        android:id="@+id/loginRedirectText23"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_gravity="center"
        android:layout_marginTop="62dp"
        android:layout_marginEnd="103dp"
        android:padding="8dp"
        android:text="BLUETOOTH"
        android:textColor="@color/black"
        android:textSize="34sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.494"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <ImageButton
        android:id="@+id/imageButton5"
        android:layout_width="120dp"
        android:layout_height="115dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="39dp"
        android:layout_marginTop="259dp"
        android:scaleType="fitXY"
        app:srcCompat="@drawable/blueon" />

    <ImageButton
        android:id="@+id/imageButton6"
        android:layout_width="120dp"
        android:layout_height="115dp"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_marginTop="257dp"
        android:layout_marginEnd="43dp"
        android:scaleType="fitXY"
        app:srcCompat="@drawable/blueoff" />

    <Button
        android:id="@+id/button20"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentBottom="true"
        android:layout_marginStart="156dp"
        android:layout_marginBottom="151dp"
        android:text="Exit" />
</RelativeLayout>
```

Java Code for Bluetooth

```java
package com.example.ankitapphome;

import android.annotation.SuppressLint;
import android.bluetooth.BluetoothAdapter;
import android.content.Intent;
import android.content.pm.PackageManager;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.ImageButton;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.ActivityCompat;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class Bluetooth extends AppCompatActivity {
    ImageButton b1, b2;
    BluetoothAdapter ba;
Button b3;
    @SuppressLint("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_bluetooth2);
        b1 = (ImageButton) findViewById(R.id.imageButton5);
        b2 = (ImageButton) findViewById(R.id.imageButton6);
        b3=(Button)findViewById(R.id.button20);
        ba = BluetoothAdapter.getDefaultAdapter();

ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main12), (v,
insets) -> {
            Insets systemBars =
insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right,
systemBars.bottom);
            return insets;
        });
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if (ActivityCompat.checkSelfPermission(Bluetooth.this,
android.Manifest.permission.BLUETOOTH_CONNECT) !=
PackageManager.PERMISSION_GRANTED) {
                    // TODO: Consider calling
                    //    ActivityCompat#requestPermissions
                    // here to request the missing permissions, and then
overriding
                    //    public void onRequestPermissionsResult(int
requestCode, String[] permissions,
                    //                                  int[]
grantResults)
                    // to handle the case where the user grants the
```

```java
                            permission. See the documentation
                            // for ActivityCompat#requestPermissions for more
details.
                            return;
                        }
                        ba.enable();
                    }
                });
                b2.setOnClickListener(new View.OnClickListener() {
                    @Override
                    public void onClick(View v) {


                        if (ActivityCompat.checkSelfPermission(Bluetooth.this,
android.Manifest.permission.BLUETOOTH_CONNECT) !=
PackageManager.PERMISSION_GRANTED) {
                            // TODO: Consider calling
                            //    ActivityCompat#requestPermissions
                            // here to request the missing permissions, and then
overriding
                            //    public void onRequestPermissionsResult(int
requestCode, String[] permissions,
                            //                                          int[]
grantResults)
                            // to handle the case where the user grants the
permission. See the documentation
                            // for ActivityCompat#requestPermissions for more
details.
                            return;
                        }
                        ba.disable();
                    }
                });
                b3.setOnClickListener(new View.OnClickListener() {
                    @Override
                    public void onClick(View v) {
                        Intent k=new Intent(Bluetooth.this, Seven.class);
                        startActivity(k);
                        finish();
                    }
                });
    }
}
```
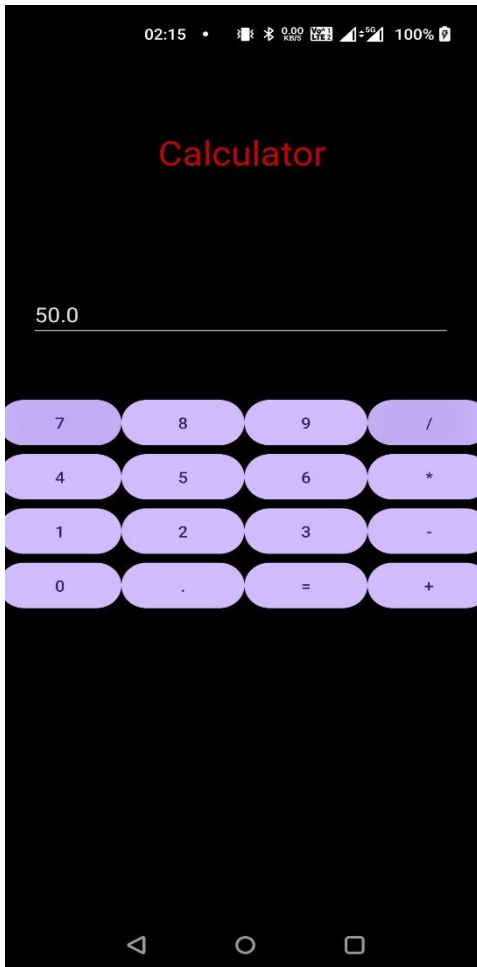
7.Calculator

2.1.1   1. Introduction

A calculator is a fundamental application that performs arithmetic operations. This project focuses on developing a simple yet functional calculator using Android Studio and Java. The calculator will support basic operations like addition, subtraction, multiplication, and division

Architecture Diagram

The architecture of the project can be divided into two main components:

1. **User Interface**: The front-end part of the application.
2. **Calculator Logic**: The backend logic for performing arithmetic operations.

User Interface

The UI consists of buttons for digits (0-9), arithmetic operations (+, -, *, /), a clear button (C), and an equals button (=).

Fig k XML code For Calculator

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
```

```xml
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main12"
    android:background="@color/black"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".Calculator">

    <TextView
        android:id="@+id/loginRedirectText23"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_marginTop="62dp"
        android:padding="8dp"
        android:text="Calculator"
        android:textColor="@android:color/holo_red_dark"
        android:textSize="30sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.494"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <LinearLayout
        android:id="@+id/linearLayout"
        android:layout_width="395dp"
        android:layout_height="200dp"
        android:layout_marginTop="25dp"
        android:layout_marginBottom="240dp"
        android:orientation="vertical"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/editTextText4">


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

            <Button
                android:id="@+id/button7"
                android:layout_width="0dp"
                android:layout_height="wrap_content"
                android:layout_weight="1"
                android:text="7" />

            <Button
                android:id="@+id/button8"
                android:layout_width="0dp"
                android:layout_height="wrap_content"
                android:layout_weight="1"
                android:text="8" />

            <Button
                android:id="@+id/button9"
                android:layout_width="0dp"
                android:layout_height="wrap_content"
                android:layout_weight="1"
                android:text="9" />
```

```xml
        <Button
            android:id="@+id/buttonDivide"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="/" />

    </LinearLayout>

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

        <Button
            android:id="@+id/button4"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="4" />

        <Button
            android:id="@+id/button5"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="5" />

        <Button
            android:id="@+id/button6"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="6" />

        <Button
            android:id="@+id/buttonMultiply"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="*" />

    </LinearLayout>

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

        <Button
            android:id="@+id/button1"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="1" />

        <Button
            android:id="@+id/button2"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
```

```xml
            android:text="2" />

        <Button
            android:id="@+id/button3"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="3" />

        <Button
            android:id="@+id/buttonMinus"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="-" />

    </LinearLayout>

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

        <Button
            android:id="@+id/button0"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="0" />

        <Button
            android:id="@+id/buttonDot"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="." />

        <Button
            android:id="@+id/buttonEquals"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="=" />

        <Button
            android:id="@+id/buttonPlus"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="+" />

    </LinearLayout>

</LinearLayout>

<EditText
    android:id="@+id/editTextText4"
    android:layout_width="339dp"
    android:layout_height="44dp"
    android:layout_marginStart="8dp"
    android:layout_marginTop="212dp"
```

```
            android:layout_marginEnd="14dp"
            android:ems="10"
            android:hint="Enter a number"
            android:inputType="text"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toTopOf="parent" />

    <Button
            android:id="@+id/button21"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginTop="74dp"
            android:layout_marginBottom="123dp"
            android:text="Exit"
            app:layout_constraintBottom_toBottomOf="parent"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toBottomOf="@+id/linearLayout" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

<mark>Fig k</mark> Java code For Calculator

```java
        package com.example.ankitapphome;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class Calculator extends AppCompatActivity {
    private EditText e1;
    private Button button0, button1, button2, button3, button4, button5,
button6, button7, button8, button9,b1;
    private Button buttonPlus, buttonMinus, buttonMultiply, buttonDivide,
buttonEquals, buttonDot;
    private double num1, num2, result;
    private String operator;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_calculator);
        e1=(EditText)findViewById(R.id.editTextText4);
        button0 = findViewById(R.id.button0);
        button1 = findViewById(R.id.button1);
        button2 = findViewById(R.id.button2);
        button3 = findViewById(R.id.button3);
```

```java
        button4 = findViewById(R.id.button4);
        button5 = findViewById(R.id.button5);
        button6 = findViewById(R.id.button6);
        button7 = findViewById(R.id.button7);
        button8 = findViewById(R.id.button8);
        button9 = findViewById(R.id.button9);
        b1=(Button)findViewById(R.id.button21);
        buttonPlus = findViewById(R.id.buttonPlus);
        buttonMinus = findViewById(R.id.buttonMinus);
        buttonMultiply = findViewById(R.id.buttonMultiply);
        buttonDivide = findViewById(R.id.buttonDivide);
        buttonEquals = findViewById(R.id.buttonEquals);
        buttonDot = findViewById(R.id.buttonDot);

ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main12), (v,
insets) -> {
            Insets systemBars =
insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right,
systemBars.bottom);
            return insets;
        });
        button0.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                e1.setText(e1.getText() + "0");
            }
        });
        button1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                e1.setText(e1.getText() + "1");
            }
        });
        button2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                e1.setText(e1.getText() + "2");
            }
        });
        button3.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                e1.setText(e1.getText() + "3");
            }
        });

        button4.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                e1.setText(e1.getText() + "4");
            }
        });
        button5.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                e1.setText(e1.getText() + "5");
            }
        });

        button6.setOnClickListener(new View.OnClickListener() {
```

```java
            @Override
            public void onClick(View v) {
                e1.setText(e1.getText() + "6");
            }
        });

        button7.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                e1.setText(e1.getText() + "7");
            }
        });
        button8.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                e1.setText(e1.getText() + "8");
            }
        });

        button9.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                e1.setText(e1.getText() + "9");
            }
        });
        buttonPlus.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                num1 = Double.parseDouble(e1.getText().toString());
                operator = "+";
                e1.setText("");
            }
        });

        buttonMinus.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                num1 = Double.parseDouble(e1.getText().toString());
                operator = "-";
                e1.setText("");
            }
        });
        buttonMultiply.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                num1 = Double.parseDouble(e1.getText().toString());
                operator = "*";
                e1.setText("");
            }
        });

        buttonDivide.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                num1 = Double.parseDouble(e1.getText().toString());
                operator = "/";
                e1.setText("");
            }
        });
        buttonEquals.setOnClickListener(new View.OnClickListener() {
            @Override
```

```java
        public void onClick(View v) {
            num2 = Double.parseDouble(e1.getText().toString());
            switch (operator) {
                case "+":
                    result = num1 + num2;
                    break;
                case "-":
                    result = num1 - num2;
                    break;
                case "*":
                    result = num1 * num2;
                    break;
                case "/":
                    result = num1 / num2;
                    break;
            }
            e1.setText(String.valueOf(result));
        }
    });
    buttonDot.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            e1.setText(e1.getText() + ".");
        }
    });
    b1.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            Intent k=new Intent(Calculator.this, Seven.class);
            startActivity(k);
            finish();
        }
    });
    }
}
```

8.Calling App

1. Introduction

The ability to make phone calls is a fundamental feature in mobile devices. This project focuses on creating a basic calling app using Android Studio with Java, allowing users to dial phone numbers and initiate calls directly from the app.

Flow Diagram

1. User opens the calling app.
2. User enters a phone number.
3. User presses the call button.
4. The app requests call permissions if not already granted.
5. The phone call is connected.

Fig L

Fig L Xml Code For Calling APP

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/relativeLayout"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@drawable/home"
    android:padding="16dp">

    <EditText
        android:id="@+id/editTextPhoneNumber26"
        android:layout_width="306dp"
        android:layout_height="wrap_content"
        android:layout_marginStart="7dp"
        android:layout_marginTop="33dp"
        android:layout_marginEnd="83dp"
        android:layout_marginBottom="36dp"
```

```xml
        android:hint="Enter phone number"
        android:inputType="phone"
        android:textColor="#171414"
        android:textColorHint="#100F0F"
        app:layout_constraintBottom_toTopOf="@+id/buttonCall"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/cpp2" />

    <Button
        android:id="@+id/buttonCall"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="161dp"
        android:layout_marginTop="91dp"
        android:layout_marginEnd="146dp"
        android:layout_marginBottom="34dp"
        android:text="Call"
        app:layout_constraintBottom_toTopOf="@+id/button"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.625"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/editTextPhoneNumber26" />

    <com.hbb20.CountryCodePicker
        android:id="@+id/cpp2"
        android:layout_width="307dp"
        android:layout_height="46dp"
        android:layout_marginStart="17dp"
        android:layout_marginTop="112dp"
        android:layout_marginEnd="71dp"
        android:layout_marginBottom="9dp"
        app:layout_constraintBottom_toTopOf="@+id/editTextPhoneNumber26"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="1.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.0" />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="167dp"
        android:layout_marginTop="49dp"
        android:layout_marginEnd="140dp"
        android:layout_marginBottom="313dp"
        android:text="Exit"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.937"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/buttonCall"
        app:layout_constraintVertical_bias="0.326" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Fig L Java Code For Calling APP

```java
package com.example.ankitapphome;

import android.os.Bundle;

import androidx.appcompat.app.AppCompatActivity;

import android.Manifest;
import android.annotation.SuppressLint;
import android.content.Intent;
import android.content.pm.PackageManager;
import android.net.Uri;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import androidx.core.app.ActivityCompat;
import androidx.core.content.ContextCompat;

public class Call extends AppCompatActivity {

    private static final int REQUEST_CALL_PERMISSION = 1;
    private EditText editTextPhoneNumber;
    private Button buttonCall,button;

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

        editTextPhoneNumber = findViewById(R.id.editTextPhoneNumber26);
        buttonCall = findViewById(R.id.buttonCall);
        button=(Button)findViewById(R.id.button);

        buttonCall.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                makePhoneCall();
            }
        });
        button.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent i=new Intent(Call.this, Seven.class);
                startActivity(i);
                finish();
            }
        });
    }

    private void makePhoneCall() {
        String phoneNumber = editTextPhoneNumber.getText().toString();

        if (phoneNumber.trim().length() > 0) {
```

```java
            if (ContextCompat.checkSelfPermission(Call.this,
                    Manifest.permission.CALL_PHONE) !=
PackageManager.PERMISSION_GRANTED) {
                ActivityCompat.requestPermissions(Call.this,
                        new String[]{Manifest.permission.CALL_PHONE},
REQUEST_CALL_PERMISSION);
            } else {
                String dial = "tel:" + phoneNumber;
                startActivity(new Intent(Intent.ACTION_CALL,
Uri.parse(dial)));
            }
        } else {
            Toast.makeText(Call.this, "Enter a phone number",
Toast.LENGTH_SHORT).show();
        }
    }
    @SuppressLint("MissingSuperCall")
    @Override
    public void onRequestPermissionsResult(int requestCode, String[]
permissions, int[] grantResults) {
        if (requestCode == REQUEST_CALL_PERMISSION) {
            if (grantResults.length > 0 && grantResults[0] ==
PackageManager.PERMISSION_GRANTED) {
                makePhoneCall();
            } else {
                Toast.makeText(this, "Permission DENIED",
Toast.LENGTH_SHORT).show();
            }
        }

    }
}
```

9.Torch

Project Report: <u>Torch App</u>

1. Introduction

This project report outlines the development of a simple Torch app using Android Studio with Java. The app will allow users to turn the device's flashlight on and off, providing a handy tool for illumination.

Flow Diagram

1. User opens the app.
2. User grants necessary permissions.
3. User toggles the flashlight using a button.
4. The system turns the flashlight on or off based on user input.

Fig M

Camera and Flashlight Control

To control the flashlight, we use the Camera2 API for devices running Android Lollipop (API 21) and above.

Fig M **Xml Code For Torch APP**

```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:id="@+id/main12"
    android:background="@drawable/home"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".Torch">
```

```xml
    <TextView
        android:id="@+id/loginRedirectText23"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_gravity="center"
        android:layout_marginTop="62dp"
        android:layout_marginEnd="131dp"
        android:padding="8dp"
        android:text="TORCH"
        android:textColor="@color/black"
        android:textSize="34sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.494"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <ImageButton
        android:id="@+id/imageButton11"
        android:layout_width="238dp"
        android:layout_height="111dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="84dp"
        android:layout_marginTop="264dp"
        android:scaleType="fitXY"
        app:srcCompat="@drawable/on" />

    <Button
        android:id="@+id/button23"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="160dp"
        android:layout_marginBottom="166dp"
        android:text="Exit" />
</RelativeLayout>
```

Fig M Java Code For Torch APP

```java
package com.example.ankitapphome;

import android.annotation.SuppressLint;
import android.content.Intent;
import android.hardware.camera2.CameraAccessException;
import android.hardware.camera2.CameraManager;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.ImageButton;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class Torch extends AppCompatActivity {
```

```java
ImageButton b1;
CameraManager cm;
Button b2;
private boolean torch = false;
    @SuppressLint("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_torch2);
        b1=(ImageButton)findViewById(R.id.imageButton11);
        cm=(CameraManager)getSystemService(CAMERA_SERVICE);
        b2=(Button)findViewById(R.id.button23);


ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main12), (v,
insets) -> {
            Insets systemBars =
insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right,
systemBars.bottom);
            return insets;
        });
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if(torch==false){
                    try {
                        String id=cm.getCameraIdList()[0];
                        cm.setTorchMode(id,true);
                        torch=true;
                        b1.setImageResource(R.drawable.on);
                    }catch (CameraAccessException e){
                }
            }else {
                    try {
                        String id=cm.getCameraIdList()[0];
                        cm.setTorchMode(id,false);
                        torch=false;
                        b1.setImageResource(R.drawable.off);
                    }catch (CameraAccessException e){
                    }
                }    }
        });
        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent k=new Intent(Torch.this, Seven.class);
                startActivity(k);
                finish();
            }
        });
    }

    }
```
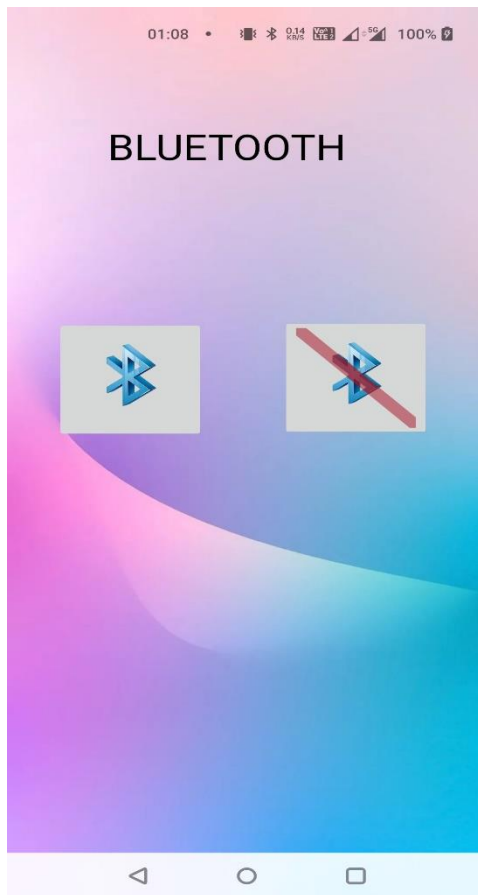
10.Wifi

Fig N

Introduction

This project report outlines the development of a WiFi management app using Android Studio with Java. The app will allow users to scan for available WiFi networks, connect to a selected network, and display the connection status

The architecture of the project consists of:

1. **User Interface**: The front-end of the application.
2. **WiFi Management**: Handles scanning and connecting to WiFi networks.
3. **Permissions Handler**: Ensures that the necessary permissions are granted.

Diagram

1. User opens the app.
2. User grants necessary permissions.
3. User initiates a WiFi scan.
4. The system displays a list of available networks.
5. User selects a network and enters credentials.
6. The system connects to the selected network.
7. The user is notified of the connection status.

User Interface

The UI consists of a screen with a button to scan for WiFi networks, a list to display available networks, and input fields for network credentials

Fig N XML Code For Wifi APP

```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:id="@+id/main12"
    android:background="@drawable/home"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".Wifis">


    <TextView
        android:id="@+id/loginRedirectText23"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_gravity="center"
        android:layout_marginTop="62dp"
        android:layout_marginEnd="160dp"
        android:padding="8dp"
        android:text="WIFI"
        android:textColor="@color/black"
        android:textSize="34sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.494"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <ImageButton
        android:id="@+id/imageButton"
        android:layout_width="120dp"
        android:layout_height="115dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="50dp"
        android:layout_marginTop="272dp"
        android:scaleType="fitXY"
        app:srcCompat="@drawable/wifion" />

    <ImageButton
        android:id="@+id/imageButton4"
        android:layout_width="120dp"
        android:layout_height="115dp"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_marginTop="273dp"
        android:layout_marginEnd="50dp"
        android:scaleType="fitXY"
        app:srcCompat="@drawable/wifioff" />

    <Button
        android:id="@+id/button22"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentBottom="true"
```

```xml
            android:layout_marginStart="153dp"
            android:layout_marginBottom="154dp"
            android:text="Exit" />
</RelativeLayout>
```

Fig N Java Code For Wifi APP

```java
 package com.example.ankitapphome;

import android.annotation.SuppressLint;
import android.content.Intent;
import android.net.wifi.WifiManager;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.ImageButton;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class Wifis extends AppCompatActivity {
ImageButton b1,b2;
WifiManager wm;
Button b3;
    @SuppressLint("MissingInflatedId")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_wifis);
        b1=(ImageButton)findViewById(R.id.imageButton);
        b2=(ImageButton)findViewById(R.id.imageButton4);
        b3=(Button)findViewById(R.id.button22);

        wm=(WifiManager)getSystemService(WIFI_SERVICE) ;


ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main12), (v,
insets) -> {
            Insets systemBars =
insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right,
systemBars.bottom);
            return insets;
        });
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                wm.setWifiEnabled(true);
            }
        });
        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                wm.setWifiEnabled(false);
```

```java
            }
        });
        b3.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent k=new Intent(Wifis.this, Seven.class);
                startActivity(k);
                finish();
            }
        });
    }
}
```
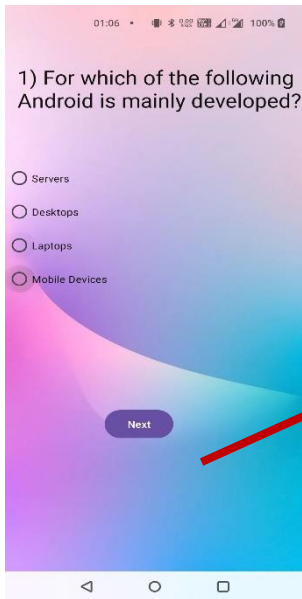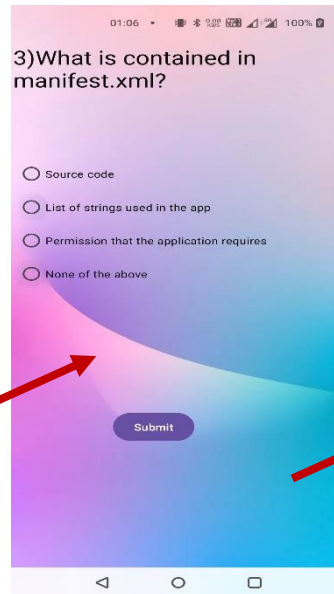
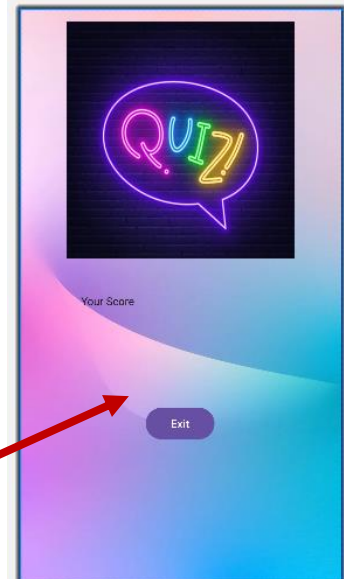# 11.QUIZ

Fig O   Fig P   Fig Q   Fig R

Introduction

This project report details the development of a Quiz app using Android Studio with Java. The app will allow users to answer multiple-choice questions and receive a score based on their answers. It aims to provide a simple and engaging way for users to test their knowledge on various topics.

Architecture Diagram

The architecture of the project can be divided into three main components:

1. **User Interface**: The front-end part of the application where users interact with the quiz.
2. **Data Management**: Handles storing and retrieving quiz questions and user data.
3. **Logic Layer**: Manages the quiz logic, including scoring and feedback

User Interface

The UI consists of several screens:

- **Main Screen**: Where users can start the quiz.
- **Quiz Screen**: Displays the questions and answer options.
- **Result Screen**: Shows the final score and feedback

Fig O Xml Code For Quiz APP

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main12"
    android:layout_width="match_parent"
    android:background="@drawable/home"
    android:layout_height="match_parent"
    tools:context=".Playquiz">

    <RadioGroup
        android:id="@+id/radioGroup"
        android:layout_width="359dp"
        android:layout_height="295dp"
        android:layout_marginStart="16dp"
        android:layout_marginEnd="36dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.387">

        <RadioButton
            android:id="@+id/radioButton"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Servers"
            android:textColor="#120F0F" />

        <RadioButton
            android:id="@+id/radioButton2"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Desktops"
            android:textColor="#120F0F" />

        <RadioButton
```

```xml
            android:id="@+id/radioButton3"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Laptops"
            android:textColor="#120F0F" />

        <RadioButton
            android:id="@+id/radioButton4"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Mobile Devices"
            android:textColor="#120F0F" />
    </RadioGroup>

    <Button
        android:id="@+id/button14"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="56dp"
        android:layout_marginBottom="163dp"
        android:text="Next"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.433"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/radioGroup"
        app:layout_constraintVertical_bias="0.0" />

    <TextView
        android:id="@+id/textView2"
        android:layout_width="367dp"
        android:layout_height="108dp"
        android:layout_marginStart="16dp"
        android:layout_marginTop="44dp"
        android:text="1) For which of the following Android is mainly
developed?"
        android:textColor="#120F0F"
        android:textSize="28sp"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Fig O Java Code For Quiz APP

```java
package com.example.ankitapphome;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.RadioButton;
import android.widget.TextView;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
```

```java
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

import org.w3c.dom.Text;

public class Playquiz extends AppCompatActivity {
TextView t1;
Button b1;
RadioButton r1,r2,r3,r4;
static int score=0;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_playquiz2);
        t1=(TextView)findViewById(R.id.textView2);
        b1=(Button)findViewById(R.id.button14);
        r1=(RadioButton)findViewById(R.id.radioButton);
        r2=(RadioButton)findViewById(R.id.radioButton2);
        r3=(RadioButton)findViewById(R.id.radioButton3);
        r4=(RadioButton)findViewById(R.id.radioButton4);


ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main12), (v,
insets) -> {
            Insets systemBars =
insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right,
systemBars.bottom);
            return insets;
        });
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                score=0;
                if(r4.isChecked()){
                    ++score;
                }else {
                    --score;
                }
                Intent i=new Intent(Playquiz.this, Playquiz1.class);
                startActivity(i);
                finish();
            }
        });
    }
}
```

Fig P Xml Code For Quiz APP

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
```

```xml
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:background="@drawable/home"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".Playquiz1">

    <RadioGroup
        android:id="@+id/radioGroup2"
        android:layout_width="359dp"
        android:layout_height="295dp"
        android:layout_marginStart="16dp"
        android:layout_marginTop="142dp"
        android:layout_marginEnd="32dp"
        android:layout_marginBottom="201dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent">

        <RadioButton
            android:id="@+id/radioButton5"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Yes"
            android:textColor="#0E0D0D" />

        <RadioButton
            android:id="@+id/radioButton9"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="No"
            android:textColor="#0E0D0D" />

        <RadioButton
            android:id="@+id/radioButton12"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Only Java"
            android:textColor="#0E0D0D"
            app:layout_constraintBottom_toBottomOf="parent"
            app:layout_constraintTop_toTopOf="parent" />

        <RadioButton
            android:id="@+id/radioButton13"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Not Know"
            android:textColor="#0E0D0D" />

    </RadioGroup>

    <TextView
        android:id="@+id/textView3"
        android:layout_width="367dp"
        android:layout_height="112dp"
        android:layout_marginStart="16dp"
        android:layout_marginTop="35dp"
        android:layout_marginEnd="28dp"
        android:layout_marginBottom="42dp"
        android:text="2) Does android support other languages than java?"
```

```xml
            android:textColor="#0E0D0D"
            android:textSize="28sp"
            app:layout_constraintBottom_toTopOf="@+id/radioGroup2"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/button15"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="140dp"
        android:layout_marginTop="50dp"
        android:layout_marginEnd="181dp"
        android:layout_marginBottom="149dp"
        android:text="Next"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/radioGroup2" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Fig P Java Code For Quiz APP

```java
package com.example.ankitapphome;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.RadioButton;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class Playquiz1 extends AppCompatActivity {
        RadioButton r1,r2,r3,r4;
        Button b1;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_playquiz1);
        r1=(RadioButton)findViewById(R.id.radioButton5);
        r2=(RadioButton)findViewById(R.id.radioButton9);
        r3=(RadioButton)findViewById(R.id.radioButton12);
        r4=(RadioButton)findViewById(R.id.radioButton13);
        b1=(Button)findViewById(R.id.button15);

        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main),
(v, insets) -> {
```

```java
            Insets systemBars =
insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right,
systemBars.bottom);
            return insets;
        });b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if(r1.isChecked()){
                    ++Playquiz.score;
                }else {
                    --Playquiz.score;
                }
                Intent i=new Intent(Playquiz1.this, Playquiz2.class);
                startActivity(i);
                finish();
            }
        });
    }
}
```

Fig Q Xml Code For Quiz APP

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:background="@drawable/home"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".Playquiz2">

    <RadioGroup
        android:id="@+id/radioGroup3"
        android:layout_width="359dp"
        android:layout_height="295dp"
        android:layout_marginTop="36dp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.307"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView4">

        <RadioButton
            android:id="@+id/radioButton6"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Source code "
            android:textColor="#090909" />

        <RadioButton
            android:id="@+id/radioButton7"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="List of strings used in the app"
            android:textColor="#090909" />
```

```xml
    <RadioButton
        android:id="@+id/radioButton8"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Permission that the application requires"
        android:textColor="#090909" />

    <RadioButton
        android:id="@+id/radioButton10"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="None of the above"
        android:textColor="#090909" />
</RadioGroup>

<TextView
    android:id="@+id/textView4"
    android:layout_width="360dp"
    android:layout_height="127dp"
    android:layout_marginStart="16dp"
    android:layout_marginTop="16dp"
    android:layout_marginEnd="35dp"
    android:layout_marginBottom="36dp"
    android:text="3)What is contained in manifest.xml?"
    android:textColor="#090909"
    android:textSize="28sp"
    app:layout_constraintBottom_toTopOf="@+id/radioGroup3"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

<Button
    android:id="@+id/button16"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="147dp"
    android:layout_marginTop="69dp"
    android:layout_marginEnd="173dp"
    android:layout_marginBottom="140dp"
    android:text="Submit"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="1.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/radioGroup3"
    app:layout_constraintVertical_bias="0.0" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Fig Q Java Code For Quiz APP

```java
package com.example.ankitapphome;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
```

```java
import android.widget.RadioButton;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class Playquiz2 extends AppCompatActivity {
RadioButton r1,r2,r3,r4;
Button b1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_playquiz3);
        r1=(RadioButton)findViewById(R.id.radioButton6);
        r1=(RadioButton)findViewById(R.id.radioButton7);
        r1=(RadioButton)findViewById(R.id.radioButton8);
        r1=(RadioButton)findViewById(R.id.radioButton10);
        b1=(Button)findViewById(R.id.button16);


        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main),
(v, insets) -> {
            Insets systemBars =
insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right,
systemBars.bottom);
            return insets;
        });b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if(r3.isChecked()){
                    ++Playquiz.score;
                }else {
                    --Playquiz.score;
                }
                Intent i=new Intent(Playquiz2.this, QuizResult.class);
                startActivity(i);
                finish();
            }
        });
    }
}
```

<mark>Fig R</mark> Xml Code For Quiz APP(Result)

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:background="@drawable/home"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".QuizResult">
```

```xml
    <Button
        android:id="@+id/button17"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="68dp"
        android:text="Exit"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView6" />

    <ImageView
        android:id="@+id/imageView4"
        android:layout_width="291dp"
        android:layout_height="302dp"
        android:layout_marginTop="16dp"
        android:layout_marginBottom="45dp"
        android:scaleType="fitXY"
        app:layout_constraintBottom_toTopOf="@+id/textView6"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:srcCompat="@drawable/result" />

    <TextView
        android:id="@+id/textView6"
        android:layout_width="252dp"
        android:layout_height="74dp"
        android:layout_marginStart="52dp"
        android:layout_marginEnd="55dp"
        android:layout_marginBottom="101dp"
        android:hint="Your Score "
        android:textColorHint="#191616"
        app:layout_constraintBottom_toTopOf="@+id/button17"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Fig R Java Code For Quiz APP(Result)

```java
package com.example.ankitapphome;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class QuizResult extends AppCompatActivity {
TextView t1;
Button b1;
```
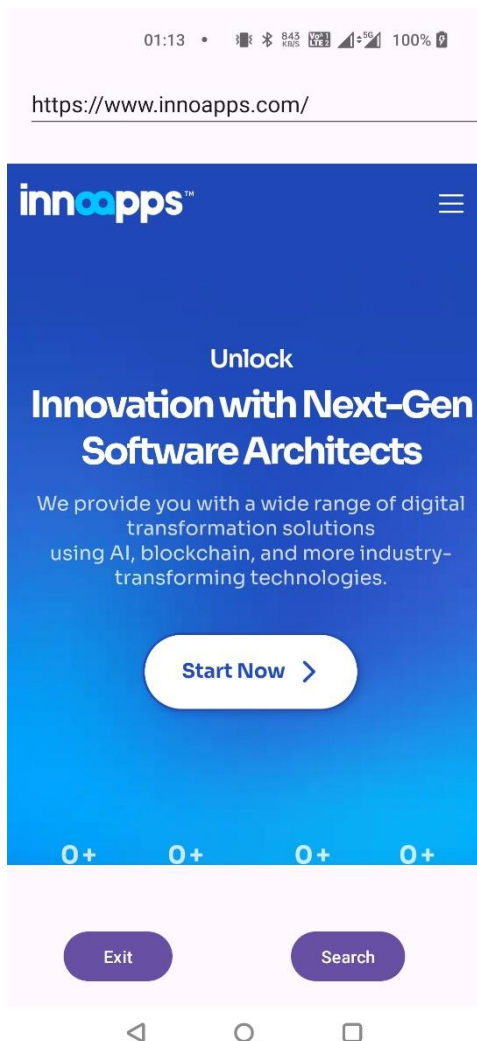
```java
@Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_quiz_result);
        b1=(Button)findViewById(R.id.button17);
        t1=(TextView)findViewById(R.id.textView6);


        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main),
(v, insets) -> {
            Insets systemBars =
insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right,
systemBars.bottom);
            return insets;

        });
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent i= new Intent(QuizResult.this, Seven.class);
                startActivity(i);
                finish();
            }
        });
    }
}
```

12.Web Browser

Project Report: Web Browser App in Android Studio with Java

Introduction

This project report outlines the development of a simple web browser app using Android Studio with Java. The app allows users to navigate the internet, featuring a user-friendly interface and basic browser functionalities

Architecture Diagram

The architecture of the project consists of:

1.   **User Interface**: The front-end of the application.
2.   **WebView Component**: Renders web pages within the app.
3.   **Permissions Handler**: Ensures that necessary permissions are granted.

Fig Q

Diagram

1. User opens the app.
2. User enters a URL in the address bar.
3. The app loads the webpage using WebView.
4. User navigates the web pages using the provided controls.

User Interface

The UI consists of a single screen with an address bar, a WebView, and navigation buttons.

Fig Q Xml Code For Web Browser

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main12"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".Webbrowser">

    <WebView
        android:id="@+id/webView"
        android:layout_width="402dp"
        android:layout_height="569dp"
        android:layout_marginStart="18dp"
        android:layout_marginTop="86dp"
        android:layout_marginEnd="36dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.311"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.0" />

    <EditText
        android:id="@+id/editTextText"
        android:layout_width="379dp"
        android:layout_height="44dp"
        android:layout_marginStart="16dp"
        android:layout_marginTop="16dp"
        android:ems="10"
        android:hint="Search"
        android:inputType="text"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/button2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="16dp"
        android:text="Search"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.789"
        app:layout_constraintStart_toStartOf="parent" />

    <Button
        android:id="@+id/button3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginEnd="96dp"
        android:layout_marginBottom="16dp"
        android:text="Exit"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toStartOf="@+id/button2" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

Fig Q Java Code For Web Browser

```java
package com.example.ankitapphome;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.webkit.WebView;
import android.widget.Button;
import android.widget.EditText;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class Webbrowser extends AppCompatActivity {
    EditText e1;
    WebView w1;
    Button b1,b2;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_webbrowser2);
        e1=(EditText)findViewById(R.id.editTextText);
        w1=(WebView)findViewById(R.id.webView);
        b1=(Button)findViewById(R.id.button2);
        b2=(Button)findViewById(R.id.button3);

ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main12), (v,
insets) -> {
            Insets systemBars =
insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right,
systemBars.bottom);
            return insets;
        });
        b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent i=new Intent(Webbrowser.this,Seven.class);
                startActivity(i);
                finish();
            }
        });
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String s1=e1.getText().toString();
                w1.loadUrl(s1);
            }
        });
    }
}
```