



#### **Problem 4**

**Exercise Objective:** Develop an Android application that counts the number of taps on a button and displays the count.

**Problem Statement 4:** Create an app with a button labeled "Tap me!" and a TextView to display the count of taps. Each time the button is tapped, the count should increase by one.

**Expected Output:** The app displays the number of times the button has been tapped

# This is XML code

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:background="#0000FF"
tools:context=".MainActivity">

    <Button
        android:id="@+id/tapButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Tap me!"
        android:textColor="#FFFFFF"
        android:background="#FF5722"
        android:layout_centerInParent="true"/>

    <TextView
        android:id="@+id/tapCountTextView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="0"
        android:textColor="#000000"
        android:textSize="24sp"
        android:layout_below="@id/tapButton"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="20dp"/>
</RelativeLayout>
```

# This is **JAVA** code

```
package com.example.buttontapcounter;

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 MainActivity extends AppCompatActivity {

    private Button tapButton;
    private TextView tapCountTextView;
    private int tapCount = 0;

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

        tapButton = findViewById(R.id.tapButton);
        tapCountTextView = findViewById(R.id.tapCountTextView);

        tapButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {

                tapCount++;
                tapCountTextView.setText(String.valueOf(tapCount));
            }
        });
    }
}
```