**Write an android app to develop a calculator with basic operations.**

* **activity\_main.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:orientation="vertical"

android:layout\_height="match\_parent"

tools:context=".MainActivity">

<TextView

android:id="@+id/textView3"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:background="#FBEAEB"

android:textSize="40sp"

android:text="MiNi calculator"

android:textAlignment="center"/>

<EditText

android:id="@+id/editTextText"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_marginBottom="20dp"

android:ems="10"

android:inputType="numberDecimal"

android:hint="Enter first value" />

<EditText

android:id="@+id/editTextText2"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_marginBottom="20dp"

android:ems="10"

android:inputType="numberDecimal"

android:hint="Enter second value" />

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_margin="20dp"

android:orientation="horizontal">

<Button

android:id="@+id/button2"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:text="+" />

<Button

android:id="@+id/button3"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:text="-" />

<Button

android:id="@+id/button4"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:text="\*" />

<Button

android:id="@+id/button5"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:text="/" />

</LinearLayout>

<TextView

android:id="@+id/textView4"

android:textSize="40sp"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:background="#2F3C7E"

android:text="Result="

android:textColor="#ff0000"

android:textStyle="bold"/>

</LinearLayout>

* **MainActivity.java**

package com.example.calculator;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.TextView;

import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

private EditText editText1, editText2;

private TextView resultTextView;

private Button addButton, subtractButton, multiplyButton, divideButton;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

// Initialize UI elements

editText1 = findViewById(R.id.editTextText);

editText2 = findViewById(R.id.editTextText2);

resultTextView = findViewById(R.id.textView4);

addButton = findViewById(R.id.button2);

subtractButton = findViewById(R.id.button3);

multiplyButton = findViewById(R.id.button4);

divideButton = findViewById(R.id.button5);

// Set listeners for buttons

addButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

performOperation('+');

}

});

subtractButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

performOperation('-');

}

});

multiplyButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

performOperation('\*');

}

});

divideButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

performOperation('/');

}

});

}

private void performOperation(char operator) {

String input1 = editText1.getText().toString();

String input2 = editText2.getText().toString();

if (input1.isEmpty() || input2.isEmpty()) {

Toast.makeText(this, "Please enter both values", Toast.LENGTH\_SHORT).show();

return;

}

try {

double value1 = Double.parseDouble(input1);

double value2 = Double.parseDouble(input2);

double result = 0;

switch (operator) {

case '+':

result = value1 + value2;

break;

case '-':

result = value1 - value2;

break;

case '\*':

result = value1 \* value2;

break;

case '/':

if (value2 != 0) {

result = value1 / value2;

result = Math.round(result \* 100.0) / 100.0;

} else {

Toast.makeText(this, "Cannot divide by zero", Toast.LENGTH\_SHORT).show();

return;

}

break;

}

resultTextView.setText("Result = " + result);

} catch (NumberFormatException e) {

Toast.makeText(this, "Invalid input", Toast.LENGTH\_SHORT).show();

}

}

}

* **Output: -**

