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: -**