

Name- Akash Singh

Course-BCA 5 'C'

University roll no- 1921012

PROBLEM: Create a simple application to implement a simple calculator in android

CODE

```
<?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:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#8BC34A"
    android:backgroundTint="@android:color/darker_gray"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="194dp"
        android:layout_height="43dp"
        android:layout_marginStart="114dp"
        android:layout_marginLeft="114dp"
        android:layout_marginTop="58dp"
        android:layout_marginEnd="103dp"
        android:layout_marginRight="103dp"
        android:layout_marginBottom="502dp"
        android:scrollbarSize="30dp"
        android:text=" Calculator"
        android:textAppearance="@style/TextAppearance.AppCompat.Body1"
        android:textSize="30dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/num1"
        android:layout_width="364dp"
        android:layout_height="28dp"
        android:layout_marginStart="72dp"
        android:layout_marginLeft="72dp"
        android:layout_marginTop="70dp"
        android:layout_marginEnd="71dp"
```

```
android:layout_marginRight="71dp"
android:layout_marginBottom="416dp"
android:background="@android:color/white"
android:ems="10"
android:hint="Number1(0)"
android:inputType="number"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />
```

<EditText

```
android:id="@+id/num2"
android:layout_width="363dp"
android:layout_height="30dp"
android:layout_marginStart="72dp"
android:layout_marginLeft="72dp"
android:layout_marginTop="112dp"
android:layout_marginEnd="71dp"
android:layout_marginRight="71dp"
android:layout_marginBottom="374dp"
android:background="@android:color/white"
android:ems="10"
android:hint="number2(0)"
android:inputType="number"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />
```

<TextView

```
android:id="@+id/result"
android:layout_width="356dp"
android:layout_height="71dp"
android:layout_marginStart="41dp"
android:layout_marginLeft="41dp"
android:layout_marginTop="151dp"
android:layout_marginEnd="48dp"
android:layout_marginRight="48dp"
android:layout_marginBottom="287dp"
android:background="@android:color/white"
android:text="result"
android:textColorLink="#673AB7"
android:textSize="25sp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />
```

```
<Button
    android:id="@+id/sum"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="292dp"
    android:layout_marginBottom="263dp"
    android:backgroundTint="@android:color/holo_red_light"
    android:onClick="doSum"
    android:text="+"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toStartOf="@+id/mul"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.507" />
```

```
<Button
    android:id="@+id/sub"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="292dp"
    android:layout_marginEnd="113dp"
    android:layout_marginRight="113dp"
    android:layout_marginBottom="263dp"
    android:backgroundTint="@android:color/holo_red_light"
    android:onClick="doSub"
    android:text="-"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.507" />
```

```
<Button
    android:id="@+id/div"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="307dp"
    android:layout_marginLeft="307dp"
    android:layout_marginTop="292dp"
    android:layout_marginEnd="16dp"
    android:layout_marginRight="16dp"
    android:layout_marginBottom="263dp"
    android:backgroundTint="@android:color/holo_red_light"
    android:onClick="doDiv"
    android:text="/"
    app:layout_constraintBottom_toBottomOf="parent"
```

```

        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/mul"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="292dp"
    android:layout_marginBottom="263dp"
    android:backgroundTint="@android:color/holo_red_light"
    android:onClick="doMul"
    android:text="x"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toStartOf="@+id/sub"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/sum"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.507" />

</androidx.constraintlayout.widget.ConstraintLayout>

```

Main Activity

```

package com.example.calculator;

import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    EditText e1, e2;
    TextView t1;
    int num1, num2;

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

```

```

public boolean getNumbers() {

    e1 = (EditText) findViewById(R.id.num1);

    e2 = (EditText) findViewById(R.id.num2);

    t1 = (TextView) findViewById(R.id.result);

    String s1 = e1.getText().toString();

    String s2 = e2.getText().toString();
    if ((s1.equals(null) && s2.equals(null))
        || (s1.equals("") && s2.equals(""))) {

        String result = "Please enter a value";
        t1.setText(result);

        return false;
    } else {
        num1 = Integer.parseInt(s1);
        num2 = Integer.parseInt(s2);
    }

    return true;
}

```

```

public void doSum(View v) {

    if (getNumbers()) {
        int sum = num1 + num2;
        t1.setText(Integer.toString(sum));
    }
}

```

```

public void doPow(View v) {

    if (getNumbers()) {
        double sum = Math.pow(num1, num2);
        t1.setText(Double.toString(sum));
    }
}

public void doSub(View v) {
    if (getNumbers()) {
        int sum = num1 - num2;

```

```
        t1.setText(Integer.toString(sum));
    }
}

public void doMul(View v) {
    if (getNumbers()) {
        int sum = num1 * num2;
        t1.setText(Integer.toString(sum));
    }
}

public void doDiv(View v) {

    if (getNumbers()) {
        double sum = num1 / (num2 * 1.0);
        t1.setText(Double.toString(sum));
    }
}

public void doMod(View v) {
    if (getNumbers()) {
        double sum = num1 % num2;
        t1.setText(Double.toString(sum));
    }
}
}
```

OUTPUT

