

PART - A
LAB - 02 CALCULATOR APP

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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:orientation="vertical"
    tools:context=".MainActivity">

    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="700px">

        <EditText
            android:id="@+id/editText"
            android:layout_width="0dp"
            android:layout_height="fill_parent"
            android:layout_marginBottom="1pt"
            android:layout_weight="1"
            android:ems="10"
            android:gravity="right|center"
            android:inputType="textPersonName"
            android:text="0"
            android:textSize="50sp"
            android:textStyle="bold" />

    </LinearLayout>
    <TableLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content">
        <TableRow
            android:layout_marginBottom="1pt"
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:orientation="vertical"
            android:layout_marginHorizontal="10dp">

            <Button
                android:id="@+id/butPlus"
                android:layout_width="30pt"
                android:layout_height="30pt"
                android:layout_marginEnd="1pt"
                android:layout_weight="1"
                android:text="+"
                android:onClick="operatorEvent" />

```

```
<Button
    android:id="@+id/butMinus"
    android:layout_width="30pt"
    android:layout_height="30pt"
    android:layout_marginEnd="1pt"
    android:layout_weight="1"
    android:text="-"
    android:onClick="operatorEvent" />

<Button
    android:id="@+id/butDivide"
    android:layout_width="30pt"
    android:layout_height="30pt"
    android:layout_marginEnd="1pt"
    android:layout_weight="1"
    android:text="/"
    android:onClick="operatorEvent" />

<Button
    android:id="@+id/butMultiply"
    android:layout_width="30pt"
    android:layout_height="30pt"
    android:layout_marginEnd="1pt"
    android:layout_weight="1"
    android:text="*"
    android:onClick="operatorEvent" />

</TableRow>

<TableRow
    android:layout_marginBottom="1pt"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:layout_marginHorizontal="10px">

    <Button
        android:id="@+id/butEqual"
        android:layout_width="30pt"
        android:layout_height="30pt"
        android:layout_marginEnd="1pt"
        android:layout_weight="1"
        android:text "="
        android:onClick="equalEvent" />

    </TableRow>
</TableLayout>
</LinearLayout>
```

MainActivity.java

```
package com.calculatorapp;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {
    boolean isEmpty = true;
    String numOld = "";
    String op = "+";
    EditText edt;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        edt = findViewById(R.id.editText);
    }

    public void operatorEvent(View view) {
        numOld = edt.getText().toString();
        isEmpty = true;
        if(isEmpty)
            edt.setText("");
        isEmpty = false;
        switch (view.getId()){
            case R.id.butDivide:op = "/"; break;
            case R.id.butMultiply:op = "*"; break;
            case R.id.butPlus:op = "+"; break;
            case R.id.butMinus:op = "-"; break;
        }
    }

    public void equalEvent(View view) {
        String numNew = edt.getText().toString();
        double result = 0.0;
        switch (op){
            case "+":
                result=Double.parseDouble(numOld)+Double.parseDouble(numNew);
                break;
            case "-":
                result=Double.parseDouble(numOld)-
                    Double.parseDouble(numNew);
                break;
            case "*":
                result=Double.parseDouble(numOld)*Double.parseDouble(numNew);
                break;
            case "/":
                result=Double.parseDouble(numOld)/Double.parseDouble(numNew);
                break;
        }
    }
}
```

```
    default:  
        throw new IllegalStateException("Unexpected value: " + op);  
    }  
    edt.setText(result+""");  
}  
}
```