

Assignment - 1

NOREEN V

Batch - B

PROGRAM – 1

AIM: Simple Calculator

PROGRAM:

XML File: -

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:weightSum="1">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/linearLayout1"
        android:layout_marginLeft="10pt"
        android:layout_marginRight="10pt"
        android:layout_marginTop="3pt">
        <EditText
            android:layout_weight="1"
            android:layout_height="wrap_content"
            android:layout_marginRight="5pt"
            android:id="@+id/etNum1"
            android:layout_width="match_parent"
            android:inputType="numberDecimal">
        </EditText>
        <EditText
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:layout_marginLeft="5pt"
            android:id="@+id/etNum2"
            android:layout_width="match_parent"
            android:inputType="numberDecimal">
        </EditText>
    </LinearLayout>
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/linearLayout2"
        android:layout_marginTop="3pt"
```

```

        android:layout_marginLeft="5pt"
        android:layout_marginRight="5pt">
        <Button
            android:layout_height="wrap_content"
            android:layout_width="match_parent"
            android:layout_weight="1"
            android:text="+"
            android:textSize="8pt"
            android:id="@+id/btnAdd">
        </Button>
        <Button
            android:layout_height="wrap_content"
            android:layout_width="match_parent"
            android:layout_weight="1"
            android:text="-"
            android:textSize="8pt"
            android:id="@+id/btnSub">
        </Button>
        <Button
            android:layout_height="wrap_content"
            android:layout_width="match_parent"
            android:layout_weight="1"
            android:text="*"
            android:textSize="8pt"
            android:id="@+id/btnMult">
        </Button>
        <Button
            android:layout_height="wrap_content"
            android:layout_width="match_parent"
            android:layout_weight="1"
            android:text="/"
            android:textSize="8pt"
            android:id="@+id/btnDiv">
        </Button>
    </LinearLayout>
    <TextView
        android:layout_height="wrap_content"
        android:layout_width="match_parent"
        android:layout_marginLeft="5pt"
        android:layout_marginRight="5pt"
        android:textSize="12pt"
        android:layout_marginTop="3pt"
        android:id="@+id/tvResult"
        android:gravity="center_horizontal"
        android:layout_weight="0.07">
    </TextView>
</LinearLayout>

```

JAVA File: -

```
package com.example.calcu;
```

```
import android.os.Bundle;
import android.text.TextUtils;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
```

```
import androidx.appcompat.app.AppCompatActivity;
```

```
public class MainActivity extends AppCompatActivity implements View.OnClickListener{
```

```
    EditText etNum1;
    EditText etNum2;
```

```
    Button btnAdd;
    Button btnSub;
    Button btnMult;
    Button btnDiv;
```

```
    TextView tvResult;
```

```
    String oper = "";
```

```
/** Called when the activity is first created. */
```

```
@Override
```

```
public void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
```

```
    // find the elements
```

```
    etNum1 = (EditText) findViewById(R.id.etNum1);
    etNum2 = (EditText) findViewById(R.id.etNum2);
```

```
    btnAdd = (Button) findViewById(R.id.btnAdd);
    btnSub = (Button) findViewById(R.id.btnSub);
    btnMult = (Button) findViewById(R.id.btnMult);
    btnDiv = (Button) findViewById(R.id.btnDiv);
```

```
    tvResult = (TextView) findViewById(R.id.tvResult);
```

```
    // set a listener
```

```
    btnAdd.setOnClickListener(this);
    btnSub.setOnClickListener(this);
    btnMult.setOnClickListener(this);
    btnDiv.setOnClickListener(this);
```

```

}

@Override
public void onClick(View v) {
    // TODO Auto-generated method stub
    float num1 = 0;
    float num2 = 0;
    float result = 0;

    // check if the fields are empty
    if (TextUtils.isEmpty(etNum1.getText().toString())
        || TextUtils.isEmpty(etNum2.getText().toString())) {
        return;
    }

    // read EditText and fill variables with numbers
    num1 = Float.parseFloat(etNum1.getText().toString());
    num2 = Float.parseFloat(etNum2.getText().toString());

    // defines the button that has been clicked and performs the corresponding operation
    // write operation into oper, we will use it later for output
    switch (v.getId()) {
        case R.id.btnAdd:
            oper = "+";
            result = num1 + num2;
            break;
        case R.id.btnSub:
            oper = "-";
            result = num1 - num2;
            break;
        case R.id.btnMult:
            oper = "*";
            result = num1 * num2;
            break;
        case R.id.btnDiv:
            oper = "/";
            result = num1 / num2;
            break;
        default:
            break;
    }

    // form the output line
    tvResult.setText(num1 + " " + oper + " " + num2 + " = " + result);
}
}

```

OUTPUT:

