

PROGRAM NO: 3

AIM:

To Implement basic arithmetic operations of a simple calculator.

PROGRAM CODE:

activity_main.xml	<pre><?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" tools:context=".MainActivity"> <EditText android:id="@+id/fn" android:layout_width="wrap_content" android:layout_height="wrap_content" android:layout_marginStart="99dp" android:layout_marginLeft="99dp" android:layout_marginRight="102dp" android:layout_marginTop="68dp" android:layout_marginEnd="102dp" android:layout_marginBottom="32dp" android:ems="10" android:hint="First number" android:inputType="textPersonName" app:layout_constraintBottom_toTopOf="@+id/sn" app:layout_constraintEnd_toEndOf="parent" app:layout_constraintHorizontal_bias="1.0" app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toTopOf="parent" app:layout_constraintVertical_bias="0.0" /> <Button android:id="@+id/mul" android:layout_width="wrap_content" android:layout_height="wrap_content" android:layout_marginStart="36dp" android:layout_marginLeft="99dp"</pre>
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```
android:layout_marginRight="102dp"
android:layout_marginTop="44dp"
android:onClick="mul"
android:text="*"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/add" />
```

<Button

```
android:id="@+id/div"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginStart="130dp"
android:layout_marginTop="48dp"
android:layout_marginEnd="62dp"
android:layout_marginLeft="99dp"
android:layout_marginRight="102dp"
android:onClick="div"
android:text="/"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.285"
app:layout_constraintStart_toEndOf="@+id/mul"
app:layout_constraintTop_toBottomOf="@+id/sub" />
```

<Button

```
android:id="@+id/sub"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginStart="129dp"
android:layout_marginTop="106dp"
android:layout_marginEnd="65dp"
android:layout_marginLeft="99dp"
android:layout_marginRight="102dp"
android:onClick="sub"
android:text="-"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.0"
app:layout_constraintStart_toEndOf="@+id/add"
app:layout_constraintTop_toBottomOf="@+id/res" />
```

<Button

```
android:id="@+id/add"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginStart="36dp"
android:layout_marginLeft="99dp"
android:layout_marginRight="102dp"
```

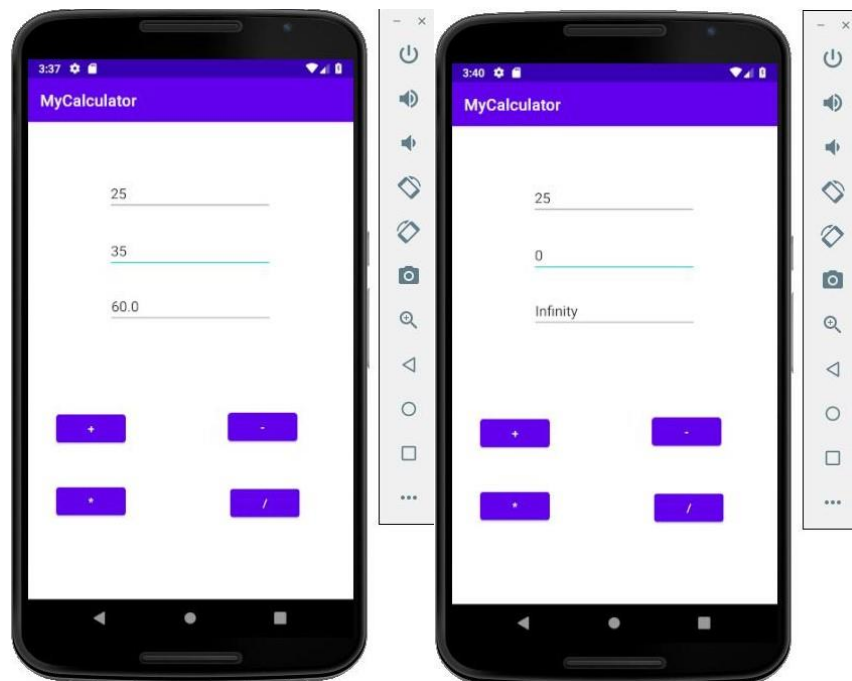
	<pre> android:layout_marginTop="108dp" android:onClick="sum" android:text="+" app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toBottomOf="@+id/res" /> <EditText android:id="@+id/sn" android:layout_width="wrap_content" android:layout_height="wrap_content" android:layout_marginStart="101dp" android:layout_marginLeft="99dp" android:layout_marginRight="102dp" android:layout_marginTop="27dp" android:layout_marginEnd="100dp" android:ems="10" android:hint="Second number" android:inputType="textPersonName" app:layout_constraintEnd_toEndOf="parent" app:layout_constraintHorizontal_bias="0.0" app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toBottomOf="@+id/fn" /> <EditText android:id="@+id/res" android:layout_width="wrap_content" android:layout_height="wrap_content" android:layout_marginStart="100dp" android:layout_marginTop="25dp" android:layout_marginEnd="101dp" android:layout_marginLeft="99dp" android:layout_marginRight="102dp" android:ems="10" android:hint="Result" android:inputType="textPersonName" app:layout_constraintEnd_toEndOf="parent" app:layout_constraintHorizontal_bias="1.0" app:layout_constraintStart_toStartOf="parent" app:layout_constraintTop_toBottomOf="@+id/sn" /> </androidx.constraintlayout.widget.ConstraintLayout> </pre>
MainActivity.java	<pre> package com.example.mycalculator; import androidx.appcompat.app.AppCompatActivity; import android.os.Bundle; </pre>

```
import android.view.View;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {
    EditText num1,num2,result;
    float n1,n2;
    String s1,s2,s3;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void getNum()
    {
        num1 = (EditText) findViewById(R.id.fn);
        num2 = (EditText) findViewById(R.id.sn);
        result = (EditText) findViewById(R.id.res);
        s1 = num1.getText().toString();
        s2 = num2.getText().toString();
    }
    public void sum(View v)
    {
        getNum();
        n1 = Float.parseFloat(s1);
        n2 = Float.parseFloat(s2);
        s3 = String.valueOf(n1+n2);
        result.setText(s3);
    }
    public void sub(View v)
    {
        getNum();
        n1 = Float.parseFloat(s1);
        n2 = Float.parseFloat(s2);
        s3 = String.valueOf(n1-n2);
        result.setText(s3);
    }
    public void mul(View v)
    {
        getNum();
        n1 = Float.parseFloat(s1);
        n2 = Float.parseFloat(s2);
        s3 = String.valueOf(n1*n2);
        result.setText(s3);
    }
    public void div(View v)
    {
```

	<pre>getNum(); n1 = Float.parseFloat(s1); n2 = Float.parseFloat(s2); s3 = String.valueOf(n1/n2); result.setText(s3); } };</pre>
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OUTPUT:



RESULT:

The program is successfully executed and the output is verified.