03 - Simple Calculator

Ex. No. : 3 **Roll No. :**

Date : **Reg. No. :**

Aim

Develop a native Calculator Application.

Objective

In this application we are going to start a new project Calculator.

First of all, to start with we are going to create a simple calculator to do simple arithmetic operations (i.e., one operator and two operands).

Procedure

Start Android Studio.

Create a new Project.

Application Name: 'Calculator'.

First of all insert a Linear Layout (Vertical) inside the Relative Layout.

Delete the Hello World.

Next Insert a Text Field inside the Linear Layout (Vertical).

Go to Design Tab and insert Buttons for operators.

Place the components and change the id's for all components according to this table:

Component	Id	Text
TextView	textView	First No.
EditText	etFNo	
TextView	textView2	Second No.
EditText	etSNo	
TextView	textView2	Result
EditText	etRes	

Insert a Linear Layout (Horizontal) inside the Linear Layout (Vertical).

Place the components and change the id's for all components according to this table:

Component	Id	Text
Button	btnAdd	+
Button	btnSub	-
Button	btnMul	*
Button	btnDiv	/

Open MainActivity.java file.

First we need to define some variables for each item in the UI.

```
EditText etFNo, etSNo, etRes;
Button btnAdd, btnSub, btnMul, btnDiv;
```

Assign the UI elements to these variables using findViewById() inside onCreate().

```
etFNo = (EditText) findViewById(R.id.etFNo);
etSNo = (EditText) findViewById(R.id.etSNo);
etRes = (EditText) findViewById(R.id.etRes);
btnAdd = (Button) findViewById(R.id.btnAdd);
btnSub = (Button) findViewById(R.id.btnSub);
btnMul = (Button) findViewById(R.id.btnMul);
btnDiv = (Button) findViewById(R.id.btnDiv);
```

Register the buttons for onClickListenet event.

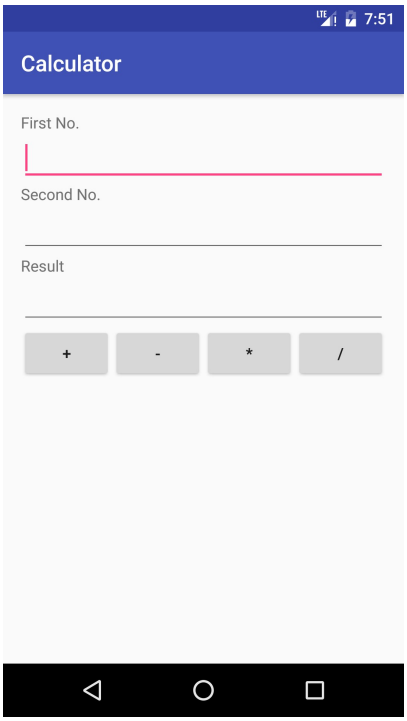
```
btnAdd.setOnClickListener(this);
btnSub.setOnClickListener(this);
btnMul.setOnClickListener(this);
btnDiv.setOnClickListener(this);
```

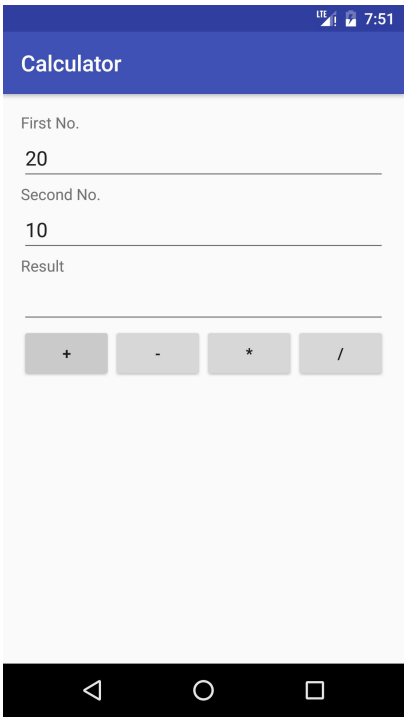
Override the onClick() method and add the following code:

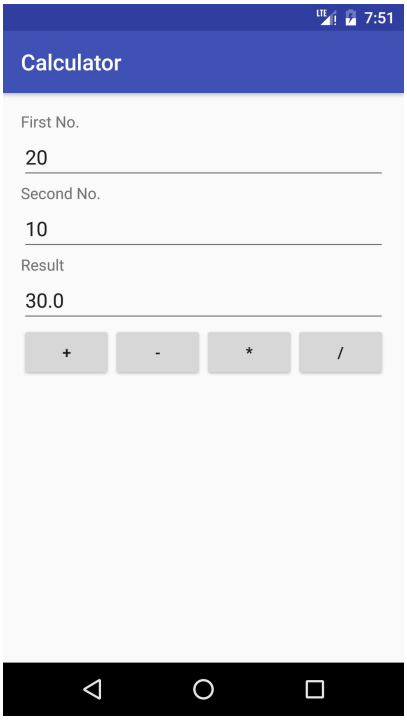
```
public void onClick(View v) {
    float fNo = 0, sNo = 0, res = 0;
    String op = "";
    fNo = Float.parseFloat(etFNo.getText().toString());
    sNo = Float.parseFloat(etSNo.getText().toString());
    switch (v.getId()) {
        case R.id.btnAdd:
            res = fNo + sNo;
            break;
        case R.id.btnSub:
            res = fNo - sNo;
            break;
        case R.id.btnMul:
            res = fNo * sNo;
```

```
                break;
            case R.id.btnDiv:
                res = fNo / sNo;
                break;
        }
        etRes.setText("" + res);
    }
```

Output


7:51
Calculator
First No.
Second No.
Result
+
-
*
/


7:51
Calculator
First No.
20
Second No.
10
Result
+
-
*
/


7:51
Calculator
First No.
20
Second No.
10
Result
30.0
+
-
*
/