

Experiment-2:

Develop an Android application using controls like Button, TextView, EditText for designing a Calculator having basic functionality like Addition, Subtraction, Multiplication, and Division.

Program:

activity_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>

<LinearLayout 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:id="@+id/main"

    android:layout_width="match_parent"

    android:layout_height="match_parent"

    android:orientation="vertical"

    tools:context=".MainActivity" >

    <EditText

        android:id="@+id/e1"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:ems="10"

        android:hint="Number1"

        android:inputType="number" />

    <EditText

        android:id="@+id/e2"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"
```

```
android:ems="10"

android:hint="Number2"

android:inputType="number" />
```

```
<TextView

    android:id="@+id/r1"

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:ems="10"

    android:inputType="number"

    android:text="Result" />
```

```
<LinearLayout

    android:layout_width="match_parent"

    android:layout_height="67dp"

    android:orientation="horizontal"></LinearLayout>
```

```
<LinearLayout

    android:layout_width="match_parent"

    android:layout_height="51dp"

    android:orientation="horizontal">
```

```
<LinearLayout

    android:layout_width="215dp"

    android:layout_height="match_parent"

    android:orientation="horizontal">
```

<Button

android:id="@+id/button"

android:layout_width="wrap_content"

android:layout_height="wrap_content"

android:layout_weight="1"

android:onClick="add"

android:text="add" />

</LinearLayout>

<Button

android:id="@+id/button3"

android:layout_width="wrap_content"

android:layout_height="wrap_content"

android:layout_weight="1"

android:onClick="sub"

android:text="subtract" />

</LinearLayout>

<LinearLayout

android:layout_width="match_parent"

android:layout_height="55dp"

android:orientation="horizontal">

<LinearLayout

android:layout_width="215dp"

android:layout_height="match_parent"

android:orientation="horizontal">

```
<Button
    android:id="@+id/button2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:onClick="mul"
    android:text="multiply" />
```

```
</LinearLayout>
```

```
<Button
    android:id="@+id/button4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:onClick="div"
    android:text="Divide" />
```

```
</LinearLayout>
```

```
</LinearLayout>
```

MainActivity.java:

```
package com.example.myapplication;

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 tv1;  
  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);  
        setContentView(R.layout.activity_main);  
        e1 = findViewById(R.id.e1);  
        e2 = findViewById(R.id.e2);  
        tv1 = findViewById(R.id.r1);  
    }  
    public void add(View V){  
        int a1 = Integer.parseInt(e1.getText().toString());  
        int a2 = Integer.parseInt(e2.getText().toString());  
        int result = a1+a2;  
        tv1.setText(""+result);  
    }  
    public void sub(View V){  
        int a1 = Integer.parseInt(e1.getText().toString());  
        int a2 = Integer.parseInt(e2.getText().toString());  
        int result = a1-a2;  
        tv1.setText(""+result);  
    }  
    public void mul(View V){  
        int a1 = Integer.parseInt(e1.getText().toString());  
        int a2 = Integer.parseInt(e2.getText().toString());
```

```
        int result = a1*a2;

        tv1.setText(""+result);
    }

    public void div(View V){

        floata1=Integer.parseInt(e1.getText().toString());

        floata2=Integer.parseInt(e2.getText().toString());

        float result = a1/a2;

        tv1.setText(""+result);
    }
}
```