

XML code

```
<?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="wrap_content"

            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="Calculate Factorial"
    android:textSize="8pt"
    android:id="@+id/btnAdd">
</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 Code

```
package com.example.factorial1;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.text.TextUtils;
import android.view.View;
```

```
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity implements View.OnClickListener{

    EditText etNum1;

    Button btnAdd;

    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);

        btnAdd = (Button) findViewById(R.id.btnAdd);
        tvResult = (TextView) findViewById(R.id.tvResult);

        // set a listener
        btnAdd.setOnClickListener(this);

    }
```

@Override

public void onClick(View v) {

 // TODO Auto-generated method stub

 float num1=0;

 float fact=1;

 float result = 0;

 // check if the fields are empty

 num1=Float.parseFloat(etNum1.getText().toString());

 // read EditText and fill variables with numbers

 // 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 = "+";

 for(int i=1;i<=num1;i++)

 {

 fact=fact*i;

 }

 result=fact;

 break;

 default:

 break;

 }

 // form the output line

 tvResult.setText("Factorial of" + " " + num1 + " = " + result);

```
}  
}
```

Screenshot

