

Program 3. Create an android application to find the factorial of a given number.

Activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:background="#3779A5"
    android:orientation="vertical"
    android:weightSum="1">

    <LinearLayout
        android:id="@+id/linearLayout1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginLeft="10pt"
        android:layout_marginTop="3pt"
        android:layout_marginRight="10pt">

        <EditText
            android:id="@+id/etNum1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginRight="5pt"
            android:layout_weight="1"
            android:hint="Enter the value here"
            android:inputType="numberDecimal"
            android:textColor="#FFFFFF"></EditText>
    </LinearLayout>

    <LinearLayout
        android:id="@+id/linearLayout2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginLeft="5pt"
        android:layout_marginTop="3pt"
        android:layout_marginRight="5pt">

        <Button
            android:id="@+id/btnAdd"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="2"
            android:background="#7C3C3C"
            android:text="Factorial"
            android:textSize="8pt"></Button>
    </LinearLayout>
```

```
<TextView
    android:id="@+id/tvResult"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginLeft="5pt"
    android:layout_marginTop="3pt"
    android:layout_marginRight="5pt"
    android:layout_weight="0.07"
    android:gravity="center_horizontal"
    android:textColor="#FFFFFF"
    android:textSize="12pt"></TextView>
</LinearLayout>
```

MainActivity.java

```
package com.example.factorial;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
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 = "";

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

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

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

    @Override
    public void onClick(View v) {
        float num1=0;
        float fact=1;
        float result = 0;
```

```

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

switch (v.getId()) {
    case R.id.btnAdd:
        oper = "+";
        for(int i=1;i<=num1;i++)
        {
            fact=fact*i;
        }
        result=fact;
        break;
    default:
        break;
}

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

```

Output

