**Program-3**

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

**ActivityMain.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="#FAF9D4"  
 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:inputType="numberDecimal"></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="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="Calculate 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:textSize="12pt"></TextView>  
</LinearLayout>

**MainActivity.java**

package com.example.factorial;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.TextView;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
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 stud* 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);  
 }

**screenshots**



