

Experiment Number 18 (Exercise 3):

Write a program to create two screens. First screen will take one number input from user. After click on Factorial button, second screen will open and it should display factorial of the same number. Also specify which type of intent you will use in this case.

Code For Activity_main.xml file:

```
<?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:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity"
    android:orientation="vertical"
    android:padding="20dp">

    <EditText android:id="@+id/etNumber"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter the number"
        android:inputType="number"
        android:layout_marginTop="50dp"/>

    <Button
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Factorial"
        android:onClick="displayFactorial"/>

</LinearLayout>
```

Code For MainActivity.java file:

```
package com.example.factorialintent;
import android.content.Intent;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

    EditText etNumber;

    @Override
    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        etNumber = findViewById(R.id.etNumber);
    }

    public void displayFactorial(View view) {

        Intent i = new Intent(MainActivity.this, FactorialActivity.class);
```

```
        i.putExtra("number", etNumber.getText().toString());
        startActivity(i);
    }
}
```

activity_factorial.xml code:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout 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:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".FactorialActivity"
    android:padding="20dp">

    <TextView android:id="@+id/tv"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Factorial of number is"
        style="@style/TextAppearance.AppCompat.Large"/>

</RelativeLayout>
```

FactorialActivity.java code:

```
package com.example.factorialintent;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.TextView;

public class FactorialActivity extends AppCompatActivity {

    TextView tv;

    @Override
    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_factorial);

        Bundle b = getIntent().getExtras();

        int no = Integer.parseInt(b.getString("number"));
        long f=1;

        for(int i=no; i>0; i--)
        {
            f = f * i;
        }

        tv = findViewById(R.id.tv);
        tv.setText("Factorial of " + no + " is " + f);
    }
}
```

Output:

