

Experiment 18

1.

ActivityMain.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:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    tools:context=".MainActivity">
    <com.google.android.material.textfield.TextInputLayout
        android:id="@+id/inputLayout1"
        style="@style/Widget.MaterialComponents.TextInputLayout.OutlinedBox"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        app:boxStrokeColor="#2196F3"
        app:helperText="Required*"
        app:helperTextTextColor="#F80000"
        app:hintTextColor="#2196F3"
        app:placeholderTextColor="#FFFFFF">
        <EditText
            android:id="@+id/ed1"
            android:layout_width="300dp"
            android:layout_height="wrap_content"
            android:hint="@string/ed1"
            android:inputType="text" />
    </com.google.android.material.textfield.TextInputLayout>
    <Button
        android:id="@+id/b1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="20dp"
        android:backgroundTint="#0000FF"
        android:text="@string/b1"/>
</LinearLayout>
```

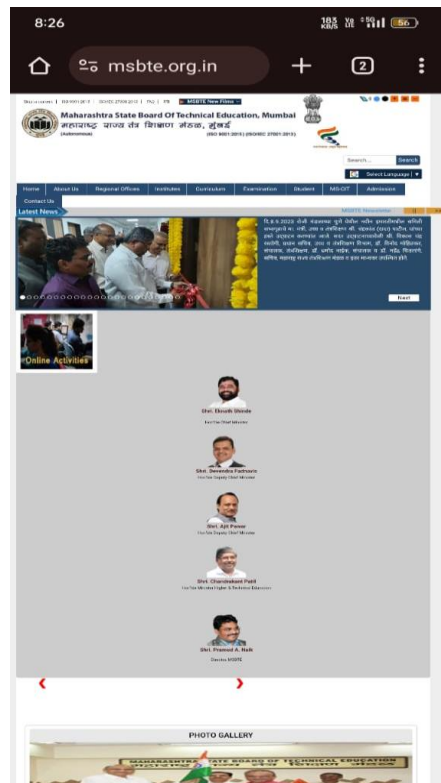
Strings.xml

```
<resources>
    <string name="app_name">Exp18_1</string>
    <string name="b1">NAVIGATE</string>
    <string name="ed1">Enter Valid URL</string>
</resources>
```

MainActivity.java

```
package com.example.exp18_1;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.text.TextUtils;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
    EditText txtLink;
    Button btnOpenLink;
    String defaultLink;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        defaultLink = "http://";
        txtLink = (EditText) findViewById(R.id.ed1);
        btnOpenLink = (Button) findViewById(R.id.b1);
        btnOpenLink.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String link = txtLink.getText().toString();
                if(!TextUtils.isEmpty(link)){
                    Uri uri = Uri.parse(defaultLink+link);
                    Intent intent = new Intent(Intent.ACTION_VIEW, uri);
                    startActivity(intent);
                }else{
                    txtLink.setError("Enter URL");
                }
            }
        });
    }
}
```

Output:



2.

ActivityMain.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:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    tools:context=".MainActivity">
    <com.google.android.material.textfield.TextInputLayout
        style="@style/Widget.MaterialComponents.TextInputLayout.OutlinedBox"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        app:boxStrokeColor="#2196F3"
        app:helperText="Required*"
        app:helperTextTextColor="#F80000"
        app:hintTextColor="#2196F3"
        app:placeholderTextColor="#FFFFFF">
        <EditText
            android:id="@+id/ed1"
            android:layout_width="300dp"
            android:layout_height="wrap_content"
```

```

        android:hint="@string/ed1"
        android:inputType="text" />
</com.google.android.material.textfield.TextInputLayout>
<Button
    android:id="@+id/b1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"
    android:backgroundTint="#0000FF"
    android:onClick="Call"
    android:text="@string/b1"/>
</LinearLayout>

```

Strings.xml

```

<resources>
    <string name="app_name">Exp18_2</string>
    <string name="ed1">Enter Phone Number</string>
    <string name="b1">START DIALER</string>
</resources>

```

MainActivity.java

```

package com.example.exp18_2;
import android.content.Intent;
import android.net.Uri;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void Call(View v)
    {
        EditText e = (EditText)findViewById(R.id.ed1);
        Toast.makeText(this, "clicked", Toast.LENGTH_LONG).show();
        Uri u = Uri.parse("tel:" + e.getText().toString());
        Intent i = new Intent(Intent.ACTION_DIAL, u);
        try
        {

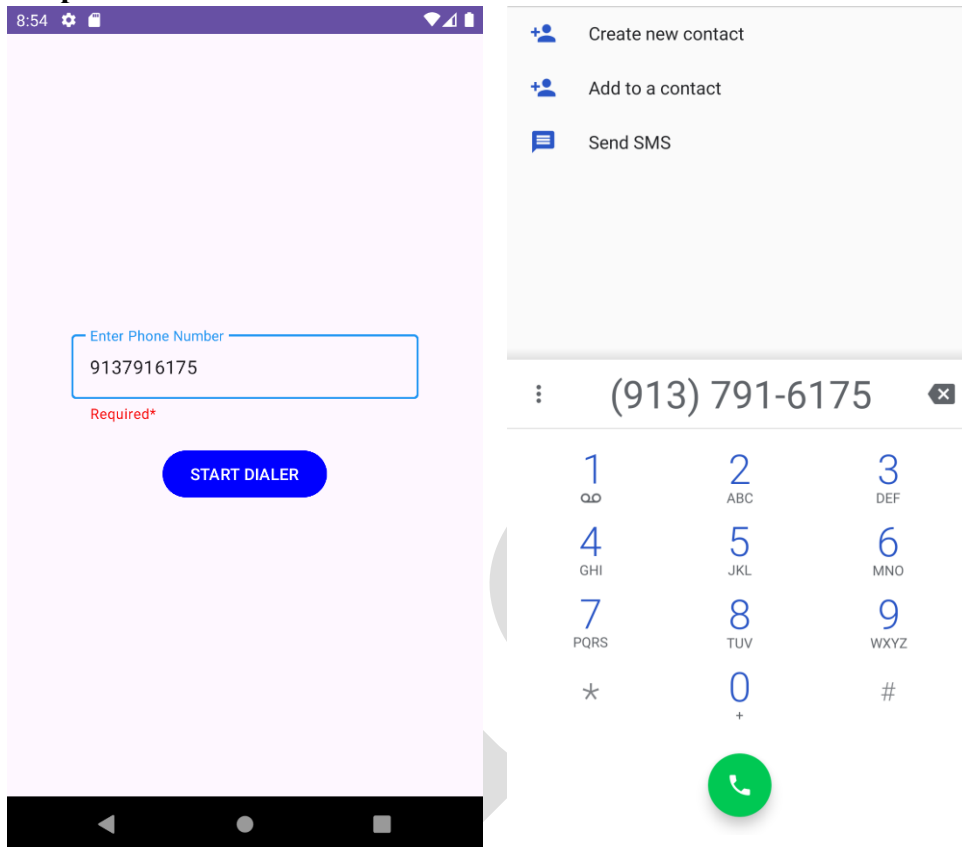
```

```

        startActivity(i);
    }
    catch (SecurityException s)
    {
        Toast.makeText(this, "An error occurred", Toast.LENGTH_LONG).show();
    }
}
}
}

```

Output:



3.

AndroidManifest.xml

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.exp18_3">
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"

```

```

        android:supportsRtl="true"
        android:theme="@style/Theme.Exp18_3">
<activity android:name=".MainActivity2"></activity>
<activity android:name=".MainActivity"
    android:exported="true">
    <intent-filter>
        <action android:name="android.intent.action.MAIN" />
        <category android:name="android.intent.category.LAUNCHER" />
    </intent-filter>
</activity>
</application>
</manifest>

```

Strings.xml

```

<resources>
    <string name="app_name">Exp18_3</string>
    <string name="ed1">Enter Number</string>
    <string name="b1">FACTORIAL</string>
    <string name="result">Factorial is:</string>
</resources>

```

ActivityMain.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:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    tools:context=".MainActivity">
    <com.google.android.material.textfield.TextInputLayout
        android:id="@+id/inputLayout1"
        style="@style/Widget.MaterialComponents.TextInputLayout.OutlinedBox"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        app:boxStrokeColor="#2196F3"
        app:helperText="Required*"
        app:helperTextTextColor="#F80000"
        app:hintTextColor="#2196F3"
        app:placeholderTextColor="#FFFFFF">
        <EditText
            android:id="@+id/ed1"

```

```

        android:layout_width="300dp"
        android:layout_height="wrap_content"
        android:hint="@string/ed1"
        android:inputType="text" />
    </com.google.android.material.textfield.TextInputLayout>
    <Button
        android:id="@+id/b1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="20dp"
        android:backgroundTint="#0000FF"
        android:text="@string/b1"/>
</LinearLayout>

```

MainActivity.java

```

package com.example.exp18_3;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
public class MainActivity extends AppCompatActivity {
    EditText ed1;
    Button b1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        ed1=findViewById(R.id.ed1);
        b1=findViewById(R.id.b1);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent i = new
                    Intent(getApplicationContext(),MainActivity2.class);
                i.putExtra("number",ed1.getText().toString());
                startActivity(i);
            }
        });
    }
}

```

ActivityMain2.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:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    tools:context=".MainActivity2">
    <TextView
        android:id="@+id/result"
        android:layout_width="200dp"
        android:layout_height="wrap_content"
        android:text="Factorial is: "
        android:textSize="25sp"
        android:textColor="#FF0000"
        android:textStyle="bold"/>
</LinearLayout>

```

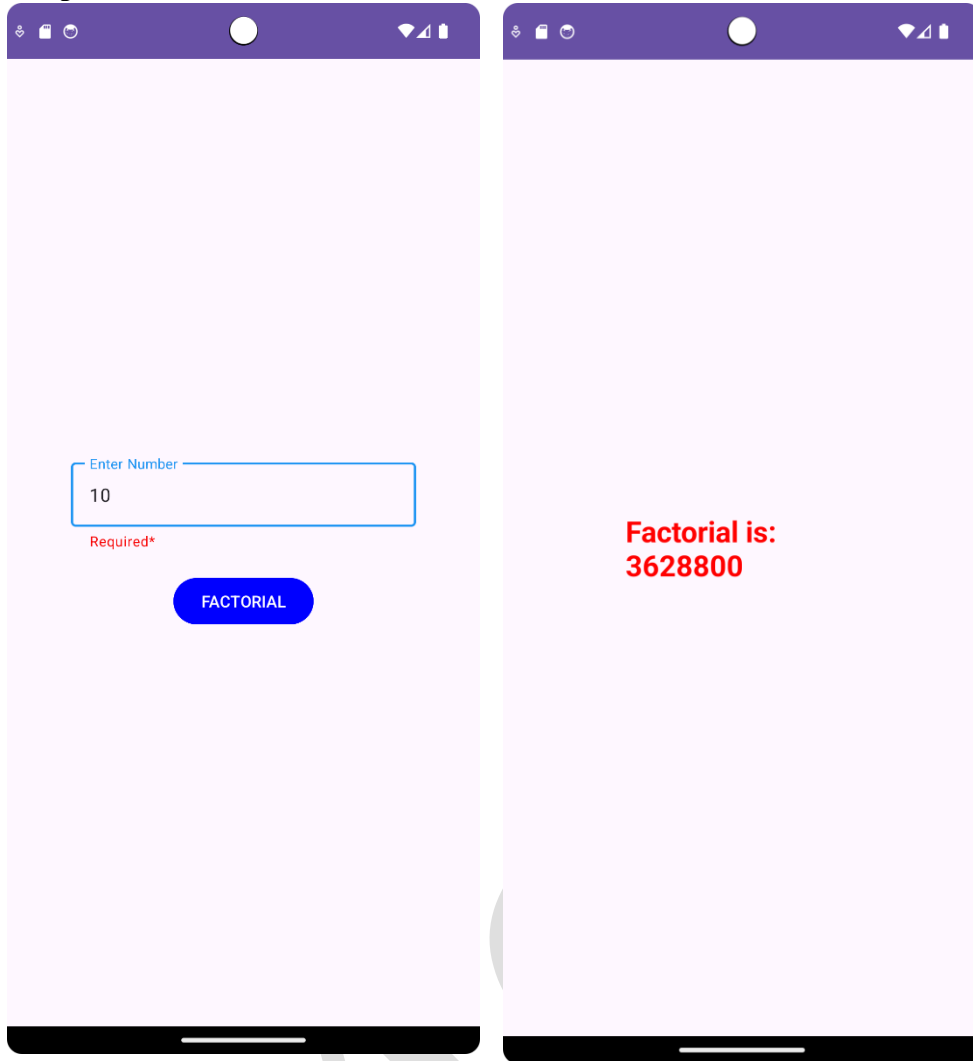
MainActivity2.java

```

package com.example.exp18_3;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.widget.TextView;
public class MainActivity2 extends AppCompatActivity {
    TextView result;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main2);
        result= findViewById(R.id.result);
        Intent i2= getIntent();
        int num=Integer.parseInt(i2.getStringExtra("number"));
        int fact=1;
        for(int i=1;i<=num;i++)
        {
            fact*=i;
        }
        result.append(fact+"");
    }
}

```


Output:



The image displays two side-by-side screenshots of a mobile application interface for calculating factorials. Both screens have a light purple background and a dark purple header bar with standard mobile status icons.

Left Screenshot: The interface features a text input field with the placeholder text "Enter Number" and the value "10". Below the input field is a red error message "Required*". At the bottom of the input area is a blue button with the text "FACTORIAL".

Right Screenshot: The interface displays the result of the calculation in red text: "Factorial is: 3628800".