

AIM

To develop a Simple Android Application that uses Layout Managers and Event Listeners.

PROCEDURE**1. Creating a New project:**

- Open Android Studio and then click on **File -> New -> New project.**
- Select the **Empty Activity** and type the name of the activity as **ex2 and Finish.**
- In MainActivity.java create views, refer views.
- Create Event listeners and intent to navigate to second activity and pass the values to the second activity.

2. Right click app→Java→com.example.ex2 and select new →java and type**SecondActivity** and click enter.

- ✓ Get the Intent from MainActivity to secondactivity.
- ✓ Getting the Values from First Activity using the Intent received
- ✓ Setting the Values to Intent.

3. Designing Layout for Main Activity:

- Click on **app -> res -> layout -> activity_main.xml.**
- Create Linear layout, Grid Layout, Relative layout and Text Views.
- Create second activity.xml to display the content created in activity_main.xml.
- Right click layout in res folder and select new →xml→Layoutxml file→type **second** and click enter.

4. Include the second activity in androidManifest.xml.**SOURCE CODE****activity_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="100dp">
        <TextView
            android:id="@+id/textView"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_margin="30dp"
            android:text="Details Form"
            android:textSize="25sp"
            android:gravity="center"/>
    </LinearLayout>
```

```

<GridLayout
    android:id="@+id/gridLayout"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:layout_marginTop="100dp"
    android:layout_marginBottom="200dp"
    android:columnCount="2"
    android:rowCount="3">
    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:layout_row="0"
        android:layout_column="0"
        android:text="Name"
        android:textSize="20sp"
        android:gravity="center"/>
    <EditText
        android:id="@+id/editText"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:layout_row="0"
        android:layout_column="1"
        android:ems="10"/>
    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:layout_row="1"
        android:layout_column="0"
        android:text="Reg.No"
        android:textSize="20sp"
        android:gravity="center"/>
    <EditText
        android:id="@+id/editText2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:layout_row="1"
        android:layout_column="1"
        android:inputType="number"

```

```

        android:ems="10"/>
<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:layout_row="2"
    android:layout_column="0"
    android:text="Dept"
    android:textSize="20sp"
    android:gravity="center"/>
<Spinner
    android:id="@+id/spinner"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:layout_row="2"
    android:layout_column="1"
    android:spinnerMode="dropdown"/>
</GridLayout>
<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentBottom="true"
    android:layout_centerInParent="true"
    android:layout_marginBottom="150dp"
    android:text="Submit"/>
</RelativeLayout>

```

MainActivity.java

```

import android.content.Intent;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Spinner;
public class MainActivity extends AppCompatActivity {
    EditText e1,e2;
    Button bt;
    Spinner s;
    String [] dept_array={"CSE","ECE","IT","Mech","Civil"};

```

```

String name,reg,dept;
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    e1= (EditText) findViewById(R.id.editText);
    e2= (EditText) findViewById(R.id.editText2);
    bt= (Button) findViewById(R.id.button);
    s= (Spinner) findViewById(R.id.spinner);
    ArrayAdapter adapter= new
ArrayAdapter(MainActivity.this,android.R.layout.simple_spinner_item,dept_array);
    s.setAdapter(adapter);
    bt.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            name=e1.getText().toString();
            reg=e2.getText().toString();
            dept=s.getSelectedItem().toString();
            Intent i = new Intent(MainActivity.this,SecondActivity.class);
            i.putExtra("name_key", name);
i.putExtra("reg_key",reg);
i.putExtra("dept_key", dept);
            startActivity(i);
        }
    });
}
}

```

SecondActivity.java

```

import android.content.Intent;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.TextView;
public class SecondActivity extends AppCompatActivity {
    TextView t1,t2,t3;
    String name,reg,dept;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.second);
        t1= (TextView) findViewById(R.id.textView1);
        t2= (TextView) findViewById(R.id.textView2);
        t3= (TextView) findViewById(R.id.textView3);
        Intent i = getIntent();

```

```

        name=i.getStringExtra("name_key");
        reg=i.getStringExtra("reg_key");
        dept=i.getStringExtra("dept_key");
        t1.setText(name);
        t2.setText(reg);
        t3.setText(dept);
    }}

```

second.xml

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context="com.example.exno2.SecondActivity"
    android:orientation="vertical"
    android:gravity="center">
    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="20dp"
        android:text="New Text"
        android:textSize="30sp"/>
    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="20dp"
        android:text="New Text"
        android:textSize="30sp"/>
    <TextView
        android:id="@+id/textView3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="20dp"
        android:text="New Text"
        android:textSize="30sp"/>
</LinearLayout>

```

In **androidManifest.xml**, add the second activity:

```

<activity android:label="@string/app_name" android:name="SecondActivity"/>

```

OUTPUT

The image displays two side-by-side screenshots of an Android application titled "Layout Managers Event Listeners".

The left screenshot shows the "Details Form" with the following fields:

- Name: ABC
- Reg.No: 312318104015
- Dept: CSE (with a dropdown arrow)

A "SUBMIT" button is located at the bottom of the form.

The right screenshot shows the data entered in the form displayed on the screen:

- ABC
- 312318104015
- CSE

RESULT

Thus a simple android application that uses Layout Managers and Event Listeners has been implemented successfully.