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| **Ex. No. 02 Develop an application that uses Layout Managers and Event Listeners**  **Date:** |

**Aim:**

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

**Creating a New project:**

∙ Open Android Studio and then click on **File -> New -> New project**.

∙ Then type the Application name as **“exno2″** and click Next.

∙ Then **select the Minimum SDK** as shown below and click Next.

∙ Then **select the Empty Activity** and click Next.

∙ Finally click **Finish**.

∙ It will take some time to build and load the project.

∙ After completion it will look as given below.

**Creating Second Activity for the Android Application:**

∙ Click on File -> New -> Activity -> Empty Activity.

∙ Type the Activity Name as **SecondActivity** and click Finish button. ∙ Thus Second Activity For the application is created.

**Designing Layout for Main Activity:**

∙ Click on **app -> res -> layout -> activity\_main.xml**.

∙ Now click on Text as shown below.

∙ Then delete the code which is there and type the code as given below. **Code for 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>

**Designing Layout for Second Activity:**

∙ Click on **app -> res -> layout -> activity\_second.xml**.

∙ Now click on Text as shown below.

∙ Then delete the code which is there and type the code as given below. **Code for Activity\_second.xml:**

<?xmlversion="1.0"encoding="utf-8"?>

<LinearLayoutxmlns: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.devang.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>

∙ Now click on Design and your activity will look as given below. ∙ So now the designing part of Second Activity is also completed. **Java Coding for the Android Application:**

∙ Java Coidng for Main Activity:

∙ Click on **app -> java -> com.example.exno2 -> MainActivity**. ∙ Then delete the code which is there and type the code as given below. **Code for MainActivity.java:**

package com.example.exno2;

import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.ArrayAdapter;

import android.widget.Button;

import android.widget.EditText;

import android.widget.Spinner;

import androidx.appcompat.app.AppCompatActivity;

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);

}

});

}

}

**Java Coding for Second Activity:**

∙ Click on **app -> java -> com.example.exno2 -> SecondActivity**.

∙ Then delete the code which is there and type the code as given below.

**Code for SecondActivity.java:**

package com.example.exno2;

import android.content.Intent;

//import android.support.v7.app.AppCompatActivity; import android.os.Bundle;

import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

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.activity\_second);

t1= (TextView) findViewById(R.id.textView1);

t2= (TextView) findViewById(R.id.textView2);

t3= (TextView) findViewById(R.id.textView3);

//Getting the Intent

Intent i = getIntent();

//Getting the Values from First Activity using the Intent received name=i.getStringExtra("name\_key");

reg=i.getStringExtra("reg\_key");

dept=i.getStringExtra("dept\_key");

//Setting the Values to Intent

t1.setText(name);

t2.setText(reg);

t3.setText(dept);

}

}

**Output:**

**A screenshot of a phone

Description automatically generatedA screenshot of a phone

Description automatically generated**

**Result: Result: SsS**

Thus a Simple Android Application that uses Layout Managers and Event Listeners is developed and executed successfully.

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**Rt: Result: SSA**

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