

Week 3:

Develop an application that receives user's name, contact and city and displays the same using Layout Managers and Event Listeners.

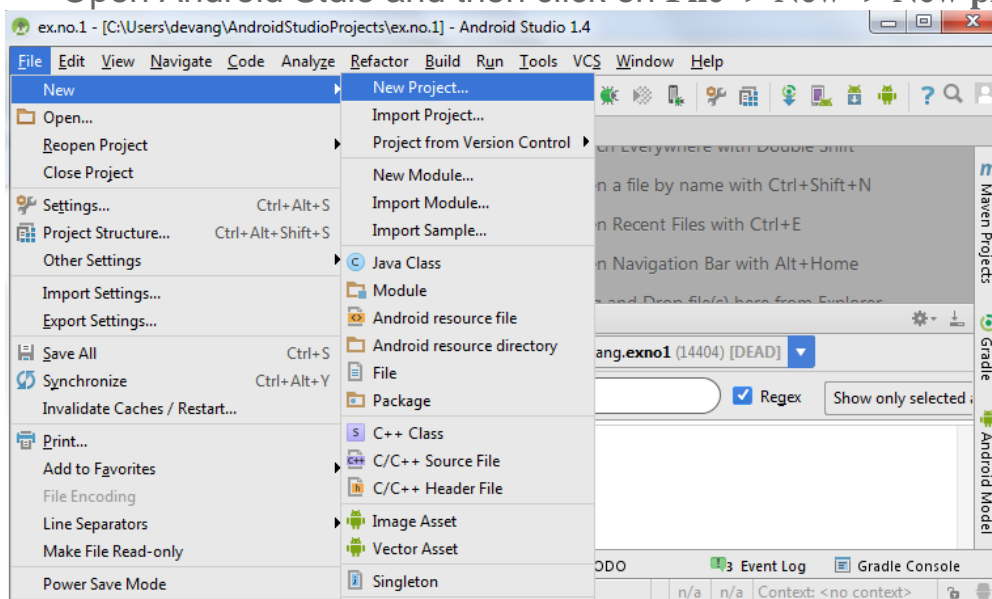
Aim:

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 **“week-3”** and click **Next**.

Create New Project

New Project

Android Studio

Configure your new project

Application name:

Company Domain:

Package name:

Project location:

The application name for most apps begins with an uppercase letter

Previous Next Cancel Finish

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

Create New Project

Target Android Devices

Select the form factors your app will run on

Different platforms may require separate SDKs

☒ Phone and Tablet

Minimum SDK:

Lower API levels target more devices, but have fewer features available. By targeting API 15 and later, your app will run on approximately **94.0%** of the devices that are active on the Google Play Store.

[Help me choose](#)

☐ Wear

Minimum SDK:

☐ TV

Minimum SDK:

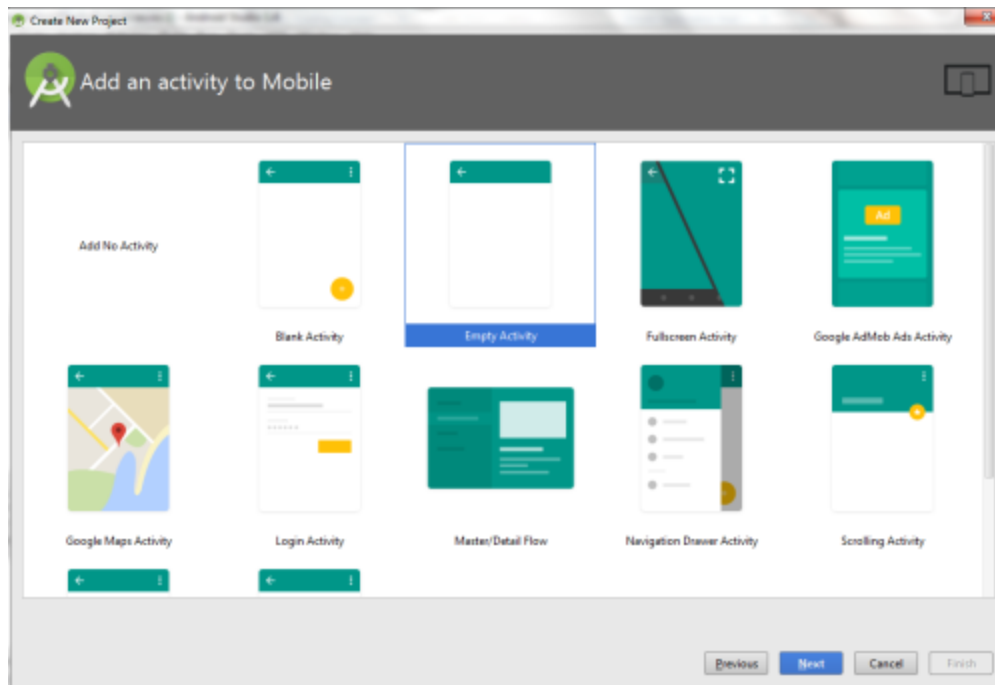
☐ Android Auto

☐ Glass (Not Installed)

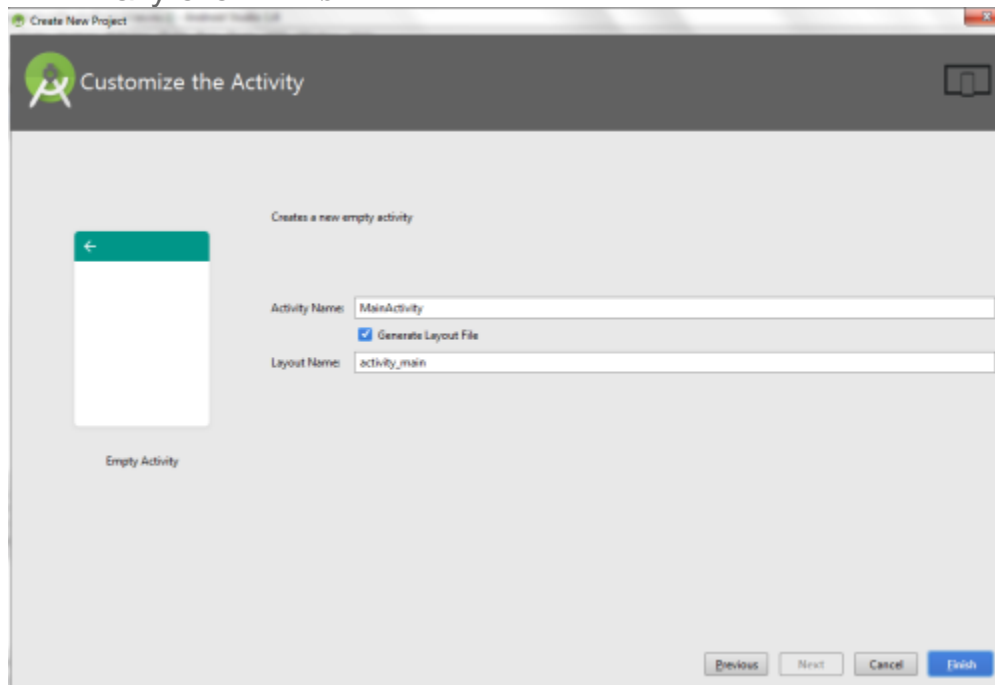
Download

Previous Next Cancel Finish

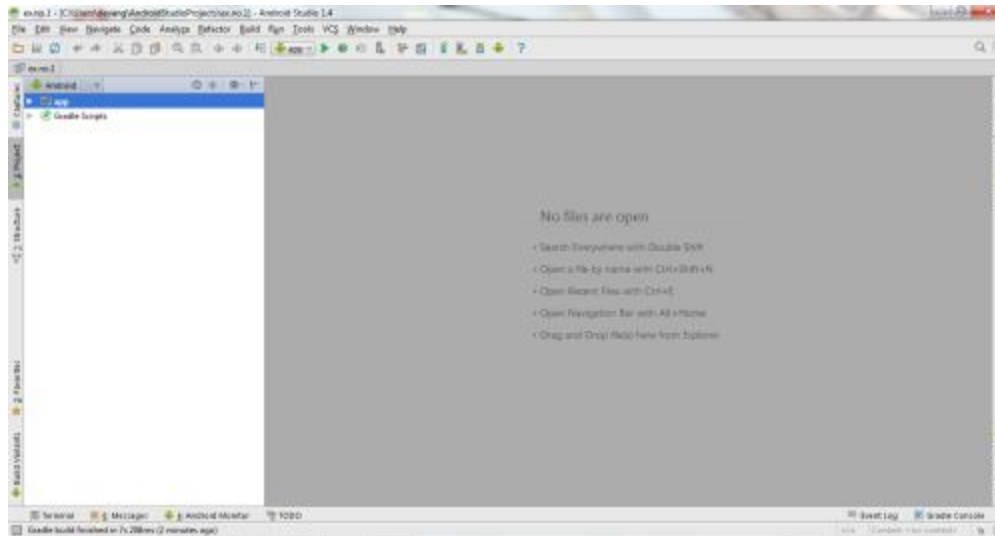
- Then select the **Empty Activity** and click Next.



- Finally click **Finish**.

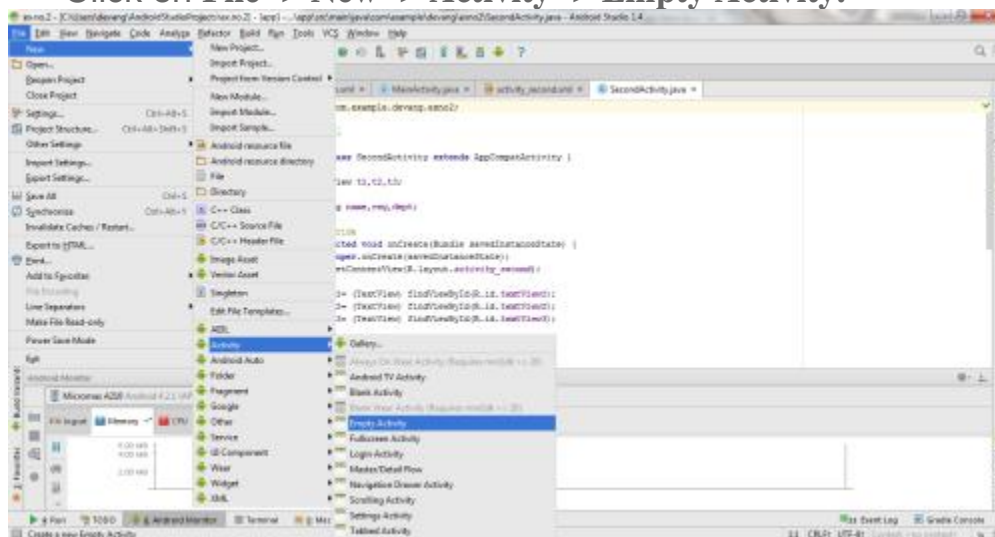


- It will take some time to build and load the project.
- After completion it will look as given below.

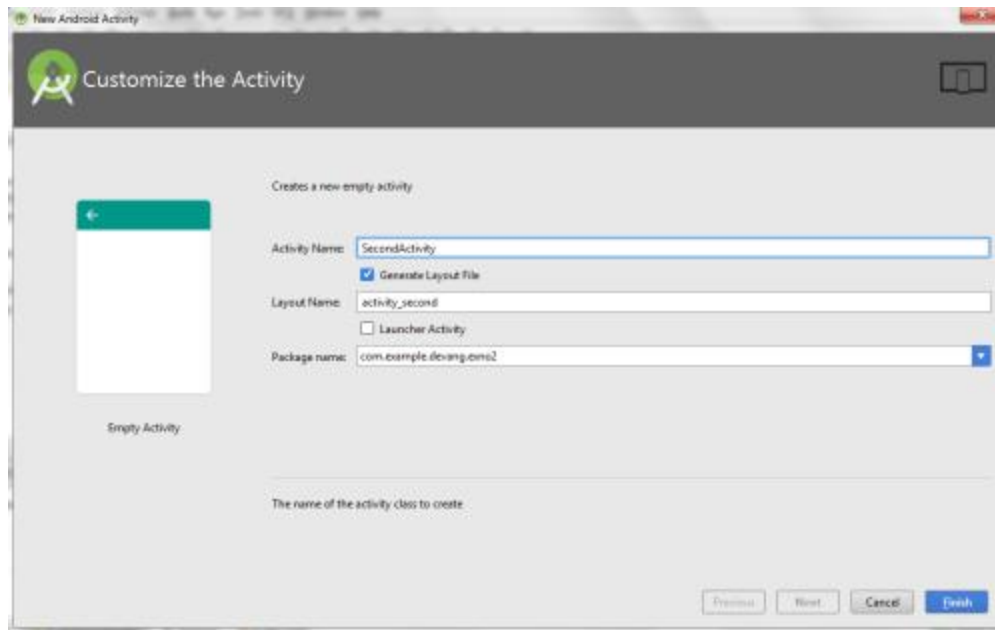


Creating Second Activity for the Android Application:

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



- Type the Activity Name as **SecondActivity** and click **Finish** button.

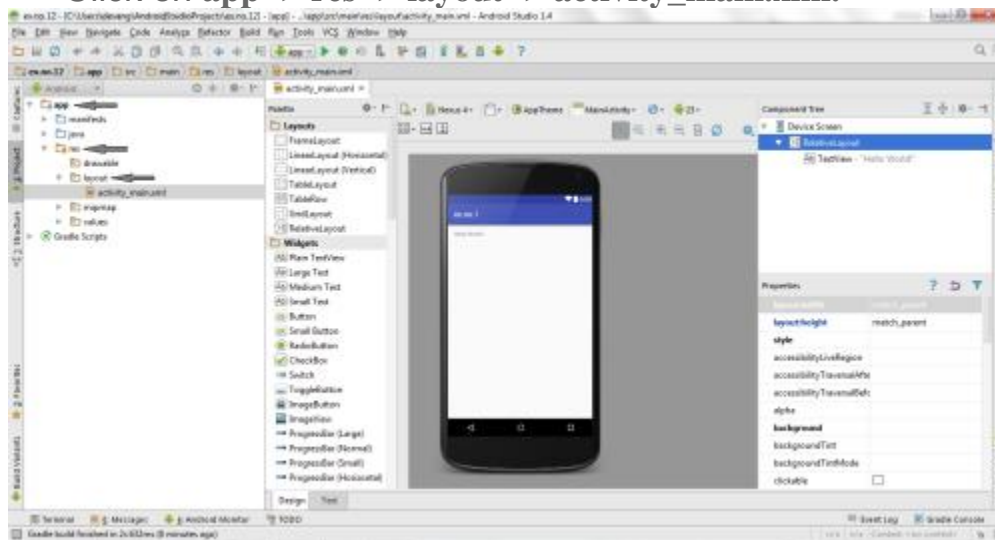


- Thus Second Activity For the application is created.

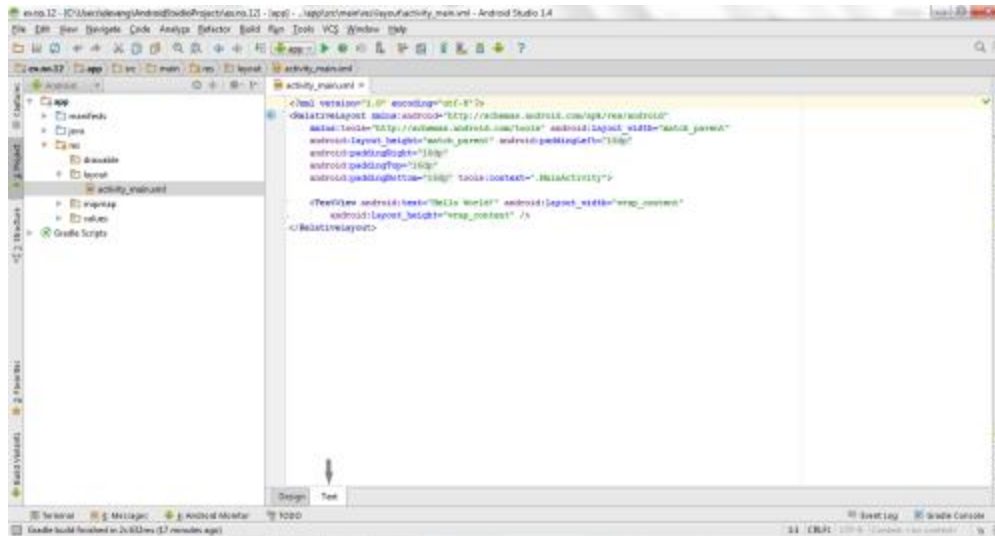
Designing layout for the Android Application:

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:

```

1  <?xml version="1.0" encoding="utf-8"?>
2  <RelativeLayout
3  xmlns:android="http://schemas.android.com/apk/res/android"
4      xmlns:tools="http://schemas.android.com/tools"
5      android:layout_width="match_parent"
6      android:layout_height="match_parent"
7      tools:context=".MainActivity">
8
9      <LinearLayout
10         android:layout_width="match_parent"
11         android:layout_height="100dp">
12         <TextView
13             android:id="@+id/textView"
14             android:layout_width="match_parent"
15             android:layout_height="wrap_content"
16             android:layout_margin="30dp"
17             android:text="Details Form"
18             android:textSize="25sp"
19             android:gravity="center"/>
20     </LinearLayout>
21
22     <GridLayout
23         android:id="@+id/gridLayout"
24         android:layout_width="match_parent"
25         android:layout_height="match_parent"
26         android:layout_marginTop="100dp"
27         android:layout_marginBottom="200dp"
28         android:columnCount="2"
29         android:rowCount="3">
30         <TextView
31             android:id="@+id/textView1"
32             android:layout_width="wrap_content"
33             android:layout_height="wrap_content"
34             android:layout_margin="10dp"

```

```

35         android:layout_row="0"
36         android:layout_column="0"
37         android:text="Name"
38         android:textSize="20sp"
39         android:gravity="center"/>
40
41     <EditText
42         android:id="@+id/editText"
43         android:layout_width="wrap_content"
44         android:layout_height="wrap_content"
45         android:layout_margin="10dp"
46         android:layout_row="0"
47         android:layout_column="1"
48         android:ems="10"/>
49
50     <TextView
51         android:id="@+id/textView2"
52         android:layout_width="wrap_content"
53         android:layout_height="wrap_content"
54         android:layout_margin="10dp"
55         android:layout_row="1"
56         android:layout_column="0"
57         android:text="Reg.No"
58         android:textSize="20sp"
59         android:gravity="center"/>
60
61     <EditText
62         android:id="@+id/editText2"
63         android:layout_width="wrap_content"
64         android:layout_height="wrap_content"
65         android:layout_margin="10dp"
66         android:layout_row="1"
67         android:layout_column="1"
68         android:inputType="number"
69         android:ems="10"/>
70
71     <TextView
72         android:id="@+id/textView3"
73         android:layout_width="wrap_content"
74         android:layout_height="wrap_content"
75         android:layout_margin="10dp"
76         android:layout_row="2"
77         android:layout_column="0"
78         android:text="Dept"
79         android:textSize="20sp"
80         android:gravity="center"/>
81
82     <Spinner
83         android:id="@+id/spinner"
84         android:layout_width="wrap_content"
85         android:layout_height="wrap_content"
86         android:layout_margin="10dp"
87         android:layout_row="2"

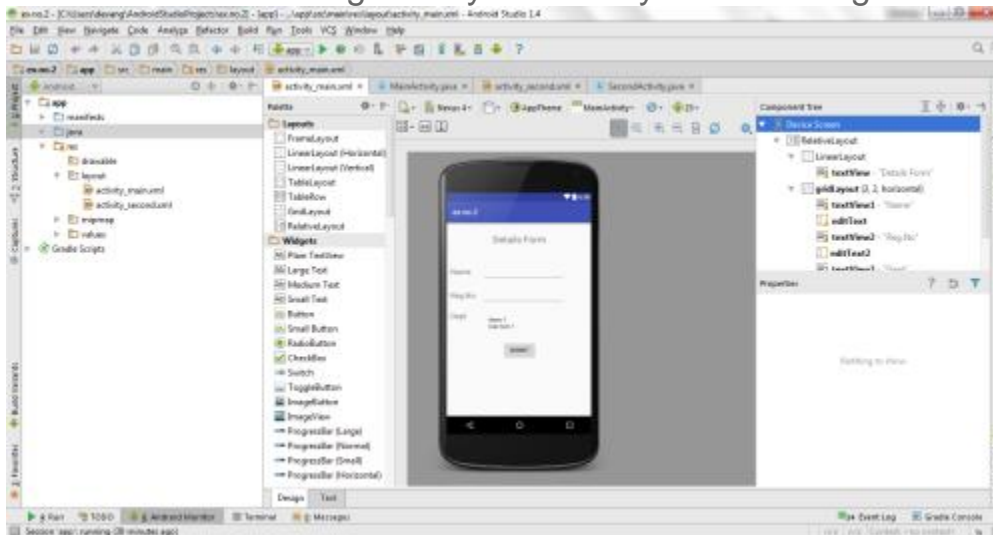
```

```

88         android:layout_column="1"
89         android:spinnerMode="dropdown"/>
90
91     </GridLayout>
92
93     <Button
94         android:id="@+id/button"
95         android:layout_width="wrap_content"
96         android:layout_height="wrap_content"
97         android:layout_alignParentBottom="true"
98         android:layout_centerInParent="true"
99         android:layout_marginBottom="150dp"
100        android:text="Submit"/>
101
102 </RelativeLayout>

```

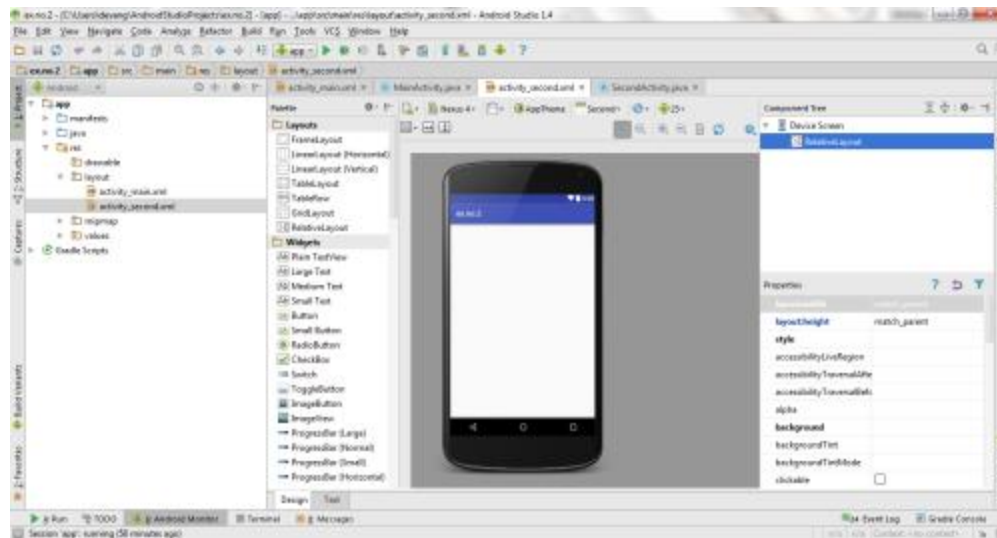
- Now click on Design and your activity will look as given below.



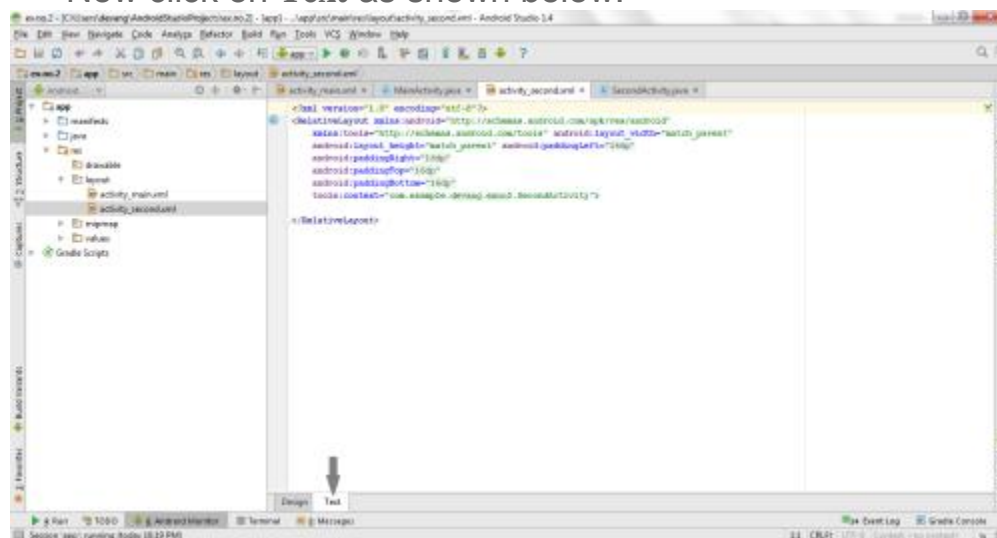
- So now the designing part of Main Activity is completed.

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:

```
<?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.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

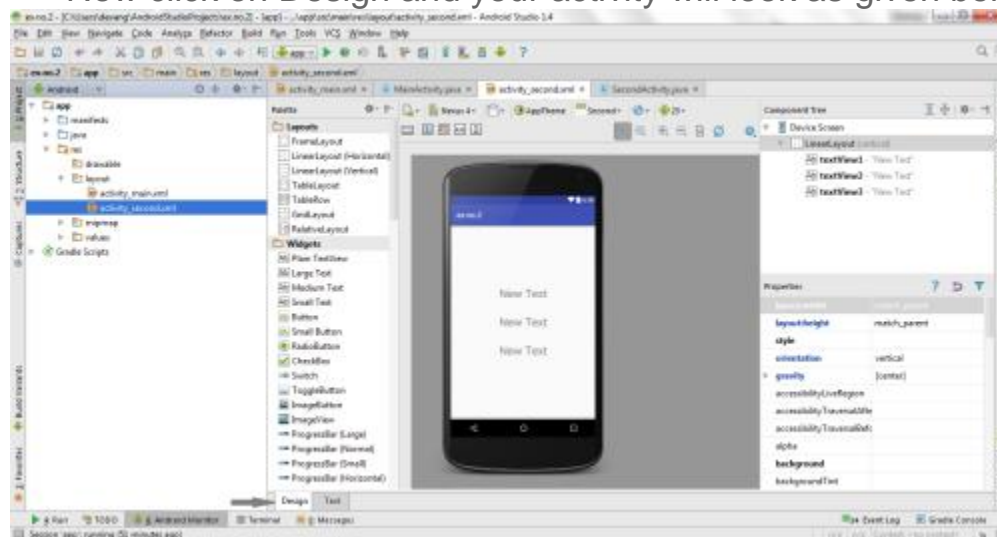
```
android:id="@+id/textView2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_margin="20dp"
android:text="New Text"
android:textSize="30sp"/>
```

<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.

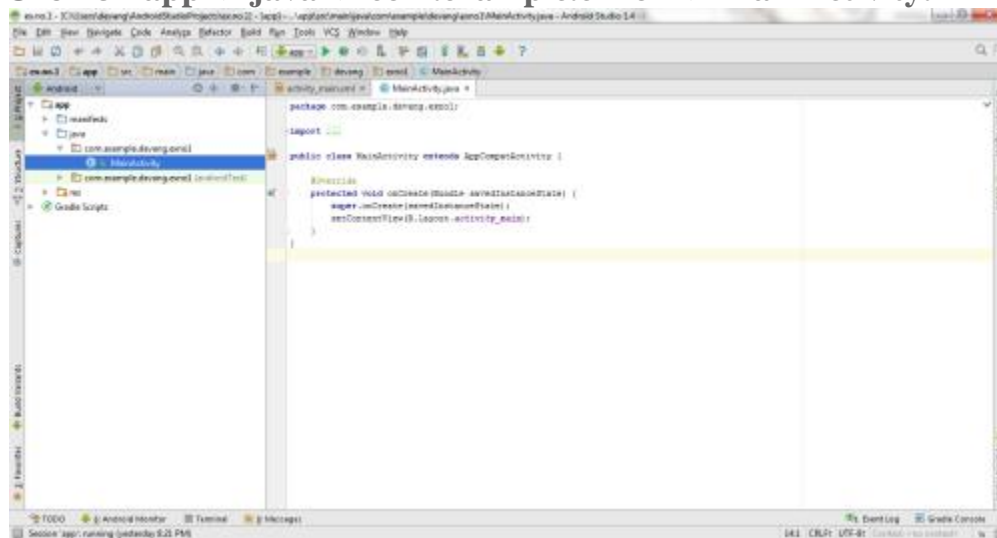


- So now the designing part of Second Activity is also completed.

Java Coding for the Android Application:

Java Coding 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:

?

```

1 package com.example.week3;
2
3 import android.content.Intent;
4 import android.support.v7.app.AppCompatActivity;
5 import android.os.Bundle;
6 import android.view.View;
7 import android.widget.AdapterView;
8 import android.widget.Button;
9 import android.widget.EditText;
10 import android.widget.Spinner;
11
12 public class MainActivity extends AppCompatActivity {
13
14     //Defining the Views
15     EditText e1,e2;
16     Button bt;
17     Spinner s;
18
19     //Data for populating in Spinner
20     String [] dept_array={"CSE", "ECE", "IT", "Mech", "Civil"};
21
22     String name,reg,dept;
23
24     @Override
25     protected void onCreate(Bundle savedInstanceState) {
26         super.onCreate(savedInstanceState);
27         setContentView(R.layout.activity_main);
28
29         //Referring the Views
30         e1= (EditText) findViewById(R.id.editText);
31         e2= (EditText) findViewById(R.id.editText2);

```

```

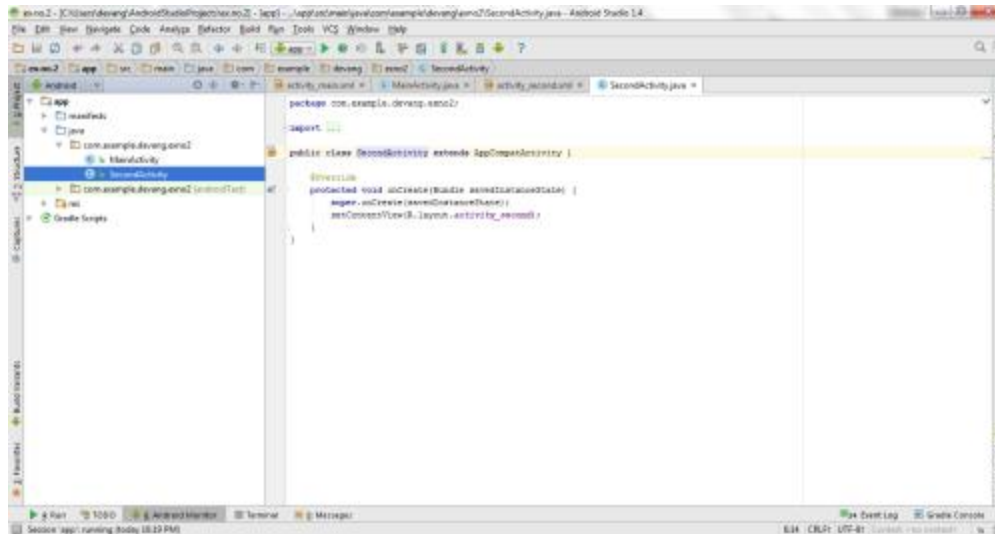
32
33         bt= (Button) findViewById(R.id.button);
34
35         s= (Spinner) findViewById(R.id.spinner);
36
37         //Creating Adapter for Spinner for adapting the data from array to
38 Spinner
39         ArrayAdapter adapter= new
40 ArrayAdapter(MainActivity.this,android.R.layout.simple_spinner_item,dept_array);
41         s.setAdapter(adapter);
42
43         //Creating Listener for Button
44         bt.setOnClickListener(new View.OnClickListener() {
45             @Override
46             public void onClick(View v) {
47
48                 //Getting the Values from Views(Edittext & Spinner)
49                 name=e1.getText().toString();
50                 reg=e2.getText().toString();
51                 dept=s.getSelectedItem().toString();
52
53                 //Intent For Navigating to Second Activity
54                 Intent i = new Intent(MainActivity.this,SecondActivity.class);
55
56                 //For Passing the Values to Second Activity
57                 i.putExtra("name_key", name);
58                 i.putExtra("reg_key",reg);
59                 i.putExtra("dept_key", dept);
60
61                 startActivity(i);
62             }
63         });
64     }
}

```

- So now the Coding part of Main Activity is completed.

Java Coding for Second Activity:

- Click on app -> java -> com.example.week3 -> SecondActivity.



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

Code for SecondActivity.java:

?

```
package com.example.week3;
```

```
import android.content.Intent;
```

```
import android.support.v7.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.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);
```

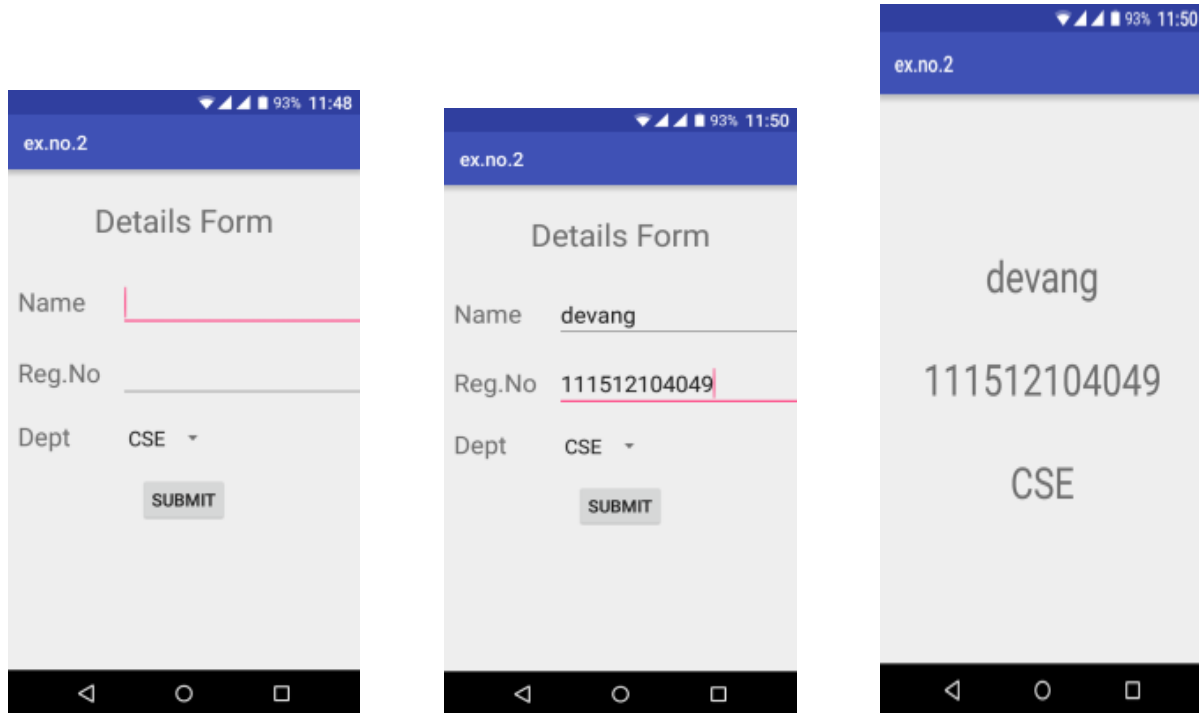
```
        t2.setText(reg);
```

```
        t3.setText(dept);
```

```
}  
}
```

- So now the Coding part of Second Activity is also completed.
- Now run the application to see the output.

Output:



Result:

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