

Android Application for Layout Managers and Event Listeners

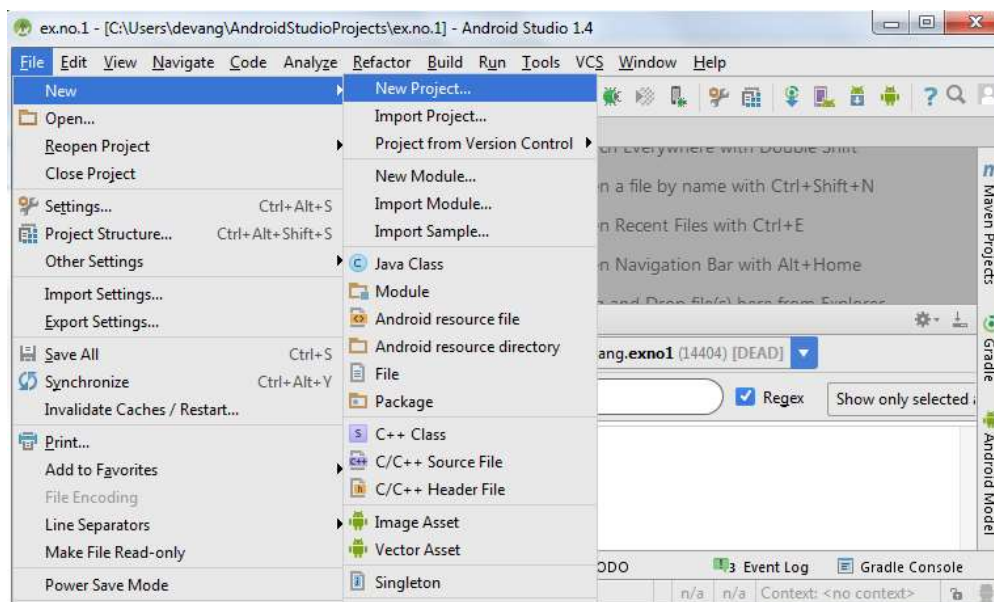
Aim:

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

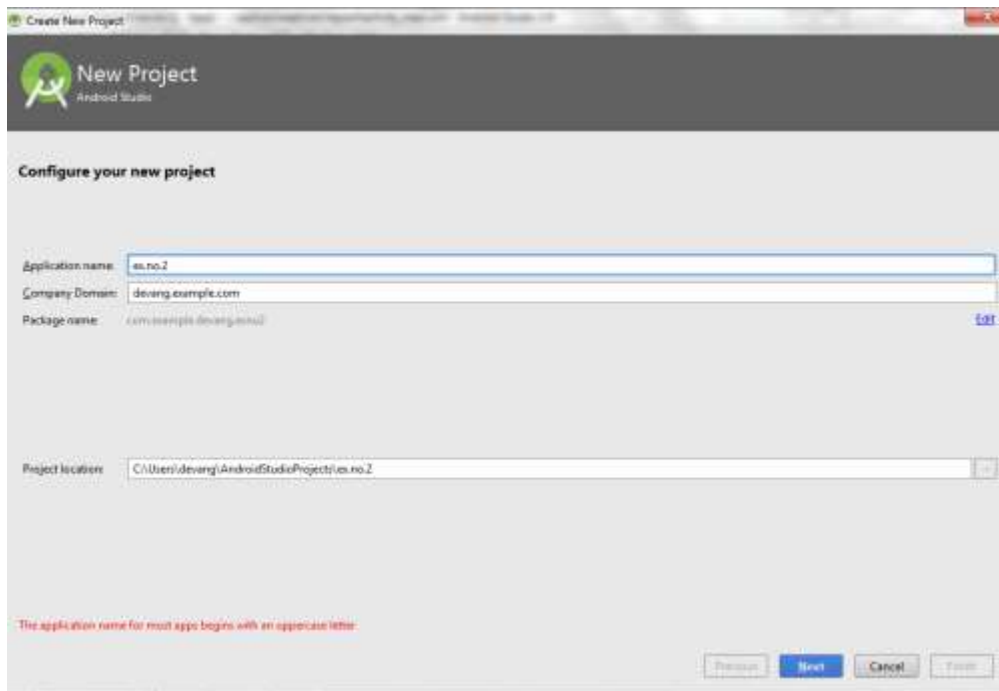
Procedure:

Creating a New project:

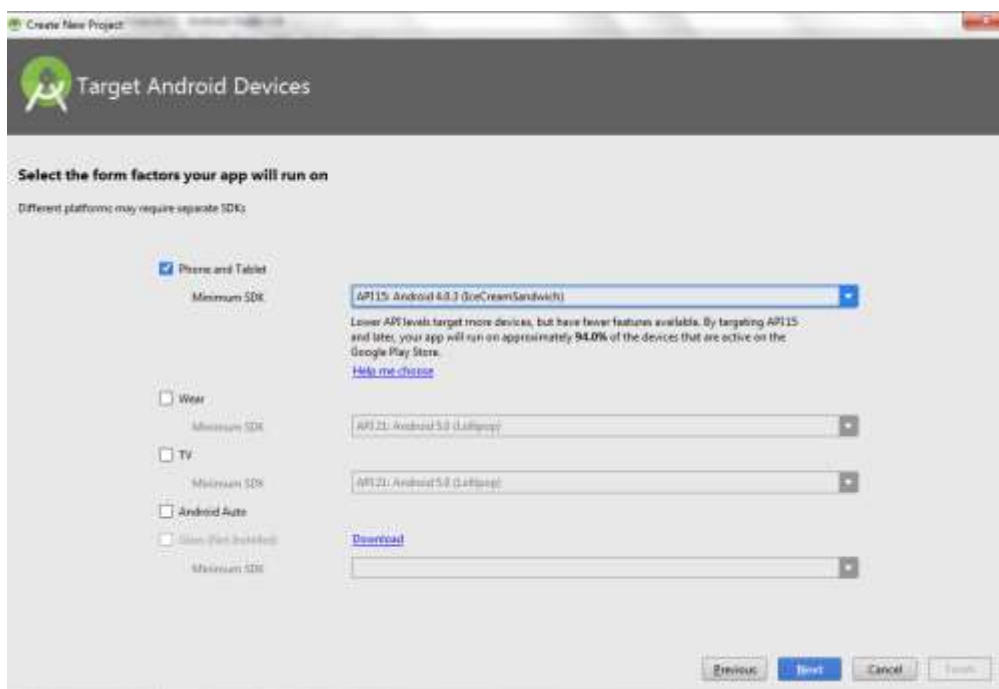
- Open Android Stdio and then click on **File -> New -> New project**.



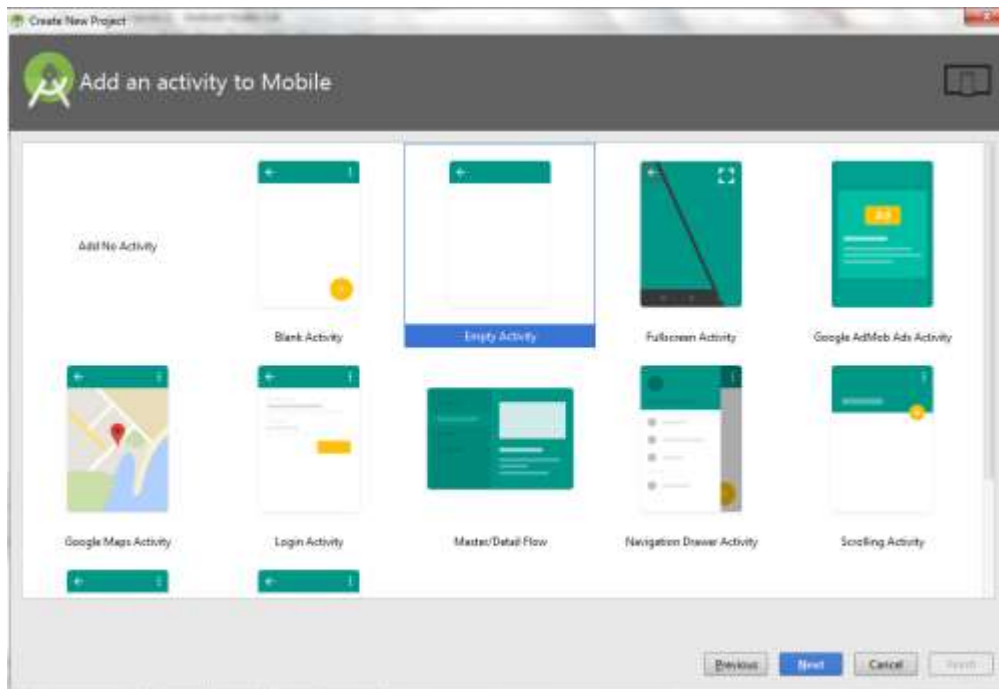
- Then type the Application name as “**ex.no.2**” and click **Next**.



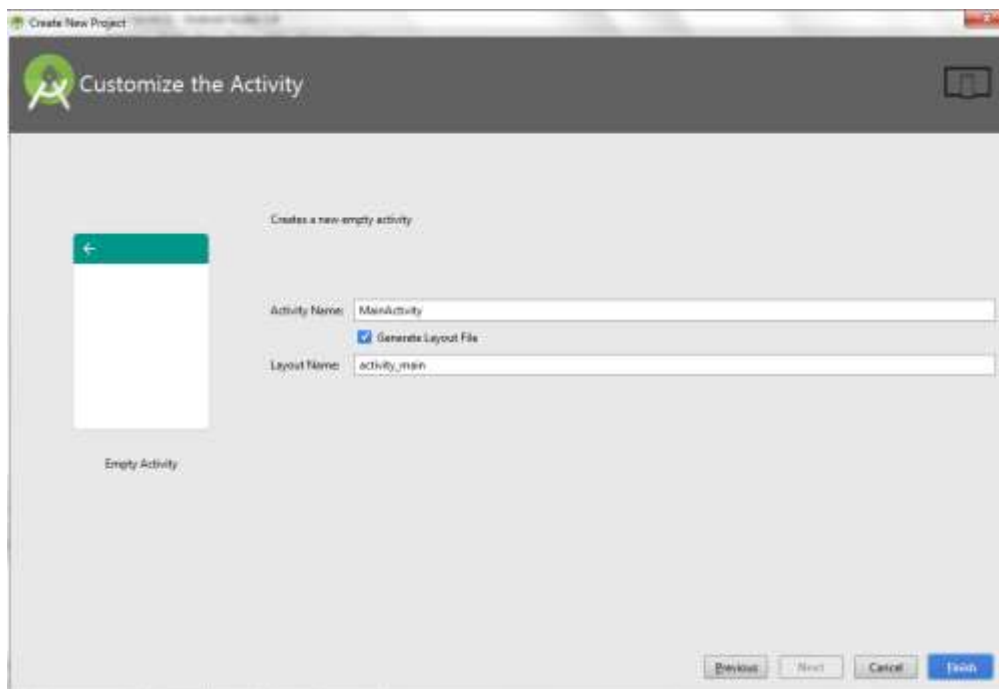
- Then select the **Minimum SDK** as shown below and click **Next**.



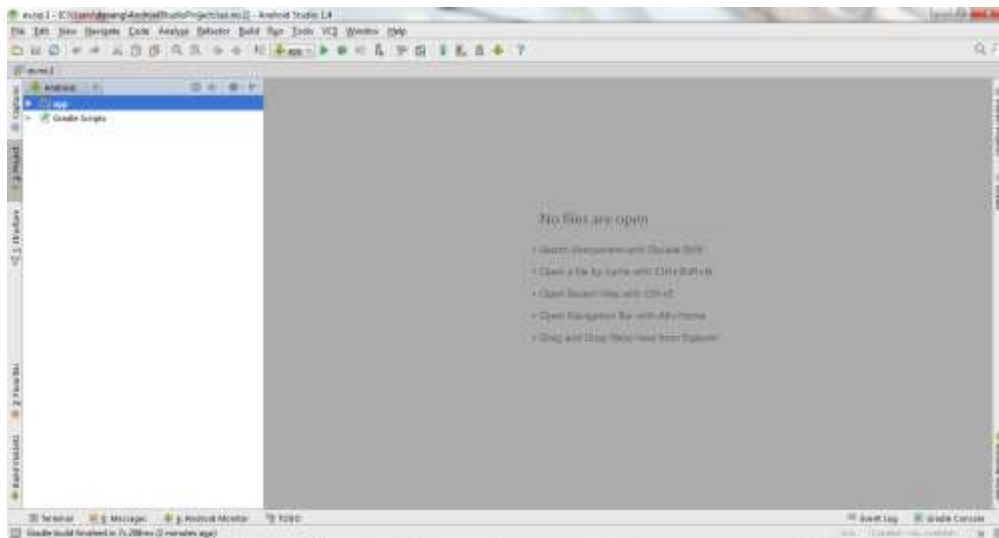
- Then select the **Empty Activity** and click **Next**.



- Finally click **Finish**.

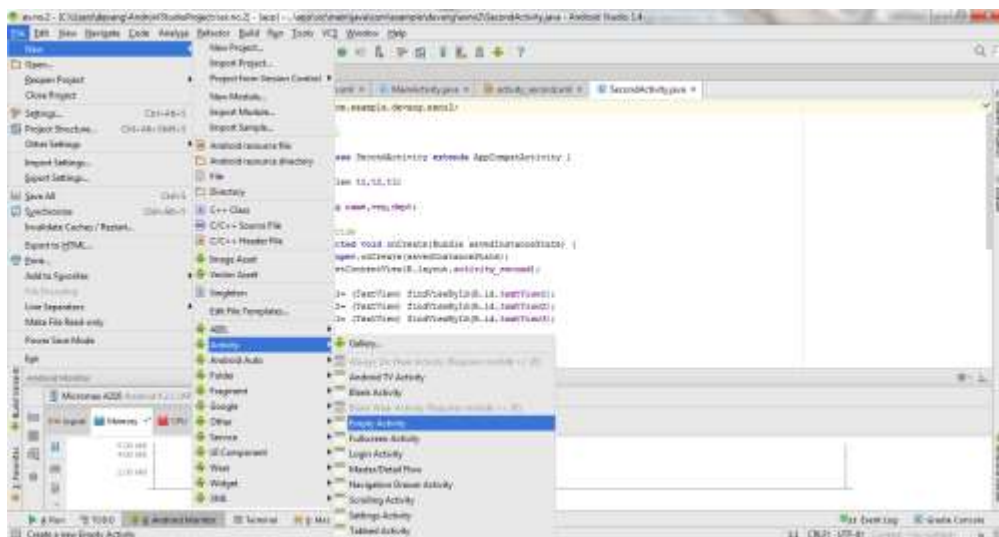


- It will take some time to build and load the project.
- After completion it will look as given below.

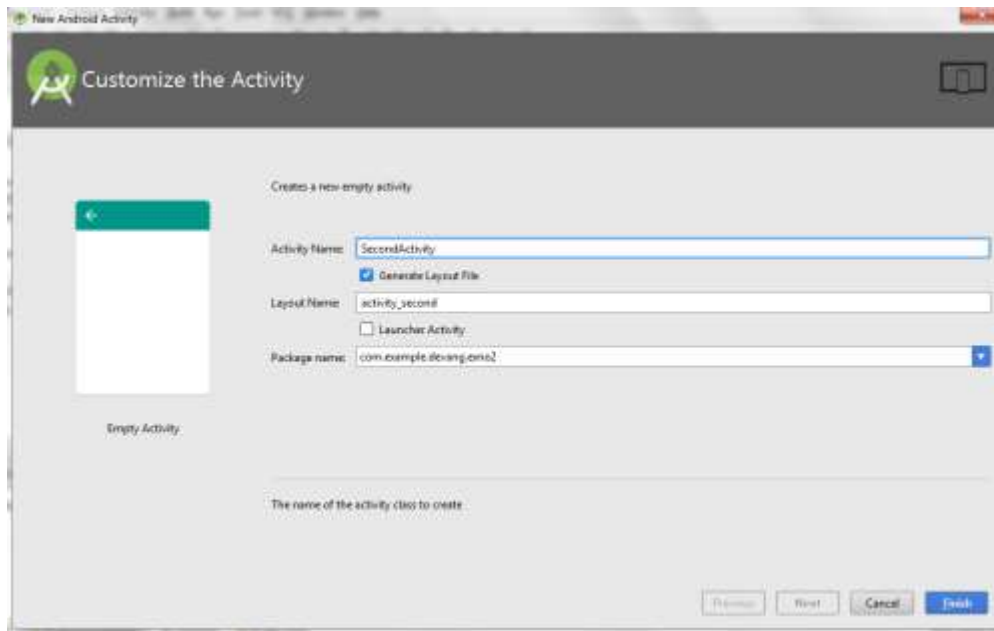


Creating Second Activity for the Android Application:

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



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

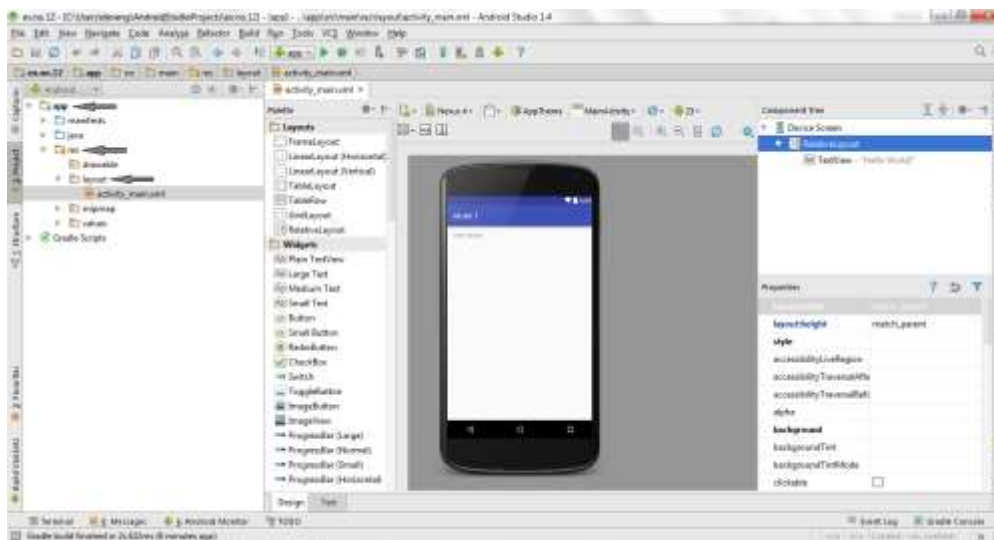


- Thus Second Activity For the application is created.

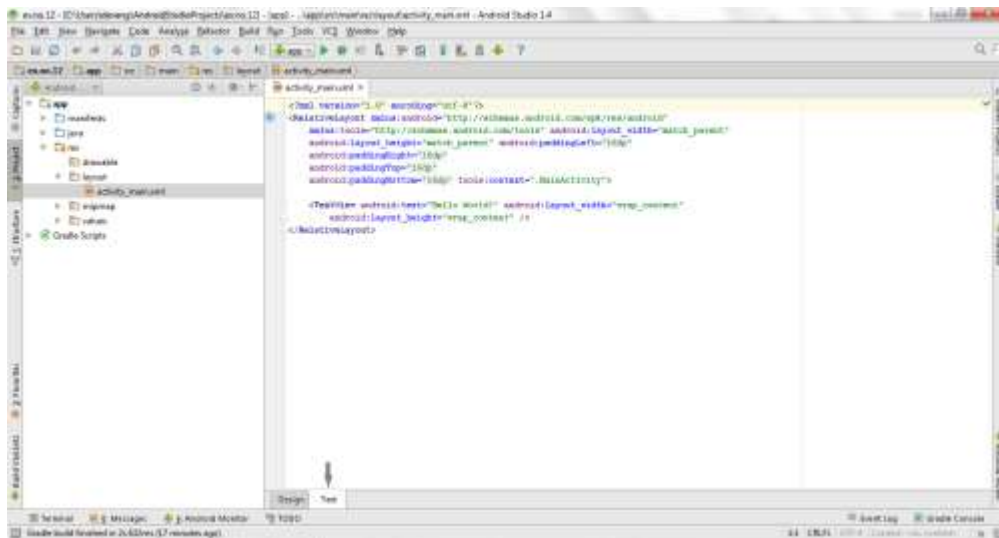
Designing layout for the Android Application:

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"
```

```

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

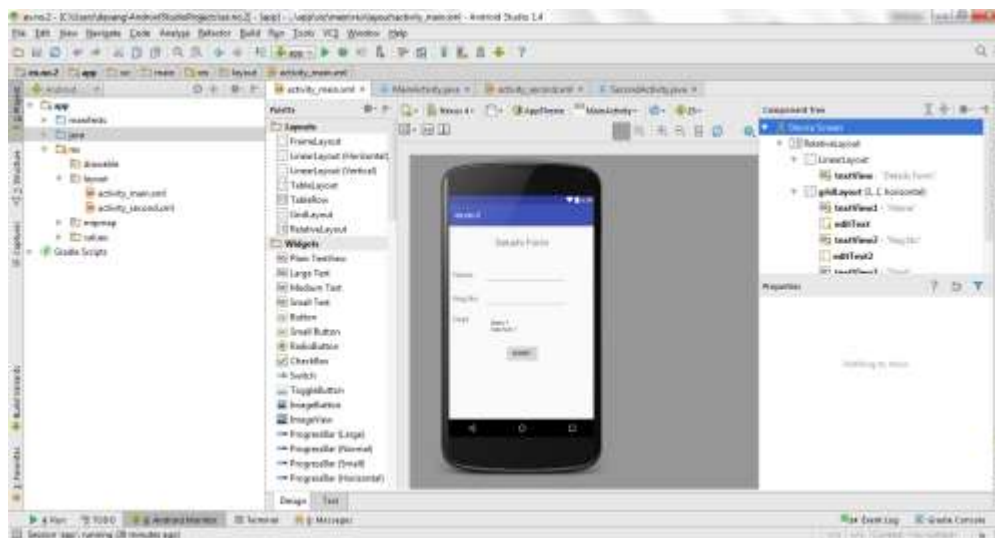
```

```

80         android:layout_alignParentBottom="true"
81         android:layout_centerInParent="true"
82         android:layout_marginBottom="150dp"
83         android:text="Submit"/>
84 </RelativeLayout>
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```

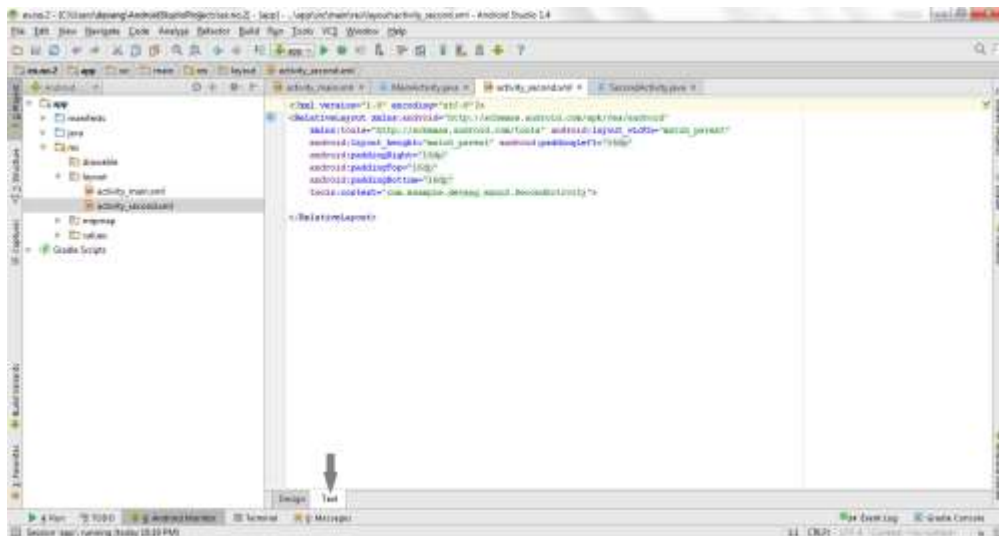
- Now click on Design and your activity will look as given below.



- 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:

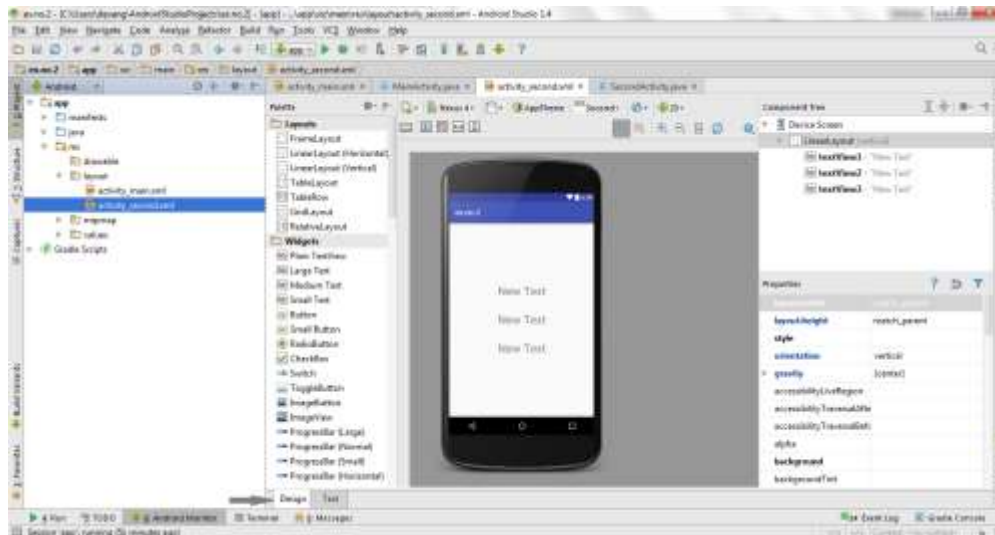
```

1
2 <?xml version="1.0" encoding="utf-8"?>
3 <LinearLayout 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="com.example.devang.exno2.SecondActivity"
8     android:orientation="vertical"
9     android:gravity="center">
10     <TextView
11         android:id="@+id/textView1"
12         android:layout_width="wrap_content"
13         android:layout_height="wrap_content"
14         android:layout_margin="20dp"
15         android:text="New Text"
16         android:textSize="30sp"/>
17     <TextView
18         android:id="@+id/textView2"
19         android:layout_width="wrap_content"
20         android:layout_height="wrap_content"
21         android:layout_margin="20dp"
22         android:text="New Text"
23         android:textSize="30sp"/>
24     <TextView
25         android:id="@+id/textView3"
26         android:layout_width="wrap_content"
27         android:layout_height="wrap_content"
28         android:layout_margin="20dp"
29         android:text="New Text"
30         android:textSize="30sp"/>
31 </LinearLayout>

```

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

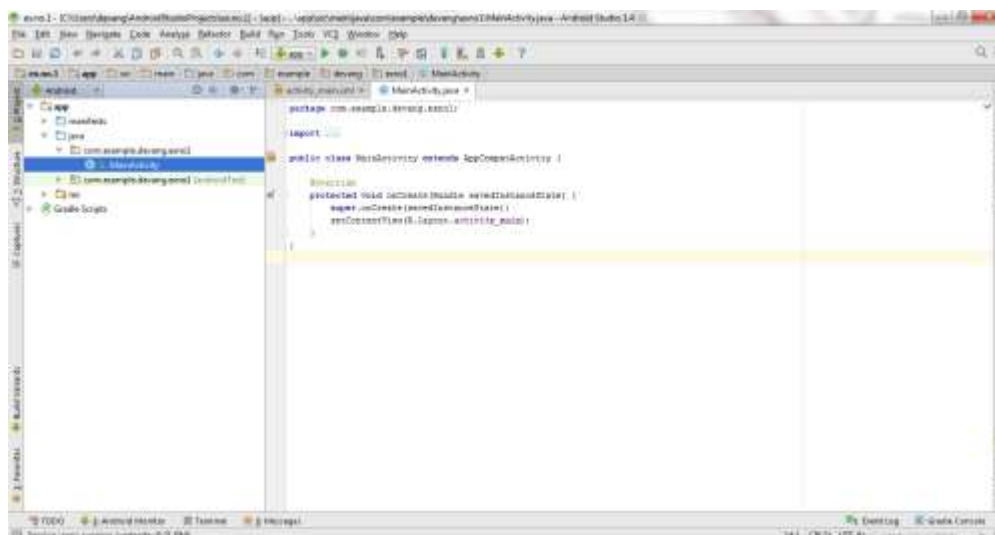


- So now the designing part of Second Activity is also completed.

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.exno2;
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.ArrayAdapter;
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
38         //to Spinner
39         ArrayAdapter adapter= new
40         ArrayAdapter(MainActivity.this,android.R.layout.simple_spinner_item,dept_
41         array);
42         s.setAdapter(adapter);
43
44         //Creating Listener for Button
45         bt.setOnClickListener(new View.OnClickListener() {
46             @Override
47             public void onClick(View v) {
48
49                 //Getting the Values from Views(Edittext & Spinner)
50                 name=e1.getText().toString();
51                 reg=e2.getText().toString();
52                 dept=s.getSelectedItem().toString();
53
54                 //Intent For Navigating to Second Activity
55                 Intent i = new
56                 Intent(MainActivity.this,SecondActivity.class);
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```

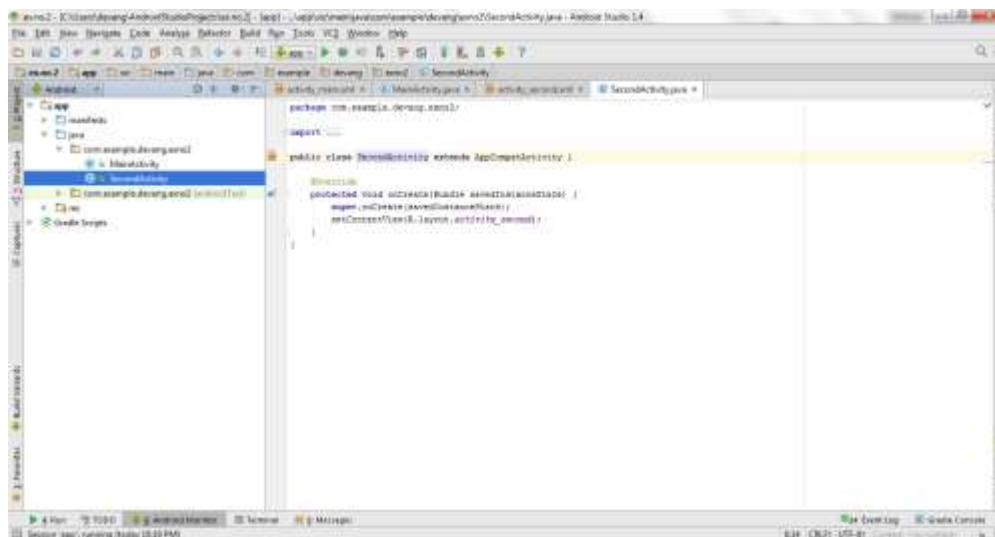
```
3          //For Passing the Values to Second Activity
0          i.putExtra("name_key", name);
3          i.putExtra("reg_key", reg);
1          i.putExtra("dept_key", dept);
3          startActivity(i);
2
3      }
3      });
3  }
4 }
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- So now the Coding part of Main Activity is completed.

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:

```
?
1 package com.example.exno2;
2
3 import android.content.Intent;
```

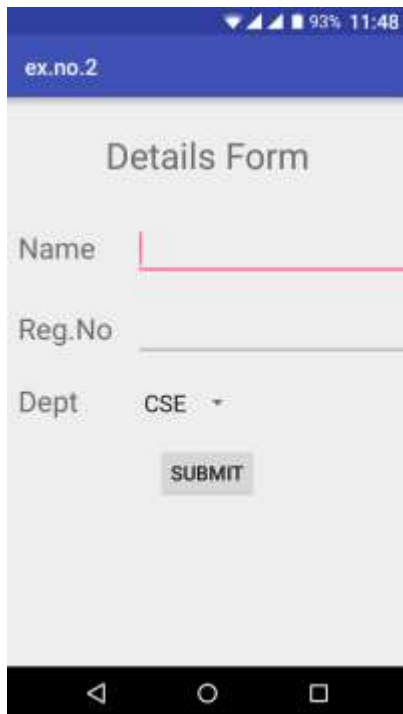
```

4 import android.support.v7.app.AppCompatActivity;
5 import android.os.Bundle;
6 import android.widget.TextView;
7
8 public class SecondActivity extends AppCompatActivity {
9
10     TextView t1,t2,t3;
11
12     String name,reg,dept;
13
14     @Override
15     protected void onCreate(Bundle savedInstanceState) {
16         super.onCreate(savedInstanceState);
17         setContentView(R.layout.activity_second);
18
19         t1= (TextView) findViewById(R.id.textView1);
20         t2= (TextView) findViewById(R.id.textView2);
21         t3= (TextView) findViewById(R.id.textView3);
22
23         //Getting the Intent
24         Intent i = getIntent();
25
26         //Getting the Values from First Activity using the Intent
27         received
28         name=i.getStringExtra("name_key");
29         reg=i.getStringExtra("reg_key");
30         dept=i.getStringExtra("dept_key");
31
32         //Setting the Values to Intent
33         t1.setText(name);
34         t2.setText(reg);
35         t3.setText(dept);
36     }
37 }

```

- 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.