

Android Application that implements Multi threading

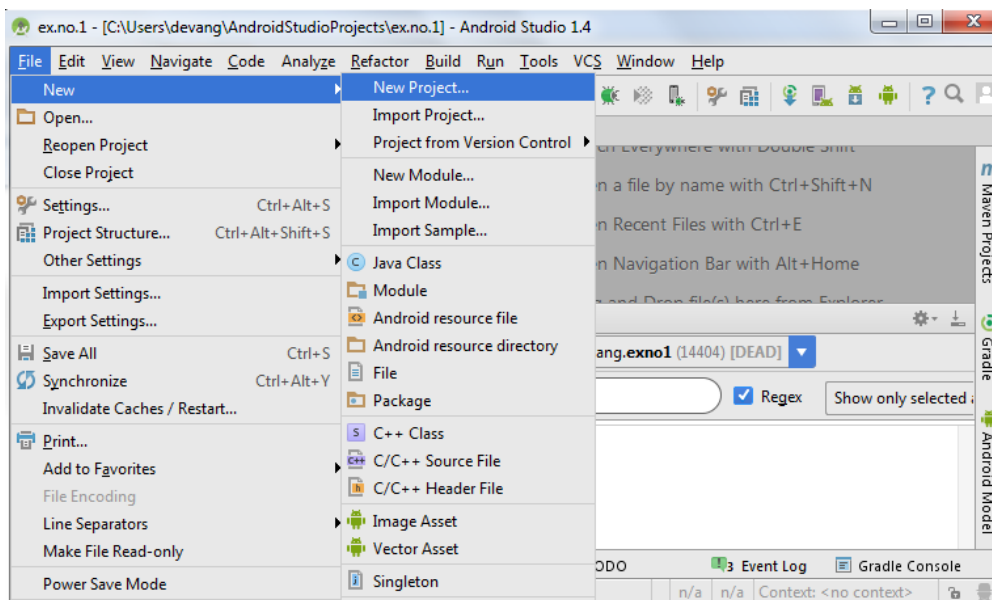
Aim:

To develop a Android Application that implements Multi threading.

Procedure:

Creating a New project:

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



- Then type the Application name as “**ex.no.7**” 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

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

Create New Project

Target Android Devices

Android Studio

Select the form factors your app will run on

Different platforms may require separate SDKs

☒ Phone and Tablet
Minimum SDK:

☐ Wear
Minimum SDK:

☐ TV
Minimum SDK:

☐ Android Auto

☐ Glass (Not Installed)
Minimum SDK:

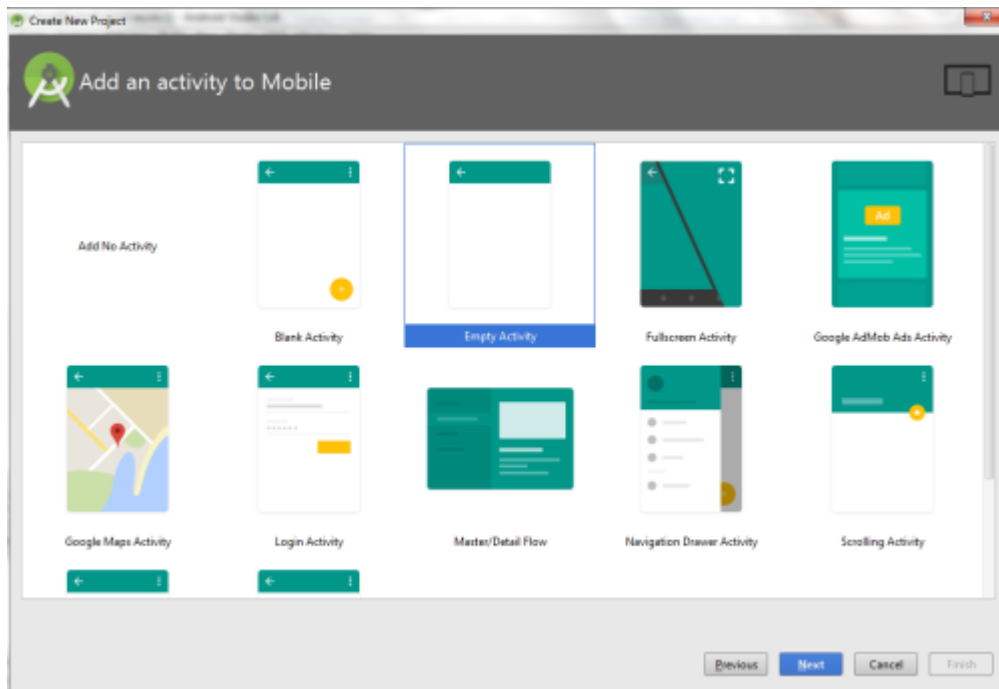
Lower API levels target more devices, but have fewer features available. By targeting API 15 and later, your app will run on approximately 94.0% of the devices that are active on the Google Play Store.

[Help me choose](#)

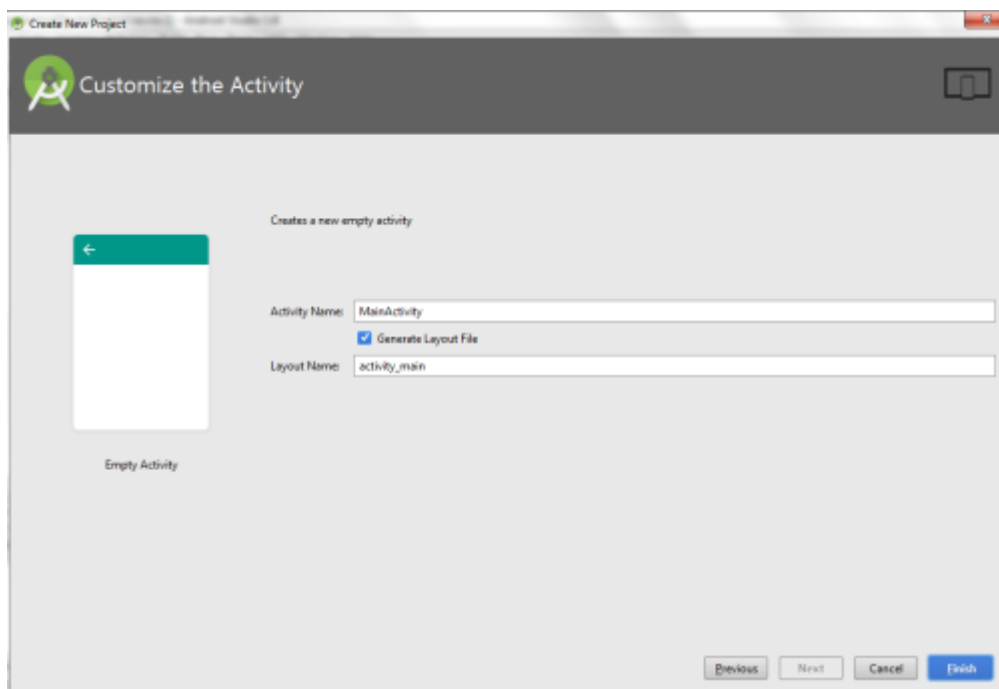
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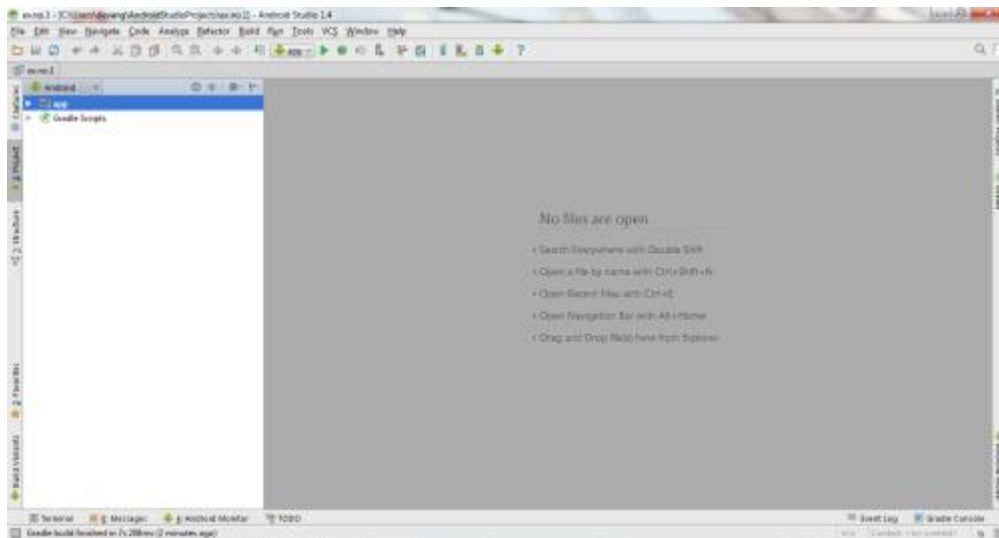
- Then select the **Empty Activity** and click **Next**.



- Finally click **Finish**.

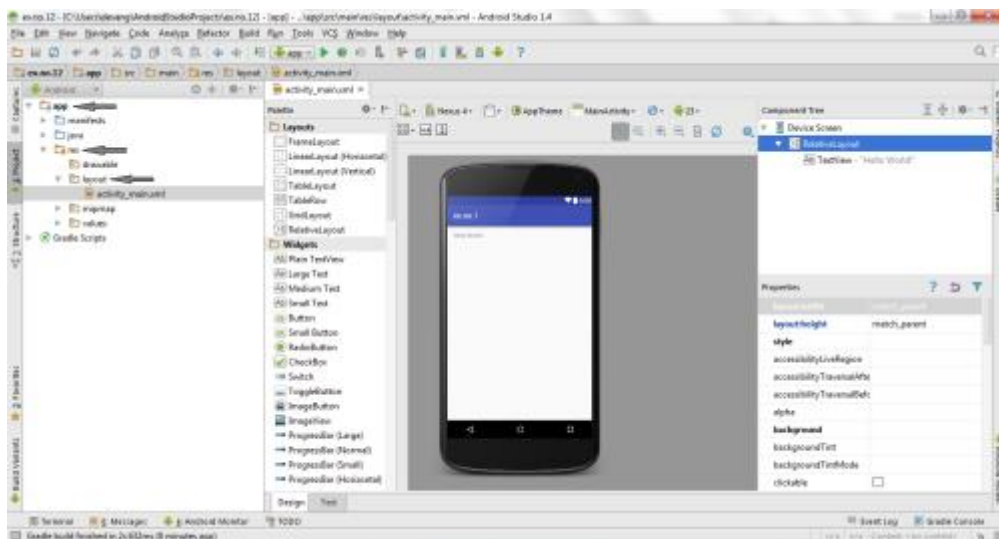


- It will take some time to build and load the project.
- After completion it will look as given below.

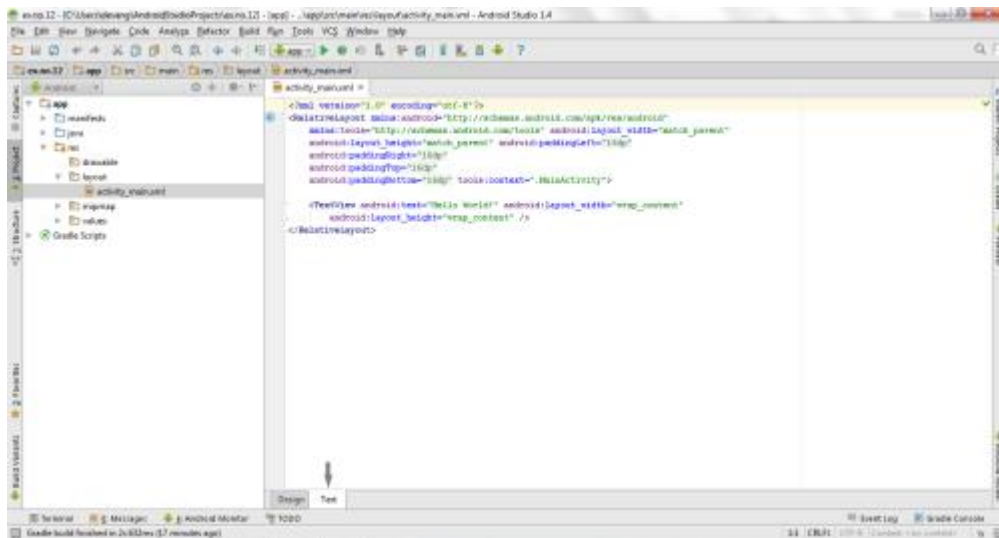


Designing layout for the Android Application:

- 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.

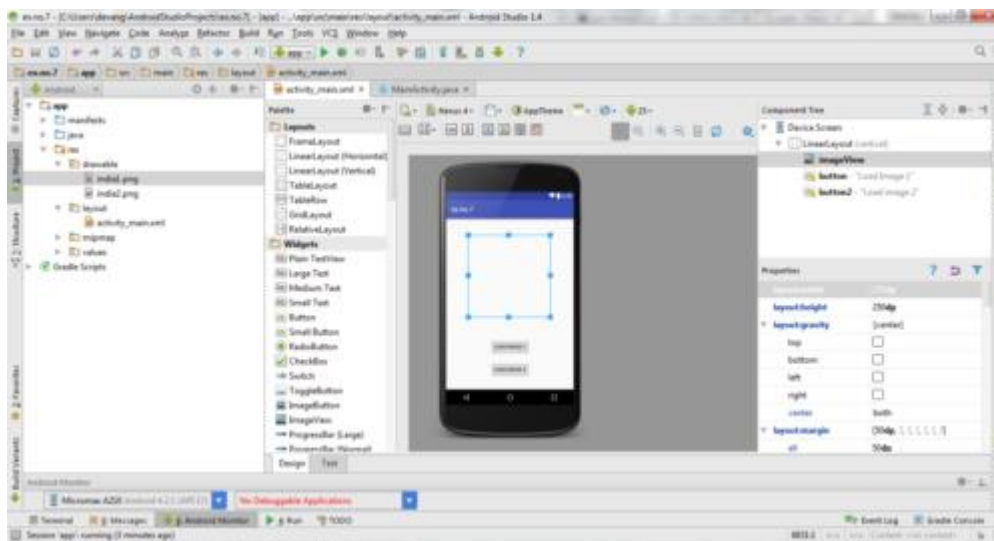
Code for Activity_main.xml:

```

1
2
3 <?xml version="1.0" encoding="utf-8"?>
4 <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
5     android:layout_width="match_parent"
6     android:layout_height="match_parent"
7     android:orientation="vertical" >
8
9     <ImageView
10         android:id="@+id/imageView"
11         android:layout_width="250dp"
12         android:layout_height="250dp"
13         android:layout_margin="50dp"
14         android:layout_gravity="center" />
15
16     <Button
17         android:id="@+id/button"
18         android:layout_width="wrap_content"
19         android:layout_height="wrap_content"
20         android:layout_margin="10dp"
21         android:layout_gravity="center"
22         android:text="Load Image 1" />
23
24     <Button
25         android:id="@+id/button2"
26         android:layout_width="wrap_content"
27         android:layout_height="wrap_content"
28         android:layout_margin="10dp"
29         android:layout_gravity="center"
30         android:text="Load image 2" />
31
32 </LinearLayout>

```

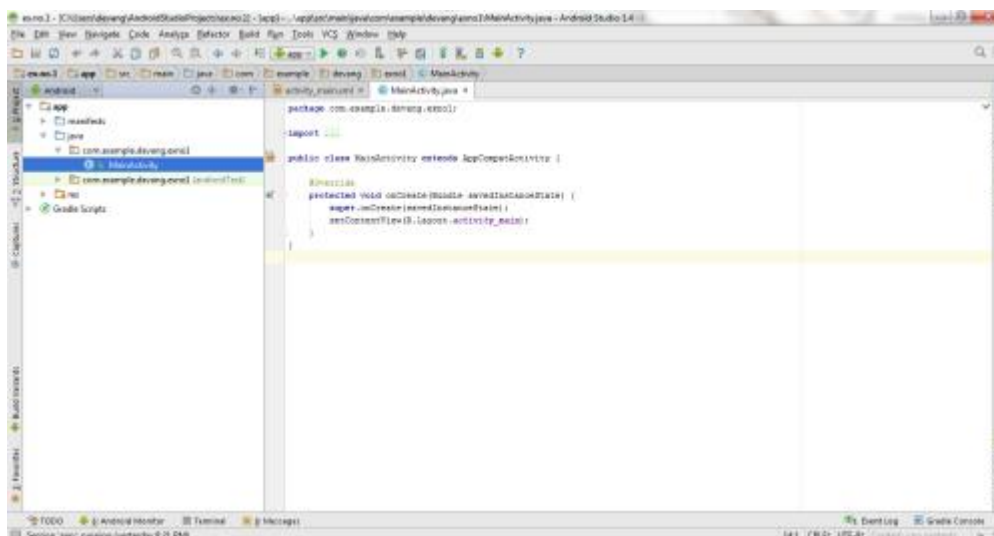
- Now click on **Design** and your application will look as given below.



- So now the designing part is completed.

Java Coding for the Android Application:

- Click on **app -> java -> com.example.exno7 -> MainActivity**.



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

Code for MainActivity.java:

?

```
1 package com.example.exno7;
2
3 import android.os.Bundle;
4 import android.support.v7.app.AppCompatActivity;
```

```

5 import android.view.View;
6 import android.widget.Button;
7 import android.widget.ImageView;
8 public class MainActivity extends AppCompatActivity
9 {
10     ImageView img;
11     Button bt1, bt2;
12     @Override
13     protected void onCreate(Bundle savedInstanceState)
14     {
15         super.onCreate(savedInstanceState);
16         setContentView(R.layout.activity_main);
17
18         bt1 = (Button) findViewById(R.id.button);
19         bt2 = (Button) findViewById(R.id.button2);
20         img = (ImageView) findViewById(R.id.imageView);
21
22         bt1.setOnClickListener(new View.OnClickListener()
23         {
24             @Override
25             public void onClick(View v)
26             {
27                 new Thread(new Runnable()
28                 {
29                     @Override
30                     public void run()
31                     {
32                         img.post(new Runnable()
33                         {
34                             @Override
35                             public void run()
36                             {
37                                 img.setImageResource(R.drawable.india1);
38                             }
39                         });
40                     }
41                 }).start();
42             }
43         });
44
45         bt2.setOnClickListener(new View.OnClickListener()
46         {
47             @Override
48             public void onClick(View v)
49             {
50                 new Thread(new Runnable()
51                 {
52                     @Override
53                     public void run()
54                     {
55                         img.post(new Runnable()
56                         {
57                             @Override
58                             public void run()
59                             {
60                                 img.setImageResource(R.drawable.india2);
61                             }
62                         });
63                     }
64                 }).start();
65             }
66         });
67     }
68 }

```

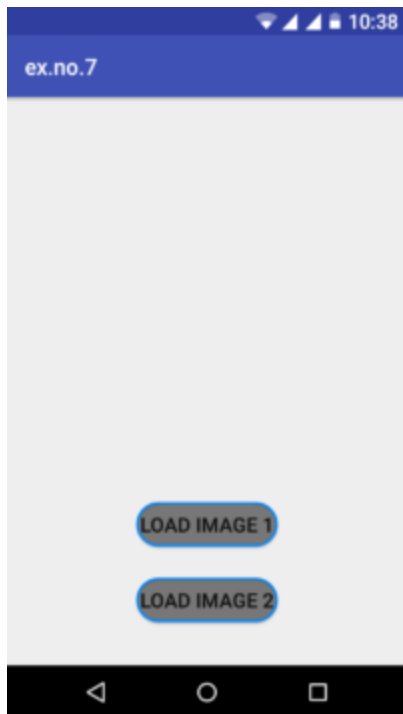
```
55         }  
56     });  
57 }  
58  
59  
60  
61  
62  
63  
64  
65  
66  
67  
68
```

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

Note: Before Running the Application, Copy the Images given below and Paste it in “*app -> res -> drawable*” by pressing “right click mouse button on *drawable*” and selecting the “*Paste*” option.

TO DOWNLOAD THE IMAGES : [CLICK HERE](#)

Output:



Result:

Thus Android Application that implements Multi threading is developed and executed successfully.