

Date:

**Aim:**

To develop an 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 **"exno6"** 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.

**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:**

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical" >

<ImageView
    android:id="@+id/imageView"
    android:layout_width="250dp"
    android:layout_height="250dp"
    android:layout_margin="50dp"
    android:layout_gravity="center" />

<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:layout_gravity="center"
    android:text="Load Image 1" />
```

```

<Button
    android:id="@+id/button2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:layout_gravity="center"
    android:text="Load image 2" />

```

```

</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.exno6 -> MainActivity**.
- Then delete the code which is there and type the code as given below.

#### Code for MainActivity.java:

```

package com.example.exno6;

import android.os.Bundle;
//import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;
import android.widget.ImageView;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity
{
    ImageView img;
    Button bt1, bt2;
    @Override
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        bt1 = (Button)findViewById(R.id.button);
        bt2 = (Button) findViewById(R.id.button2);
        img = (ImageView)findViewById(R.id.imageView);
    }
}

```

```

bt1.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View v)
    {
        new Thread(new Runnable()
        {
            @Override
            public void run()
            {
                img.post(new Runnable()
                {
                    @Override
                    public void run()
                    {
                        img.setImageResource(R.drawable.india1);
                    }
                });
            }
        }).start();
    }
});

```

```

bt2.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View v)
    {
        new Thread(new Runnable()
        {
            @Override
            public void run()
            {
                img.post(new Runnable()
                {
                    @Override
                    public void run()
                    {
                        img.setImageResource(R.drawable.india2);
                    }
                });
            }
        });
    }
}

```

```

    }).start();
  }
});
}
}

```

- 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.

#### Output:



#### Result:

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