

# **EXPERIMENT NO. 1**

**Aim : Introduction to Android Studio, IDE, Application Fundamentals**

**Name: Ankit Singh Chauhan**

**Roll no: 64**

**Class: T.Y.BSc.IT**

**Subject: Advanced Mobile Programming**

**Marks\Grade:**

**Sign:**

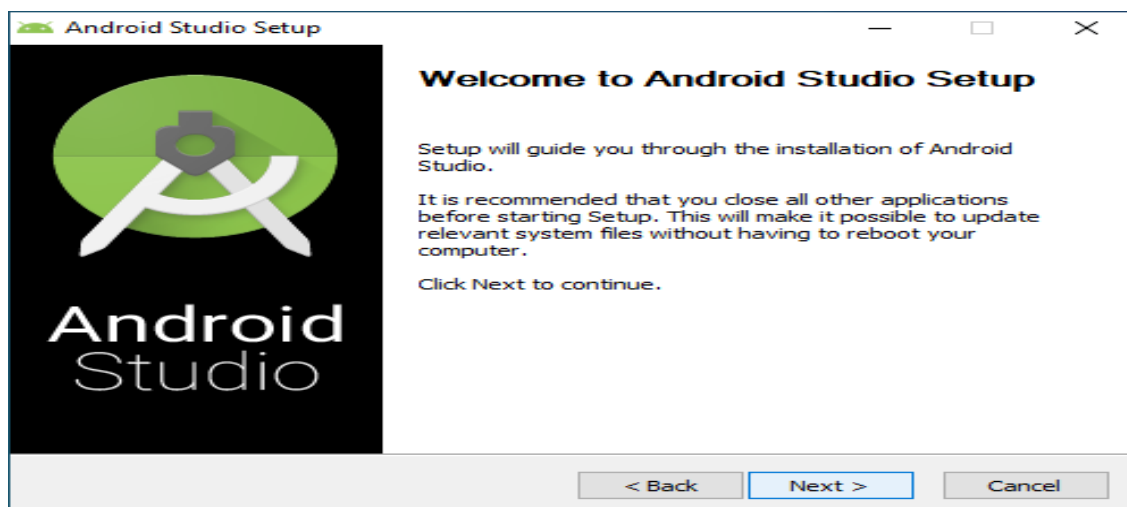
**Introduction to Android, Introduction to Android Studio IDE, Application Fundamentals: Creating a Project, Android Components, Activities, Services, Content Providers, Broadcast Receivers, Interface overview, Creating Android Virtual device, USB debugging mode, Android Application Overview. Simple “Hello World” program.**

### **Installation of Android Studio Setup:**

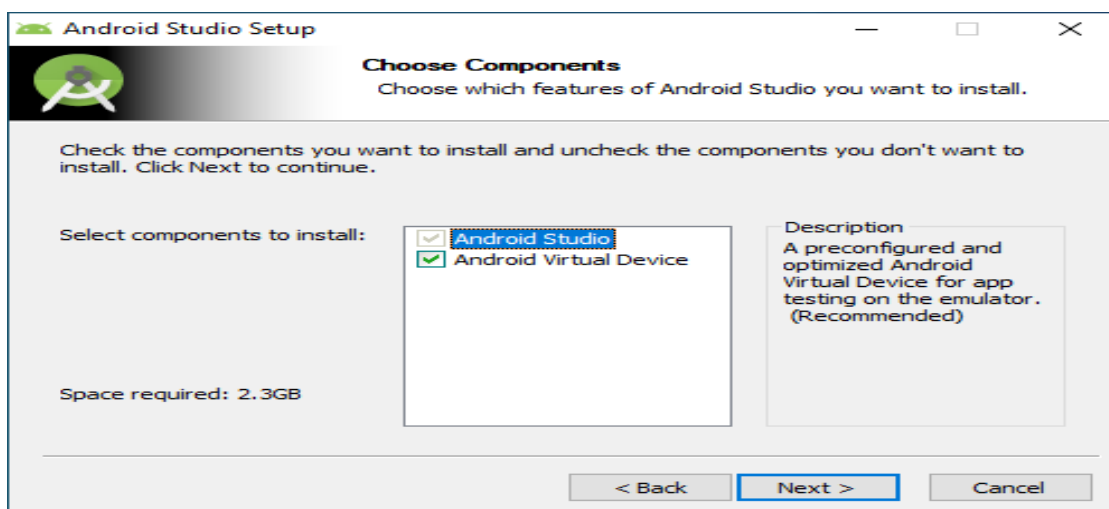
**Step 1:** Download Android Studio

<https://developer.android.com/studio/#downloads>

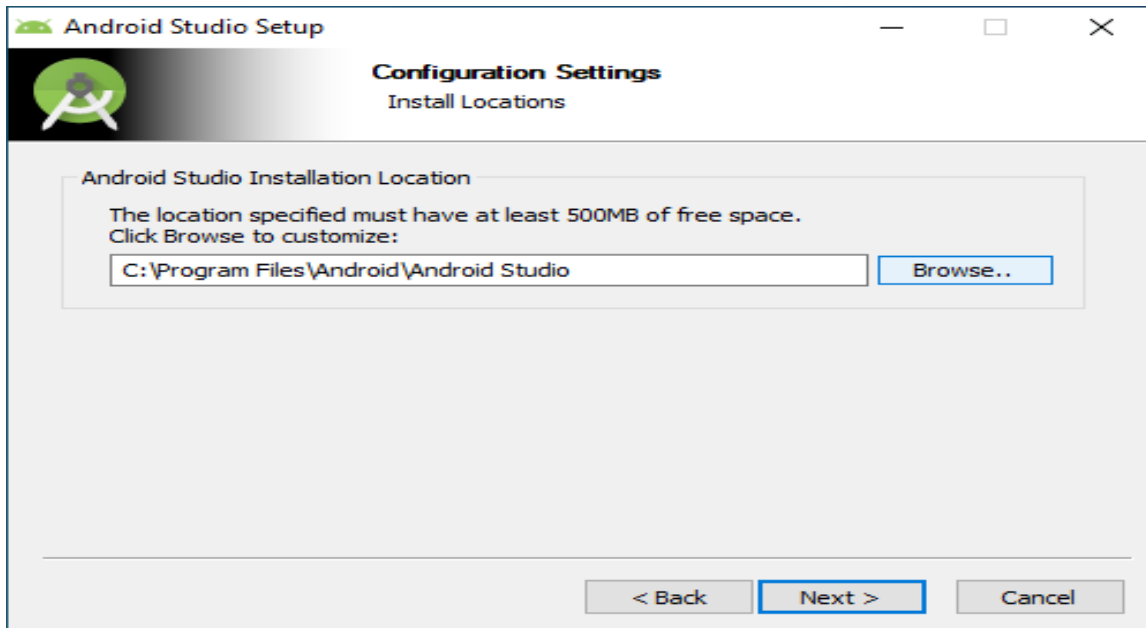
**Step 2:** After the downloading has finished, open the file and run it. It will prompt the followingscreen.



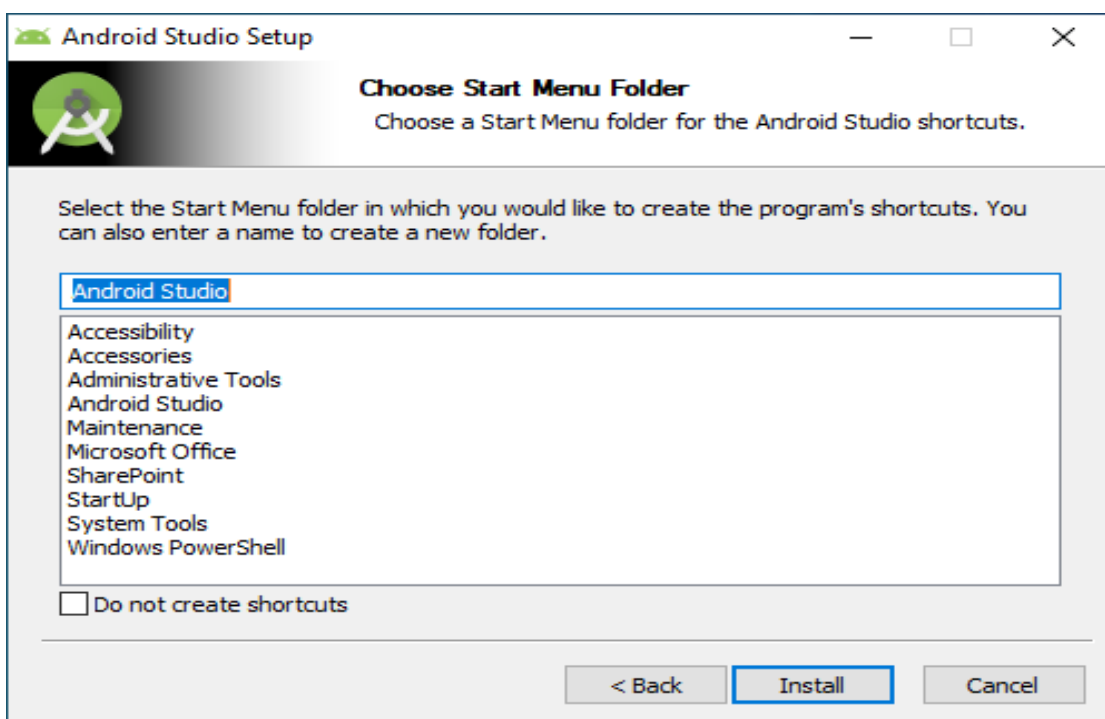
**Step 3:** After clicking on next, it will prompt the following screen (Choose Components), select **Android Virtual device**.



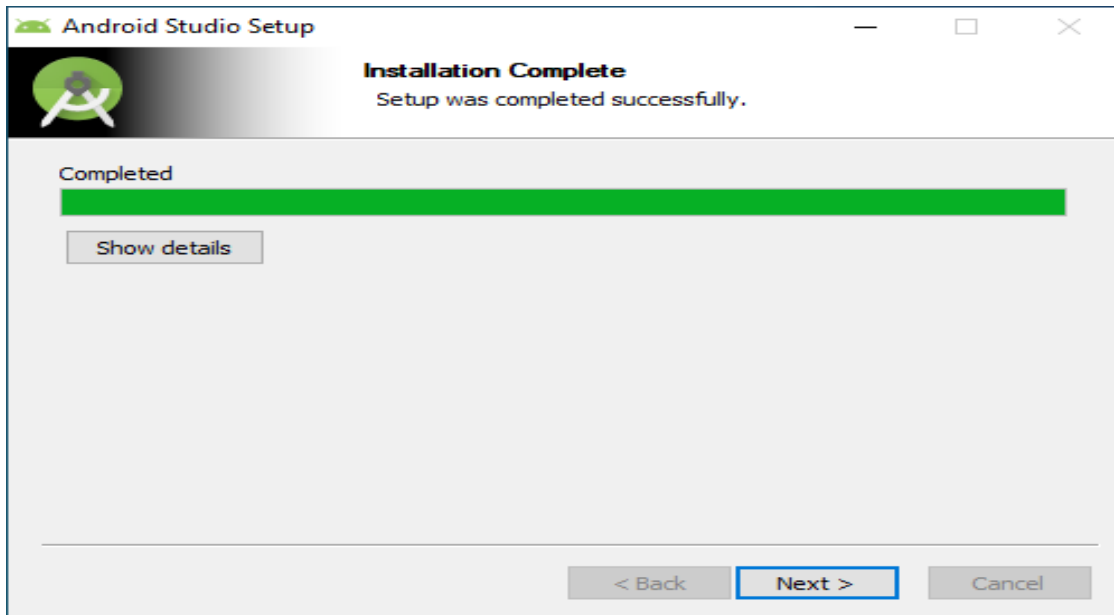
**Step 4:** After clicking on Next, it will open **Configuration Settings**, it will asked to choose the location to install Android Studio.



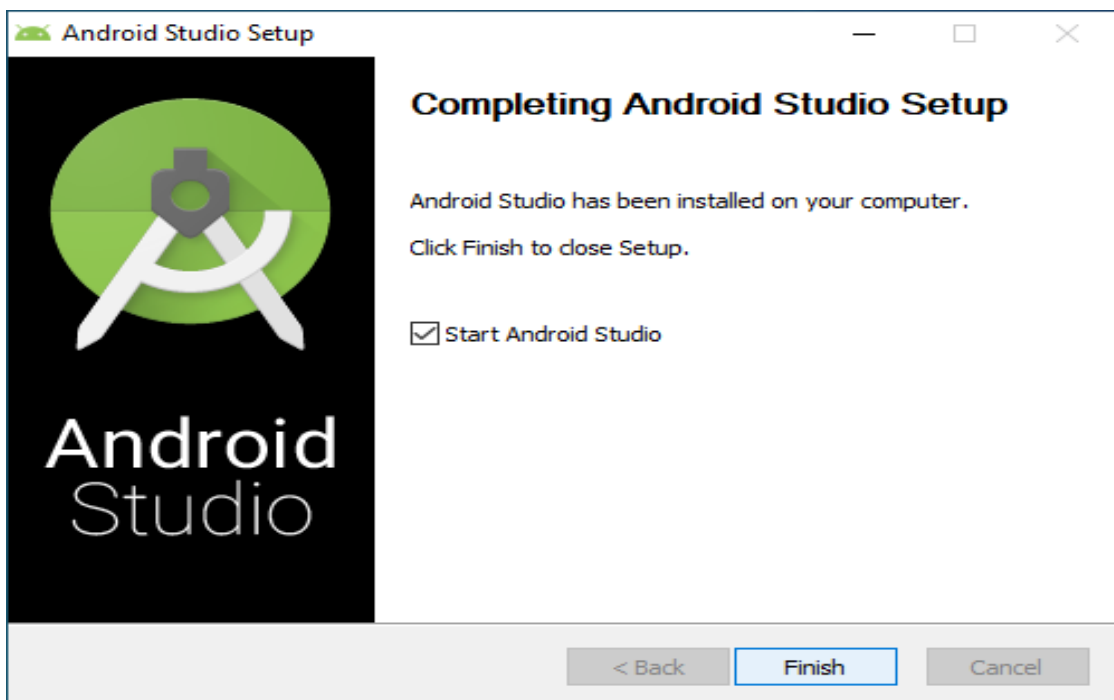
**Step 5:** After clicking on Next, it will open **Choose Start Menu Folder**, it will asked to select the folder in which to store Android Studio Shortcuts, select **Android Studio** and click on install.



**Step 6:** After clicking on **Install**, it will start installation.

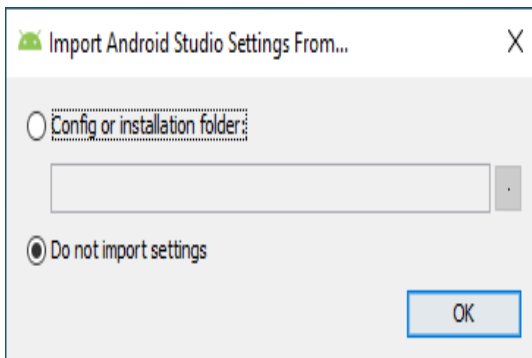


**Step 7:** After clicking Next, the installer represents the **Completing Android Studio Setup**, to complete the installation, check **start android studio** checkbox and clicked on finish.



## **Running Android Studio:**

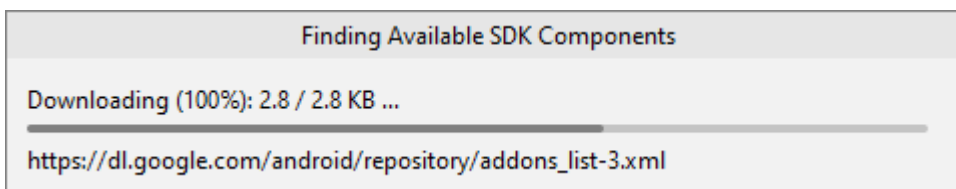
**Step 1:** The first time Android Studio runs, it presents a **Complete Installation** dialog box that offers the option of importing settings from a previous installation, choose not to import settings and clicked **ok**, and will be rewarded with the following **Splash Screen**, it will also show the **Finding Available SDK Components** message box.



Complete Installation

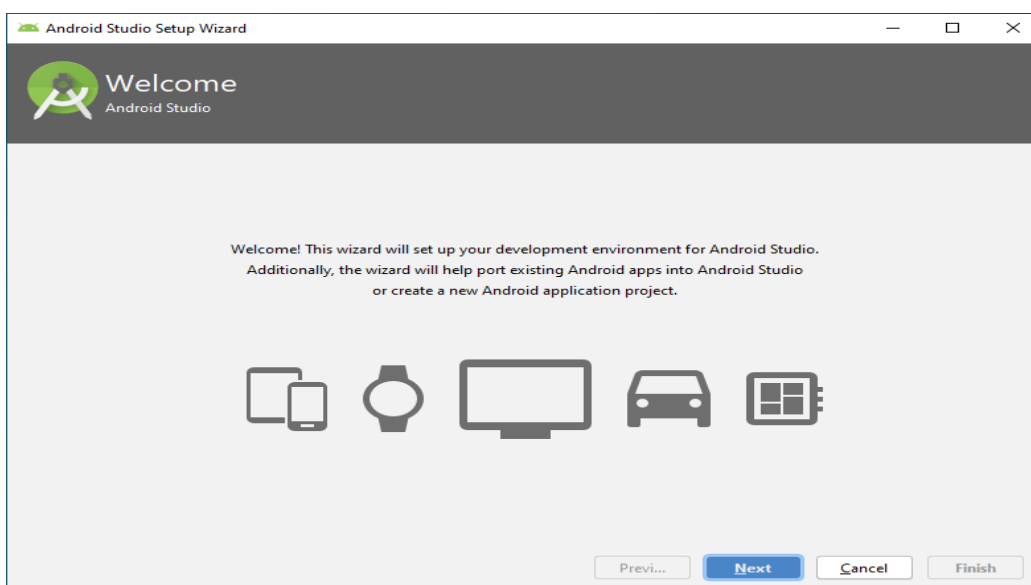


Splash Screen

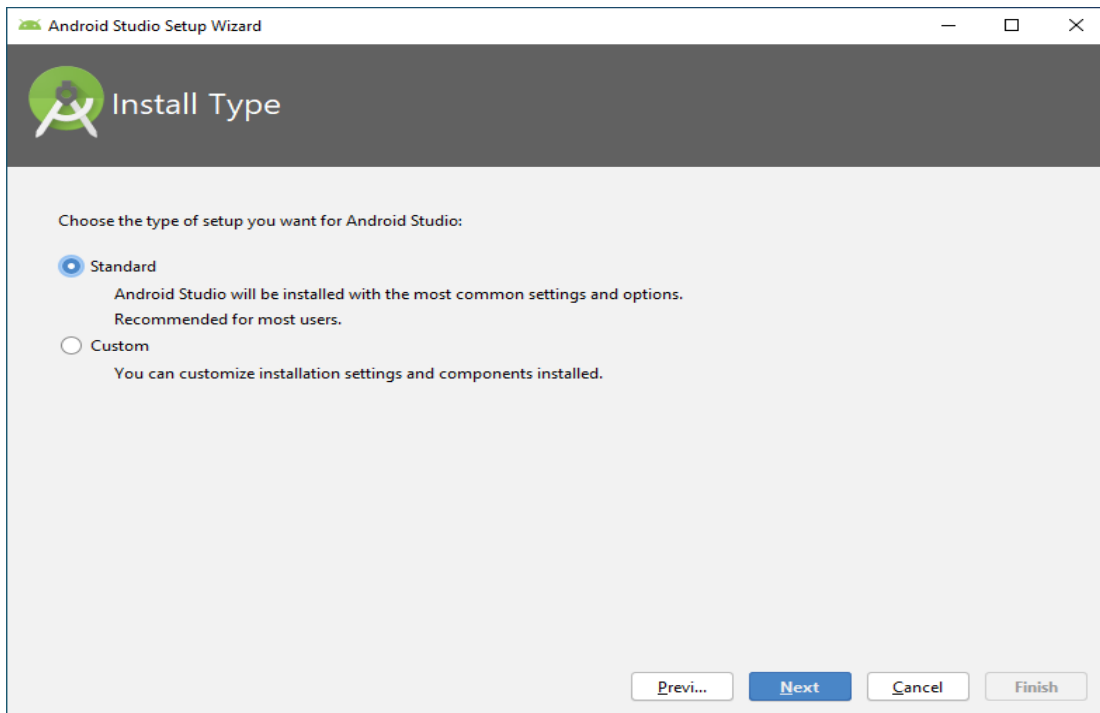


Finding Available SDK Components.

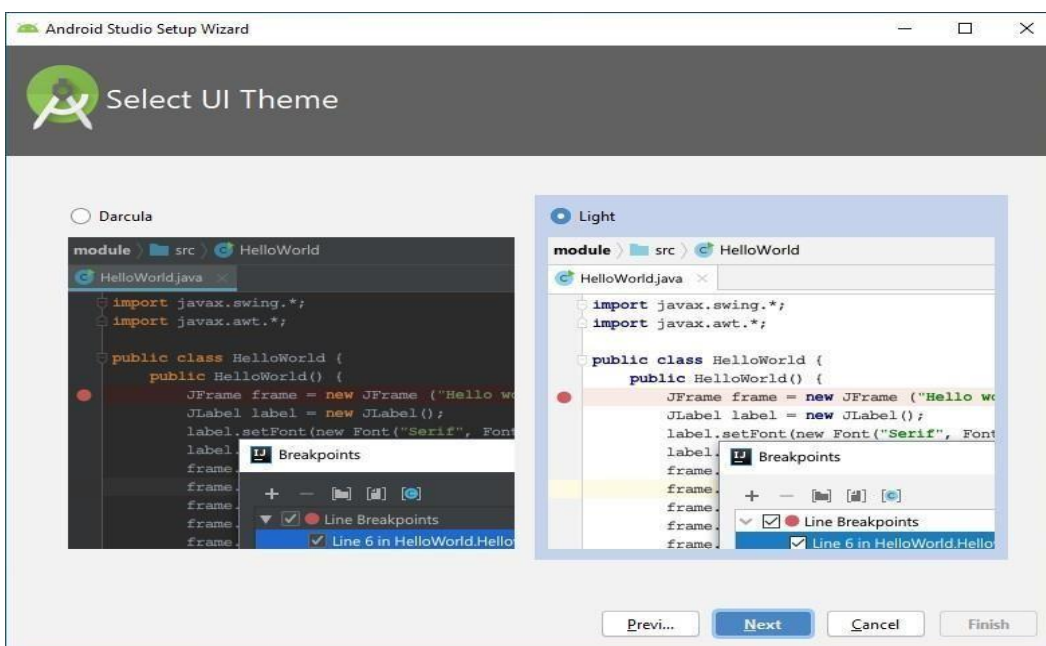
**Step 2:** Android studio presented the following **Android Studio Setup Wizard** dialog box.



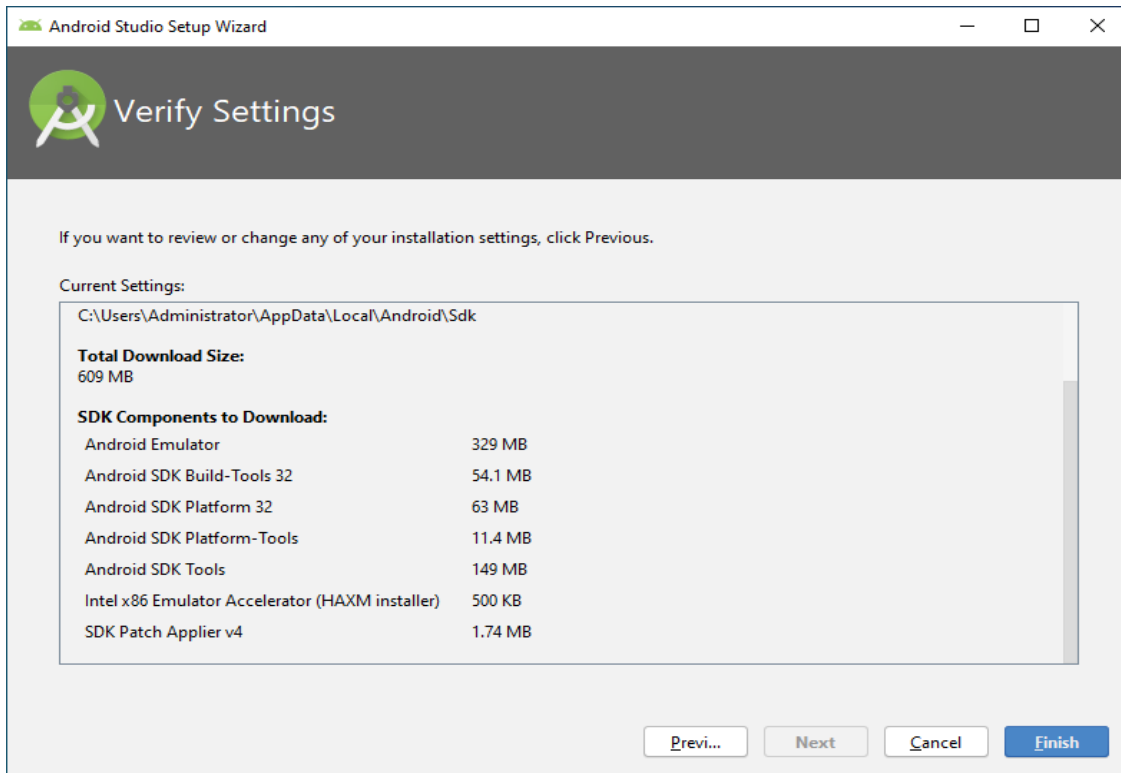
**Step 3:** After clicking on Next the wizard gives the options to select an **Installtion Type**, select **standard settings**.



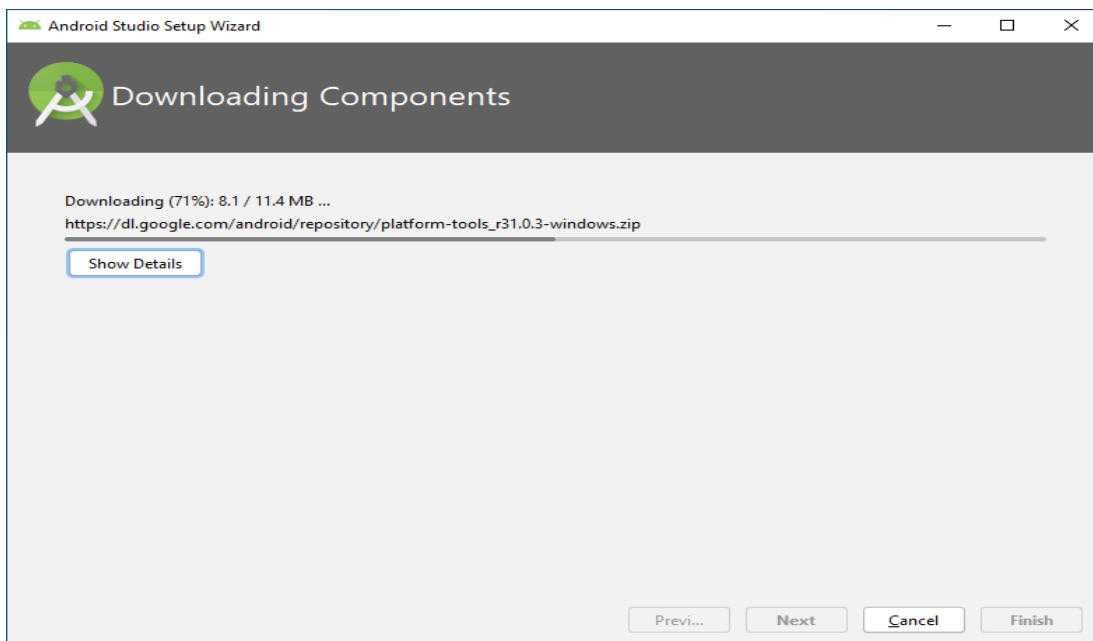
**Step 4:** After clicking on Next it will gives opportunity to choose a **user interface theme**. (Darcula and Light)



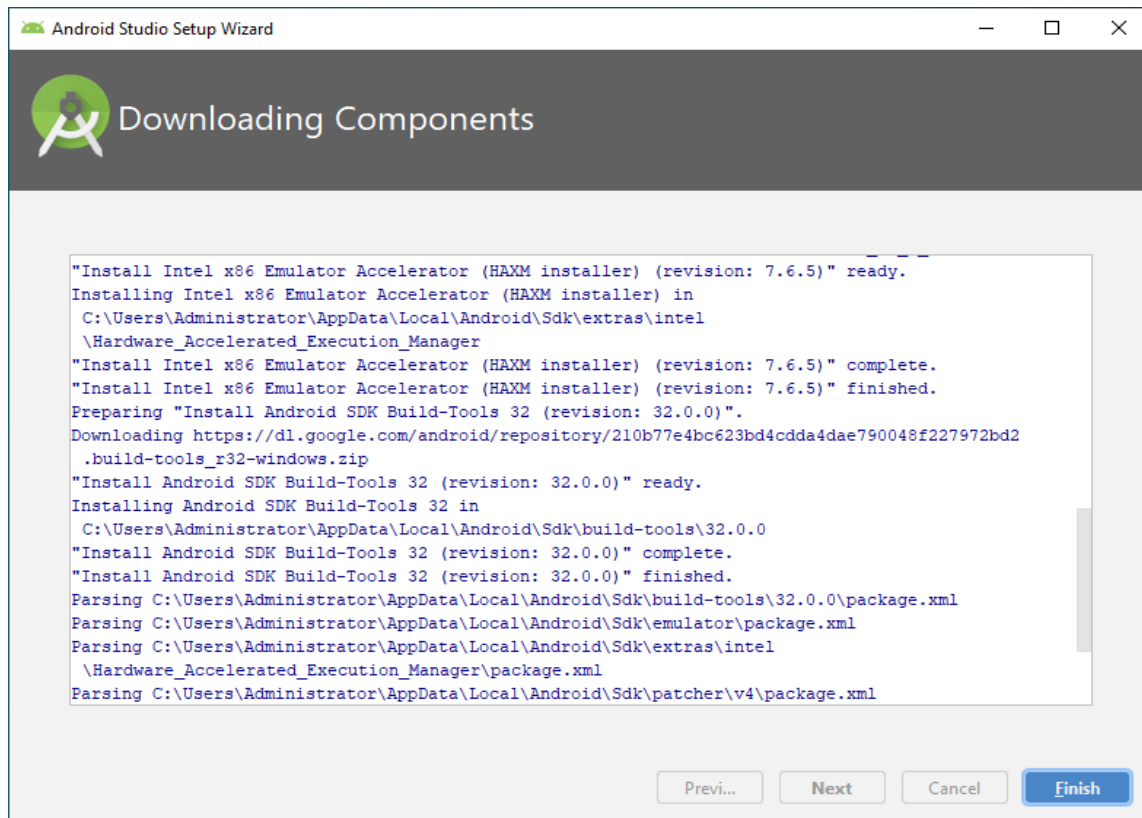
**Step 5:** After clicking on Next , Android studio identifies additional SDK components that will bedownloaded.



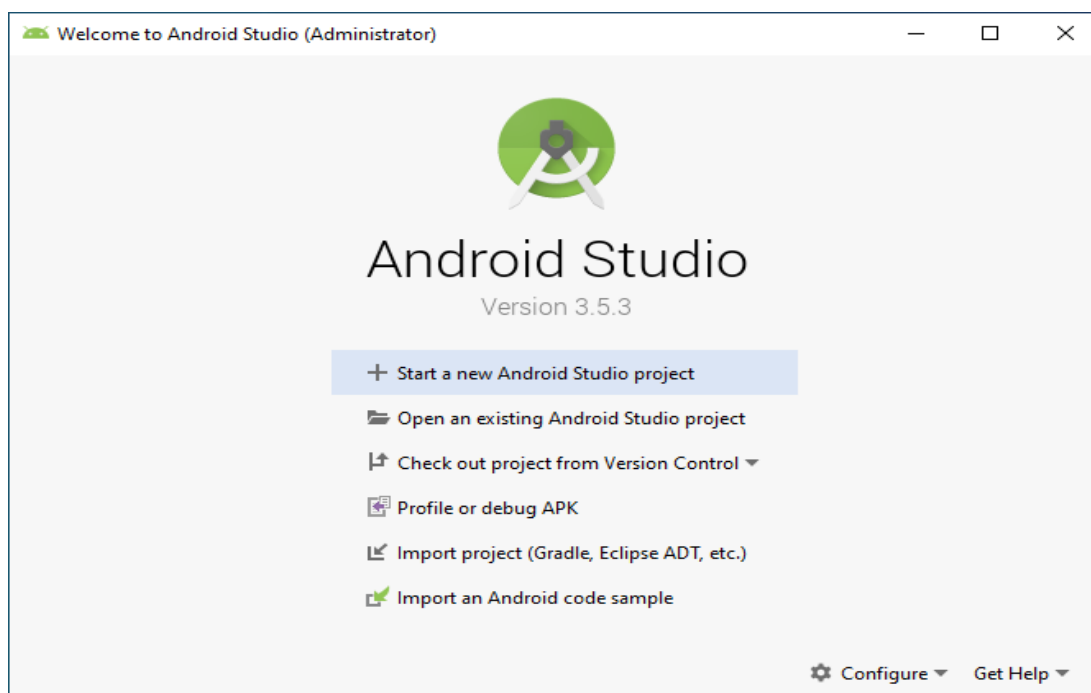
**Step 6:** After clicking on Next ,Android wizard download and unzips SDK components.



**Step 7:** Components are completely downloaded and unzipped,click on finish.



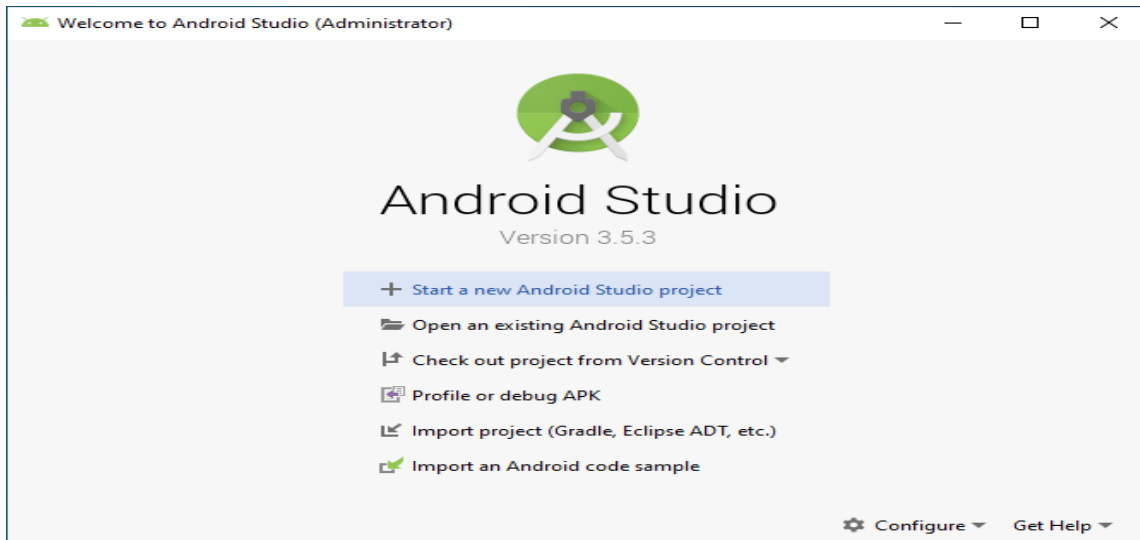
**Step 8:** After clicking on Finish,the **Welcome to Android Studio** dialog box appeared.



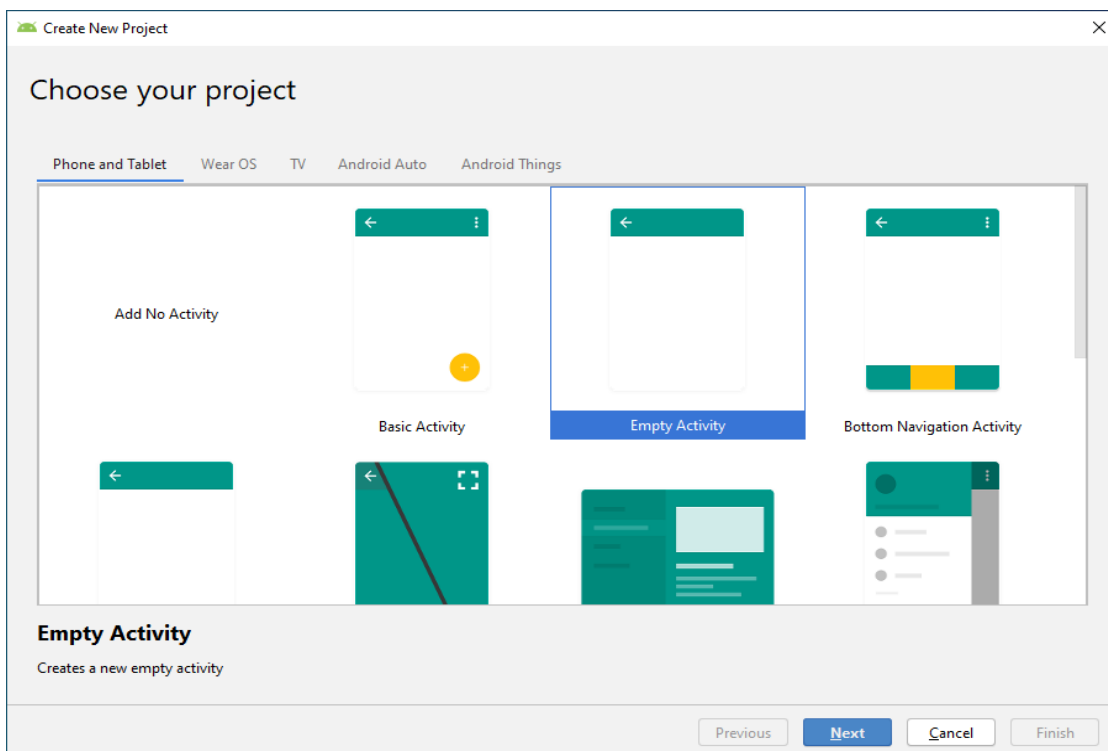


### Starting a new project:

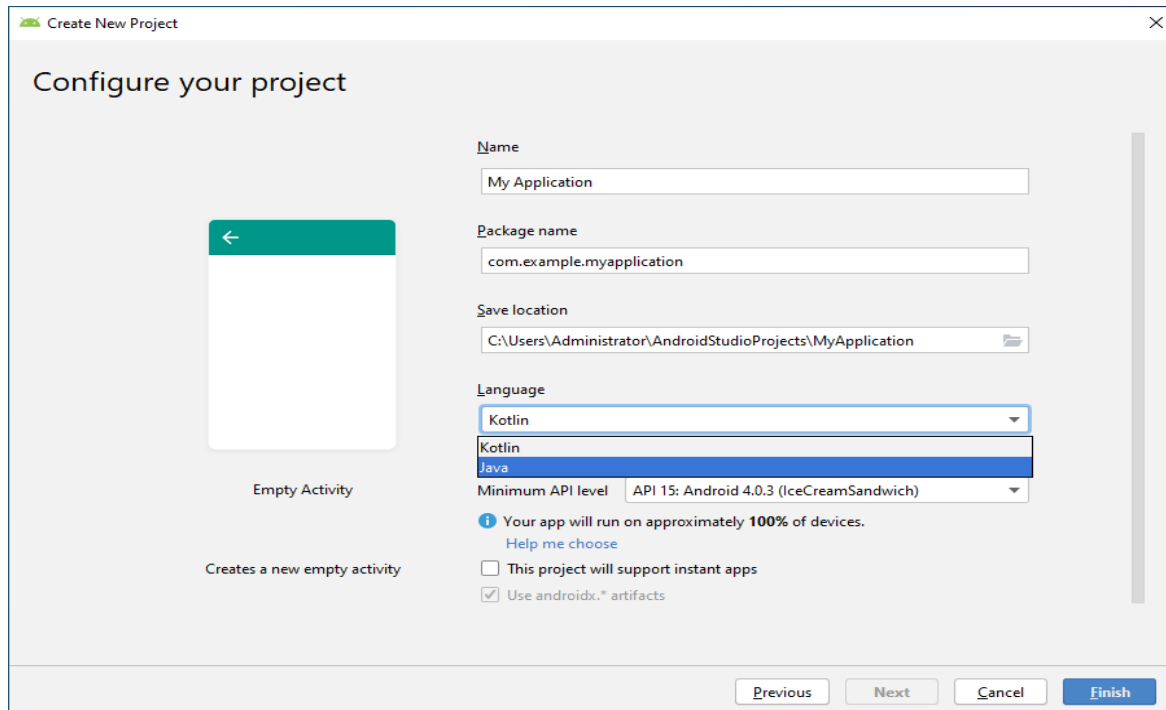
**Step 1:** click on **Start a new Android Studio Project** from **Welcome to Android Studio** dialog box .



**Step 2:** Choose activity template for app's main activity. select this template and click **Next**.

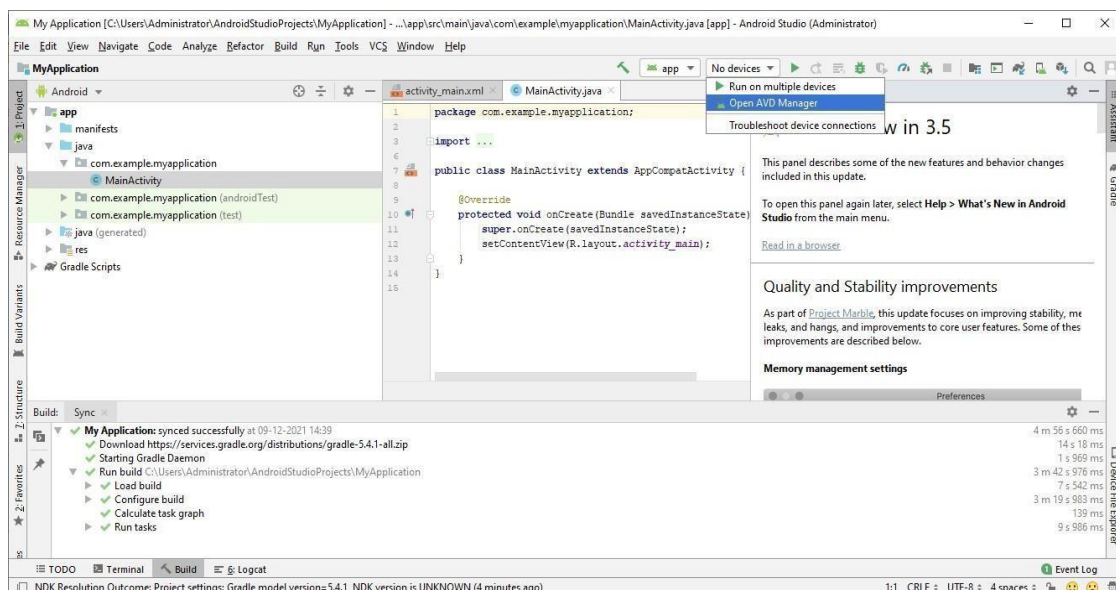


**Step 3:** After clicking on Next, the **Create New Project** dialog box appeared, give name to the application, select **Java** Language, click on Finish and Android Studio takes to the main window.

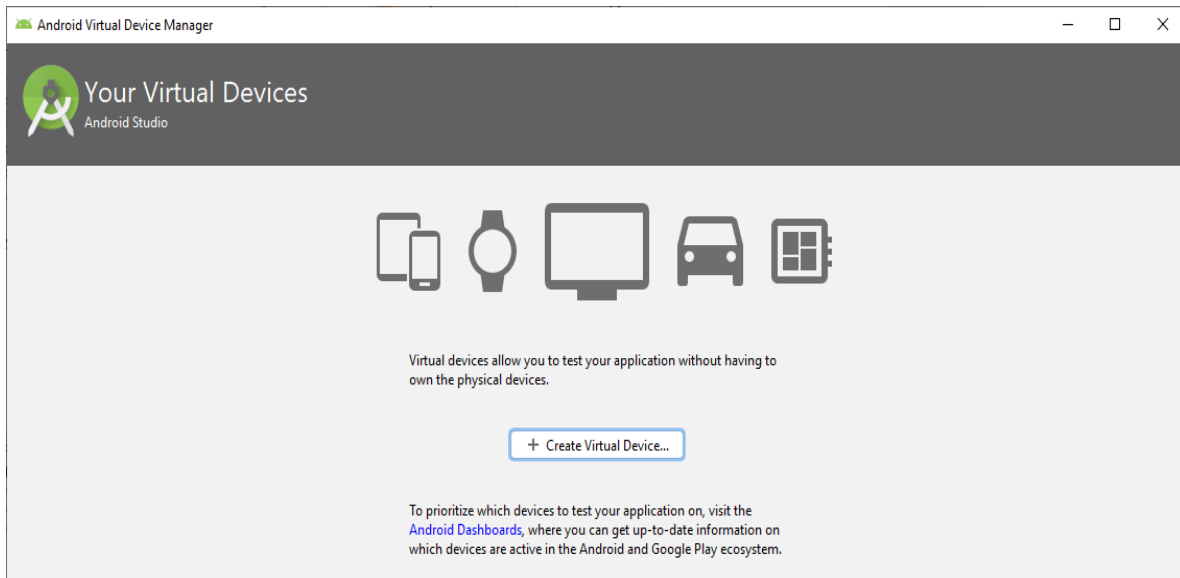


## Create AVD Manager

**Step 1:** Open the AVD Manager by clicking Tools>AVD Manager or By clicking on No device >AVD Manager.

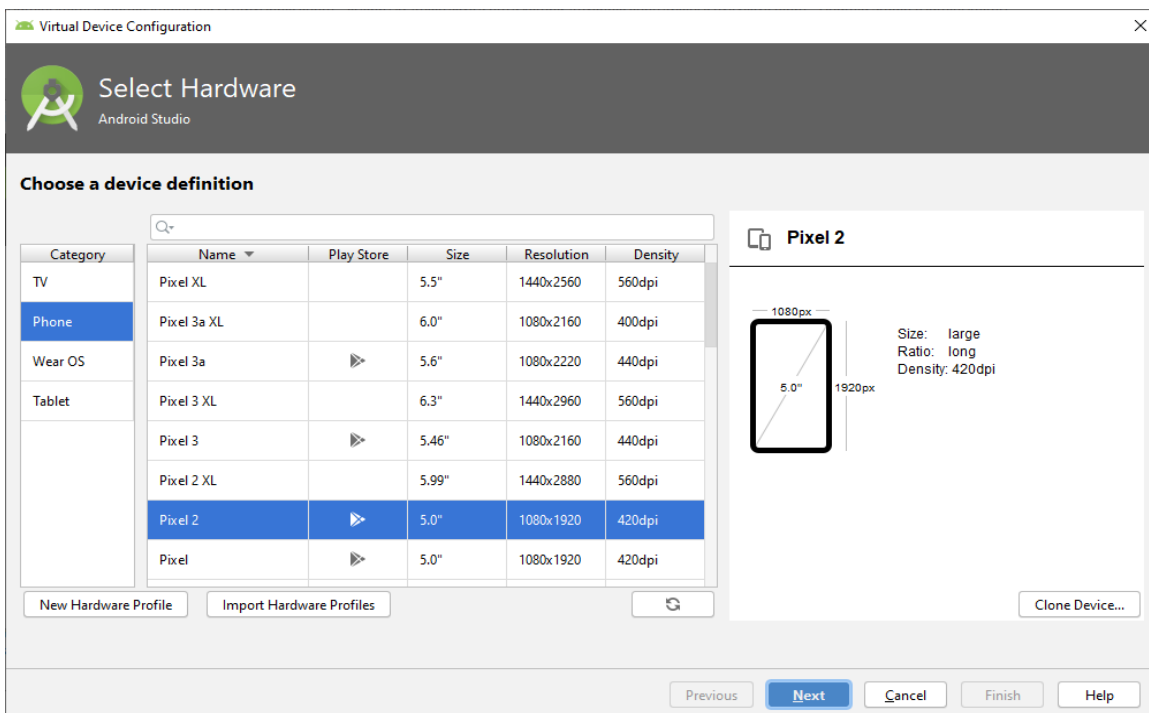


**Step 2:** Click on Create Virtual Device, at the bottom of the AVD Manager dialog.

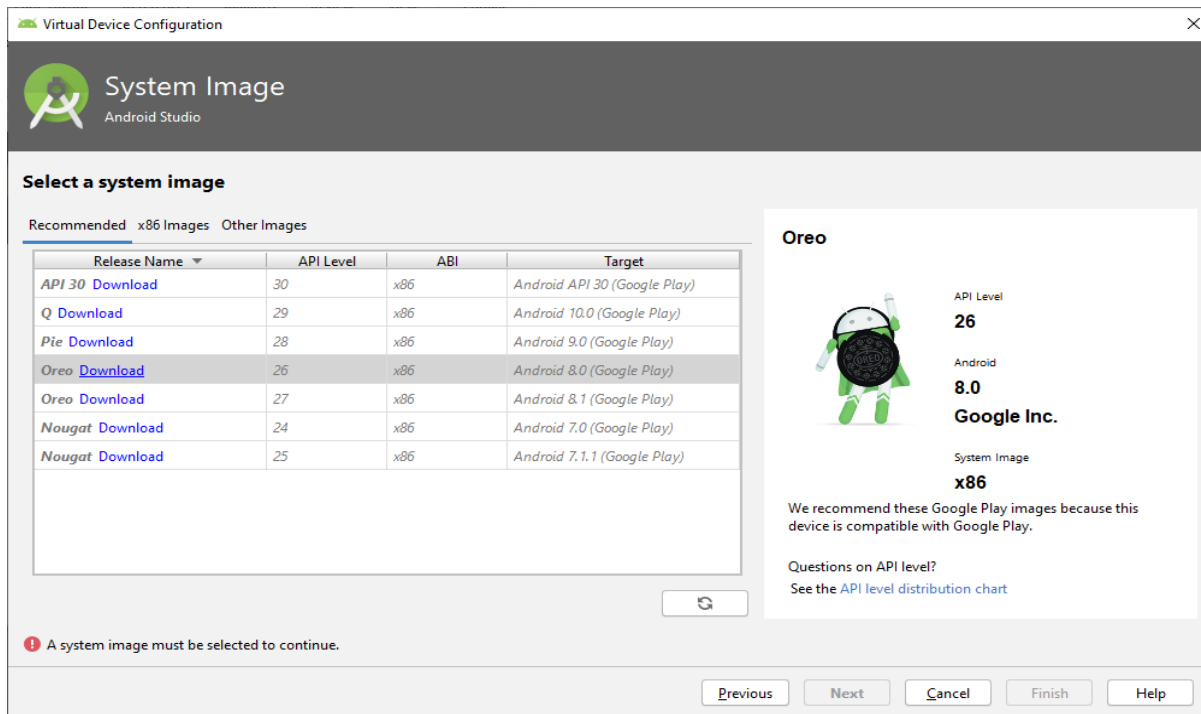


**Step 3:.** Select a hardware profile, and then click Next.

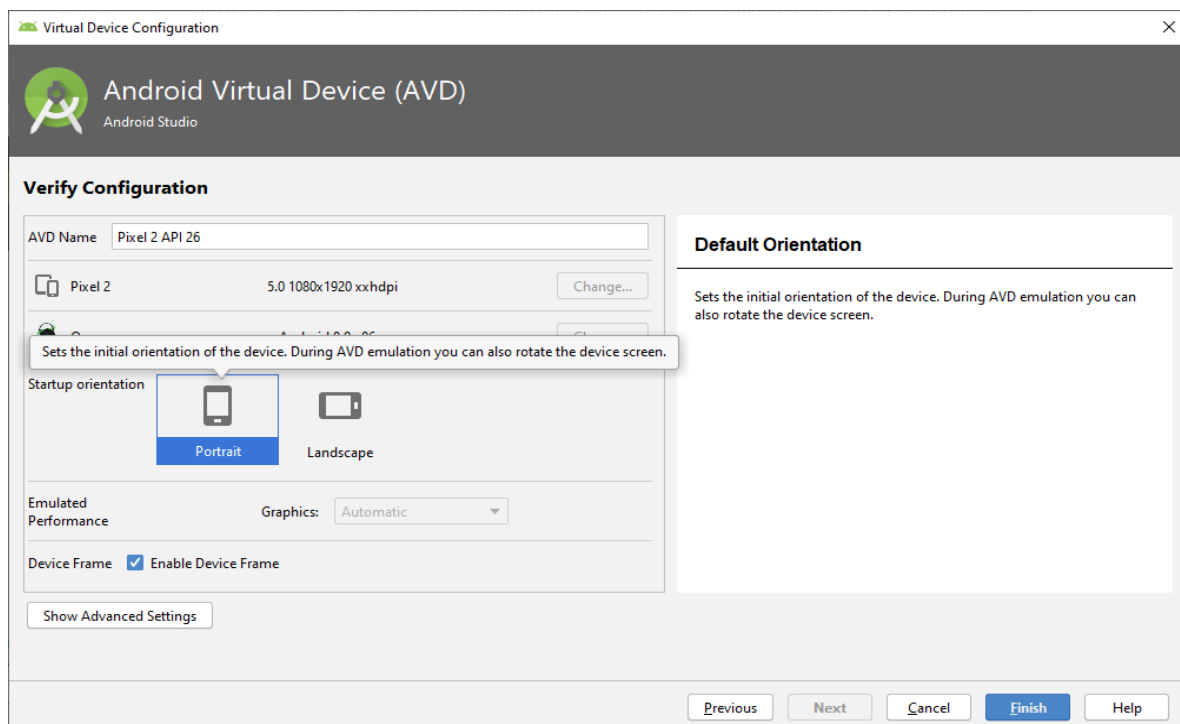
Category>Phone



**Step 4:**Select the system image for a particular API level, and then click Next.



**Step 5:** Change AVD properties as needed, and then click Finish.



## **Run Hello World Program**

**Code:**

**Activity\_main.xml :**

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".MainActivity">

<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Hello World!"
    android:textColor="@color/colorPrimary"
    android:textAppearance="@drawable/ic_launcher_background"
    android:textSize="56dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

**Main Activity.java :**

```
package com.example.myapplication;

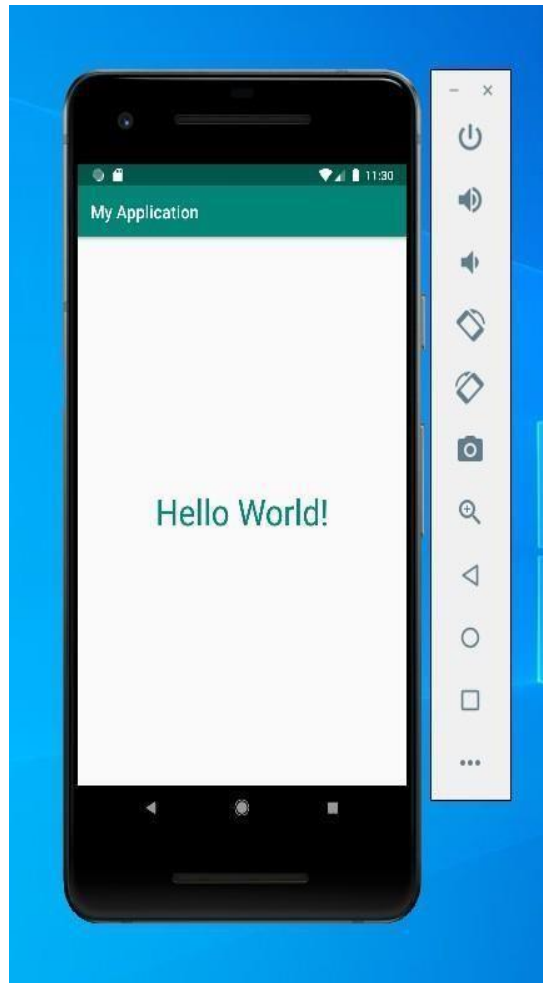
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}
```

**Output:**



# **EXPERIMENT NO. 2**

**Aim : (a) Programming Resources**

**(b) Working on Image as a button**

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**Subject: Advanced Mobile Programming**

**Marks\Grade:**

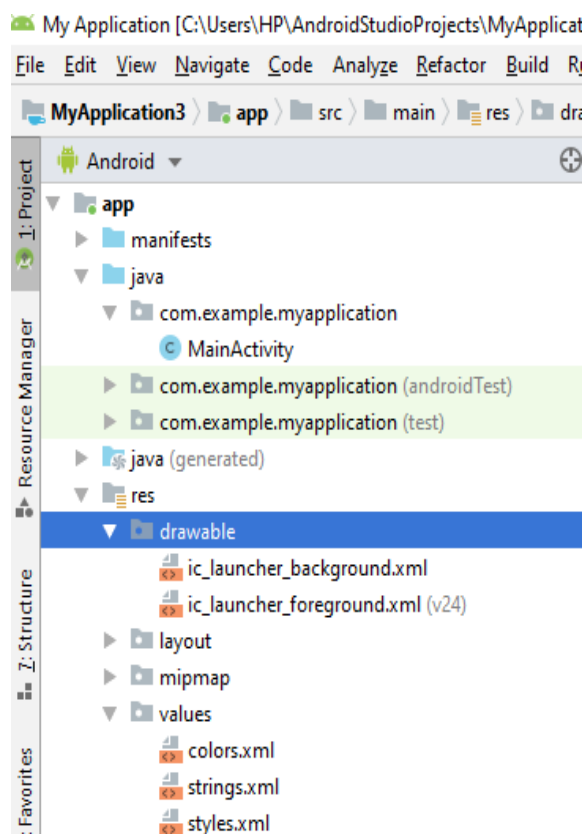
**Sign:**

## Android Resources: (Color, Theme, String, Drawable, Dimension, Image).

### Drawable:

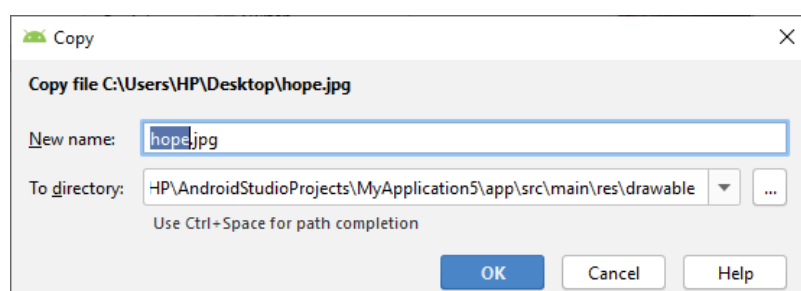
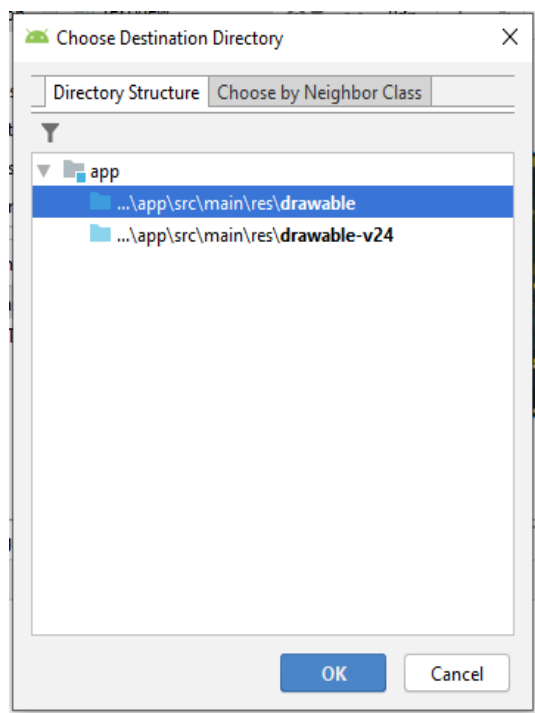
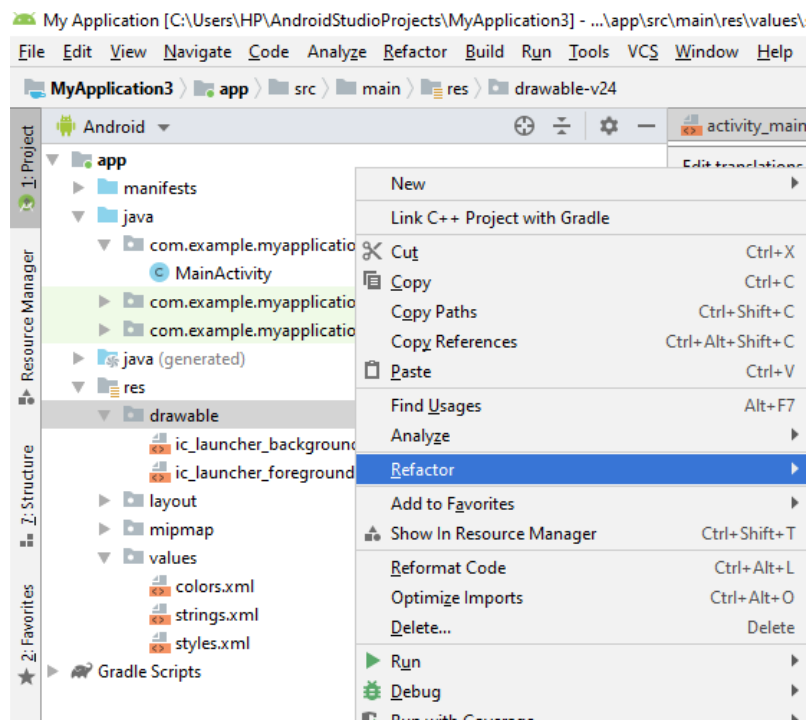
A drawable folder is nothing but a **resource directory in Android studio** source code of your project. 2. This folder contains all versions of images say mdpi, hdpi, xhdpi etc.

1. Right click on drawable folder



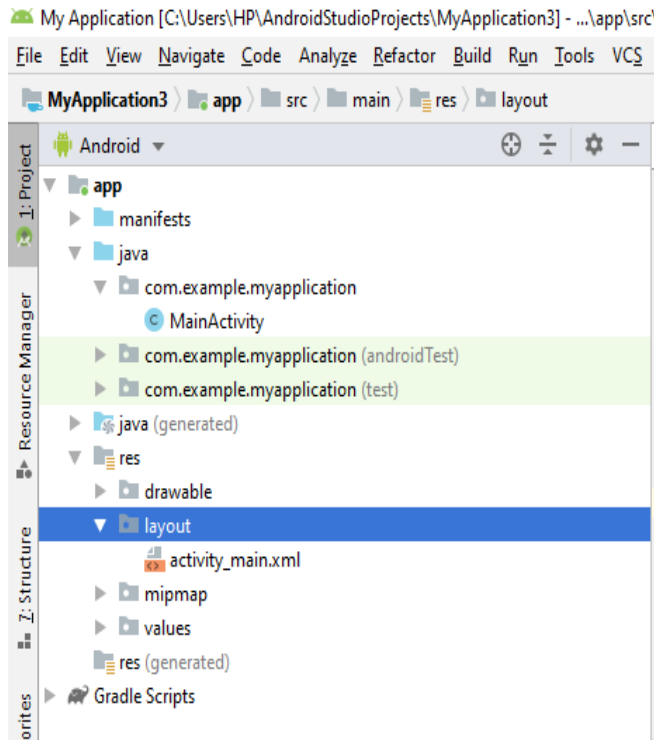
2. Copy the image if you want to create image drawable
3. Paste that image file inside the drawable folder





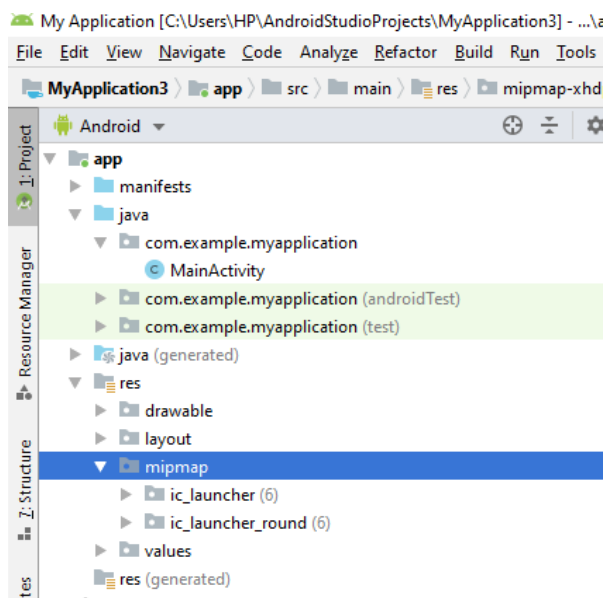
## layout :

A layout **defines the structure for a user interface in your app**, such as in an activity. All elements in the layout are built using a hierarchy of View and ViewGroup objects. A View usually draws something the user can see and interact with. XML layout files that describe the views and layouts for each activity



## Mipmap:

The mipmap folders are for placing your app/launcher icons (which are shown on the homescreen) in only. Any other drawable assets you use should be placed in the relevant drawable folders as before.



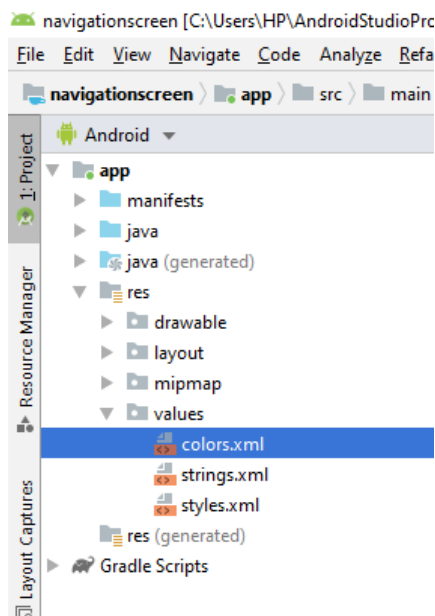
## Values:

The res/values folder is used to store the values for the resources that are used in many Android projects to include features of color, styles, dimensions etc. Below explained are few basic files, contained in the res/values folder: colors.xml: The colors.

## Color

The colors.xml is an XML file which is used to store the colors for the resources. An Android project contains 3 essential colours namely:

- colorPrimary
- colorPrimaryDark
- colorAccent



## Color.xml

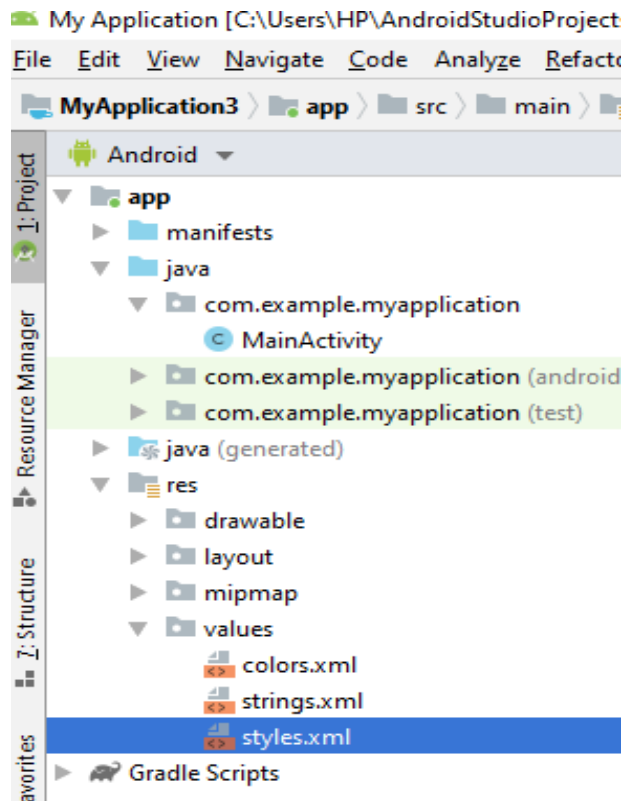
```
<?xml version="1.0" encoding="utf-8"?>
<resources>
<color name="colorPrimary">#008577</color>
<color name="colorPrimaryDark">#00574B</color>
<color name="colorAccent">#D81B60</color>
</resources>
```

## Theme

### Style

Styles in Android allow you to define the look and feel, for example colors and fonts, of Android components in XML resource files. The name of the XML file is arbitrary,

but it must use the .xml extension. You can define multiple styles per file using **<style>** tag but each style will have its name that uniquely identifies the style.



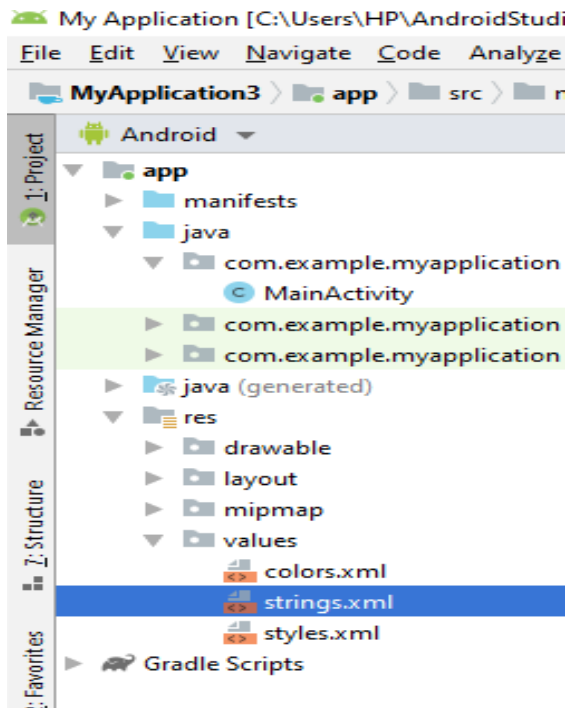
### Style.xml:

```
<resources>
    <!-- Base application theme. -->
    <style name="AppTheme" parent="Theme.AppCompat.Light.DarkActionBar">
        <!-- Customize your theme here. -->
        <item name="colorPrimary">@color/colorPrimary</item>
        <item name="colorPrimaryDark">@color/colorPrimaryDark</item>
        <item name="colorAccent">@color/colorAccent</item>
    </style>
</resources>
```

### String:

Basic function of the strings.xml is to define the strings in one file so that it is easy to use same string in different positions in the android project plus it makes the project looks less messy.

We can also define an array in this file as well.



### String.xml:

```
<resources>
    <string name="app_name">My Application</string>
    <String name="sources"/>
    <item name="FYIT" type="string"/>
    <item name="SYIT" type="string"/>
    <item name="TYIT" type="string"/>
</resources>
```

### Dimension:

A dimension value defined in XML. A **dimension** is specified with a number followed by a **unit of measure**. For example: 10px, 2in, 5sp. The following units of measure are supported by Android: dp.

### Image:

ImageView class is used **to display any kind of image resource** in the android application either it can be android. graphics. Bitmap or android. graphics.....Application of ImageView is also in applying tints to an image in order to reuse a drawable resource and create overlays on background images

## Program Code:

### ImageView

### Main\_Activity.java:

```
package com.example.myapplication;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}
```

### activity\_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@drawable/hope"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello!"
        android:textColor="#CF1C1C"
        android:textSize="36sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintHorizontal_bias="0.553"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.127" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

**Output:**



## Aim: working on image as a button.

### .xml file

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:background="@drawable/bk"
tools:context=".MainActivity">

<ImageView
    android:id="@+id/imageView4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.424"
    app:srcCompat="@mipmap/newyear"
    tools:ignore="MissingConstraints" />

<TextView android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Hello Dear Students ....."
    android:textColor="@color/colorAccent"
    android:textSize="30dp" android:textStyle="italic"
    app:layout_constraintBottom_toTopOf="@+id/imageView4"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" tools:ignore="MissingConstraints"
/>

</androidx.constraintlayout.widget.ConstraintLayout>
```



**.java file**

```
package com.example.imageviewexamp;
```

```
import androidx.appcompat.app.AppCompatActivity;
```

```
import android.os.Bundle; import
```

```
android.view.Menu; import
```

```
android.view.MenuItem;import
```

```
android.view.View;
```

```
import android.widget.ImageView;
```

```
import android.os.Bundle;
```

```
import android.widget.Toast;
```

```
public class MainActivity extends AppCompatActivity {
```

```
    @Override
```

```
    protected void onCreate(Bundle savedInstanceState) {
```

```
        super.onCreate(savedInstanceState);
```

```
        setContentView(R.layout.activity_main);
```

```
        ImageView imageView4 = (ImageView) findViewById(R.id.imageView4);
```

```
        imageView4.setOnClickListener(new View.OnClickListener() {
```

```
            @Override
```

```
            public void onClick(View view) {
```

```
                Toast.makeText(getApplicationContext(), "    HAPPY NEW YEAR .....!!!!
```

```
May the New Year 2023 bring you more happiness, success, love and blessings!",
```

```
                Toast.LENGTH_SHORT).show();
```

```
                //display the text on image click event
```

```
            }
```

```
        });
```

```
    }
```

# **EXPERIMENT NO. 3**

**Aim: Create an Android app with interactive User interface using Layouts.**

**Name: Ankit Singh Chauhan**

**Roll no: 64**

**Class: T.Y.BSc.IT**

**Subject: Advanced Mobile Programming**

**Marks\Grade:**

**Sign:**

## 1. Design an application representing a simple calculator.

Code :

**activity\_main.xml:**

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#595F5F"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/textView"
        android:layout_width="134dp"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_centerInParent="true"
        android:layout_marginStart="136dp"
        android:layout_marginLeft="136dp"
        android:layout_marginTop="51dp"
        android:layout_marginEnd="141dp"
        android:layout_marginRight="141dp"
        android:background="#F8D228"
        android:text="TYIT Calculator"
        android:textSize="18sp"
        android:textStyle="normal|bold" />

    <EditText
        android:id="@+id/editText"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="125dp"
        android:background="#FDD835"
        android:ems="10"
```

```
        android:gravity="right"
        android:inputType="number" />

<LinearLayout
    android:layout_width="370dp"
    android:layout_height="50dp"
    android:layout_alignParentStart="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentTop="true"
    android:layout_marginStart="17dp"
    android:layout_marginLeft="17dp"
    android:layout_marginTop="189dp"
    android:orientation="horizontal">

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="match_parent"
        android:layout_weight="1"
        android:text="1"
        android:textSize="18sp"
        android:textStyle="bold" />

    <Button
        android:id="@+id/button2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="2"
        android:textSize="18sp"
        android:textStyle="bold" />

    <Button
        android:id="@+id/button3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="3"
        android:textSize="18sp"
        android:textStyle="bold" />

    <Button
        android:id="@+id/buttonadd"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="+"
        android:textSize="18sp"
        android:textStyle="bold" />
</LinearLayout>
```

```
<LinearLayout
    android:layout_width="370dp"
    android:layout_height="50dp"
    android:layout_alignParentStart="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentTop="true"
    android:layout_marginStart="16dp"
    android:layout_marginLeft="16dp"
    android:layout_marginTop="248dp"
    android:orientation="horizontal">

    <Button
        android:id="@+id/button4"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="4"
        android:textSize="18sp"
        android:textStyle="bold" />

    <Button
        android:id="@+id/button5"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="5"
        android:textSize="18sp"
        android:textStyle="bold" />

    <Button
        android:id="@+id/button6"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="6"
        android:textSize="18sp"
        android:textStyle="bold" />

    <Button
        android:id="@+id/buttonsub"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="-"
        android:textSize="18sp"
        android:textStyle="bold" />
</LinearLayout>
```

```
<LinearLayout
    android:layout_width="370dp"
    android:layout_height="50dp"
    android:layout_alignParentStart="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentTop="true"
    android:layout_marginStart="17dp"
    android:layout_marginLeft="17dp"
    android:layout_marginTop="310dp"
    android:orientation="horizontal">

    <Button
        android:id="@+id/button7"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="7"
        android:textSize="18sp"
        android:textStyle="bold" />

    <Button
        android:id="@+id/button8"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="8"
        android:textSize="18sp"
        android:textStyle="bold" />

    <Button
        android:id="@+id/button9"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="9"
        android:textSize="18sp"
        android:textStyle="bold" />

    <Button
        android:id="@+id/buttonmul"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerVertical="true"
        android:layout_weight="1"
        android:text="*"
        android:textSize="18sp"
        android:textStyle="bold" />
</LinearLayout>

<LinearLayout
```

```
    android:layout_width="370dp"
    android:layout_height="50dp"
    android:layout_alignParentStart="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentTop="true"
    android:layout_alignParentBottom="true"
    android:layout_centerHorizontal="true"
    android:layout_marginStart="17dp"
    android:layout_marginLeft="17dp"
    android:layout_marginTop="376dp"
    android:layout_marginBottom="307dp"
    android:orientation="horizontal">

    <Button
        android:id="@+id/buttondot"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="."
        android:textSize="18sp"
        android:textStyle="bold" />

    <Button
        android:id="@+id/button10"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="0"
        android:textSize="18sp"
        android:textStyle="bold" />

    <Button
        android:id="@+id/buttoneql"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="="
        android:textSize="18sp"
        android:textStyle="bold" />

    <Button
        android:id="@+id/buttondiv"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="/"
        android:textSize="18sp"
        android:textStyle="bold" />
</LinearLayout>
```

```
<LinearLayout
    android:layout_width="370dp"
    android:layout_height="50dp"
    android:layout_alignParentStart="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentBottom="true"
    android:layout_centerHorizontal="true"
    android:layout_marginStart="22dp"
    android:layout_marginLeft="22dp"
    android:layout_marginBottom="225dp"
    android:orientation="horizontal">

    <Button
        android:id="@+id/buttonclr"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="CLEAR"
        android:textSize="18sp"
        android:textStyle="bold" />
</LinearLayout>

<ImageView
    android:id="@+id/imageView5"
    android:layout_width="58dp"
    android:layout_height="71dp"
    android:layout_alignParentStart="true"
    android:layout_alignParentTop="true"
    android:layout_marginStart="13dp"
    android:layout_marginTop="9dp"
    app:srcCompat="@mipmap/download" />

</RelativeLayout>
```

### MainActivity.java:

```
package com.example.tyitcal;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {
    Button button1,button2,button3,button4,button5,button6,button7,button8,button9,button10,
        buttondot,buttonclr,buttonmul,buttonadd,buttonsub,buttondiv,buttoneql;
```



```
EditText editText;  
float Valueone, Valuetwo;  
boolean Addition,Subtraction,Multiplication,Division;
```

**@Override**

```
protected void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
    setContentView(R.layout.activity_main);  
    button1=(Button)findViewById(R.id.button1);  
    button2=(Button)findViewById(R.id.button2);  
    button3=(Button)findViewById(R.id.button3);  
    button4=(Button)findViewById(R.id.button4);  
    button5=(Button)findViewById(R.id.button5);  
    button6=(Button)findViewById(R.id.button6);  
    button7=(Button)findViewById(R.id.button7);  
    button8=(Button)findViewById(R.id.button8);  
    button9=(Button)findViewById(R.id.button9);  
    buttondot=(Button)findViewById(R.id.buttondot);  
    button10=(Button)findViewById(R.id.button10);  
    buttonadd=(Button)findViewById(R.id.buttonadd);  
    buttonsub=(Button)findViewById(R.id.buttonsub);  
    buttondiv=(Button)findViewById(R.id.buttondiv);  
    buttonmul=(Button)findViewById(R.id.buttonmul);  
    buttoneql=(Button)findViewById(R.id.buttoneql);  
    buttonclr=(Button)findViewById(R.id.buttonclr);  
    editText=(EditText)findViewById(R.id.editText);  
  
    button1.setOnClickListener(new View.OnClickListener() {  
  
        @Override  
        public void onClick(View v) {  
            editText.setText(editText.getText()+"1");  
        }  
    });  
    button2.setOnClickListener(new View.OnClickListener() {  
        @Override  
        public void onClick(View v) {  
            editText.setText(editText.getText()+"2");  
        }  
    });  
    button3.setOnClickListener(new View.OnClickListener() {  
        @Override  
        public void onClick(View v) {  
            editText.setText(editText.getText() + "3");  
        }  
    });  
    button4.setOnClickListener(new View.OnClickListener() {  
        @Override  
        public void onClick(View v) {  
            editText.setText(editText.getText() + "4");  
        }  
    });  
}
```

```
    }  
});  
button5.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        editText.setText(editText.getText() + "5");  
    }  
});  
button6.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        editText.setText(editText.getText() + "6");  
    }  
});  
button7.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        editText.setText(editText.getText()+ "7");  
    }  
});  
button8.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        editText.setText(editText.getText() + "8");  
    }  
});  
button9.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        editText.setText(editText.getText() + "9");  
    }  
});  
button10.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        editText.setText(editText.getText() + "0");  
    }  
});  
buttondot.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        editText.setText(editText.getText() + ".");  
    }  
});  
buttonadd.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        if(editText==null) {  
            editText.setText("");  
        }else
```

```
{
    Valueone=Float.parseFloat(editText.getText()+"");
    Addition=true;
    editText.setText(null);
}

}

});
buttonsub.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        if (editText == null) {
            editText.setText("");
        } else {
            Valueone = Float.parseFloat(editText.getText() + "");
            Substraction= true;
            editText.setText(null);
        }
    }
});
buttonmul.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        if (editText == null) {
            editText.setText("");
        } else {
            Valueone = Float.parseFloat(editText.getText() + "");
            Multiplication = true;
            editText.setText(null);
        }
    }
});
buttondiv.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        if (editText == null) {
            editText.setText("");
        } else {
            Valueone = Float.parseFloat(editText.getText() + "");
            Division = true;
            editText.setText(null);
        }
    }
});
buttononeql.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Valuetwo = Float.parseFloat(editText.getText() + "");

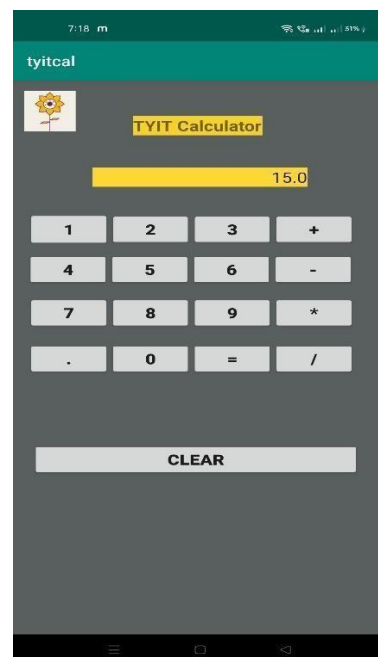
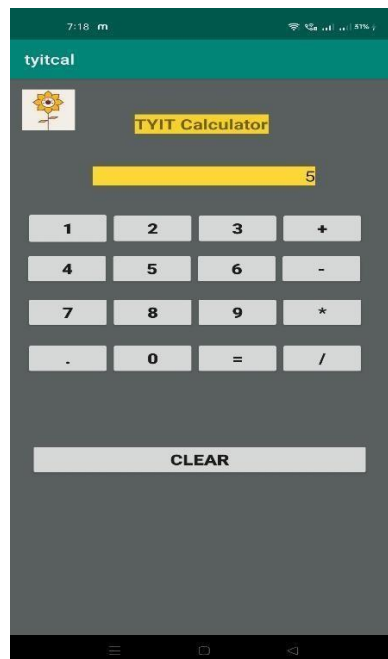
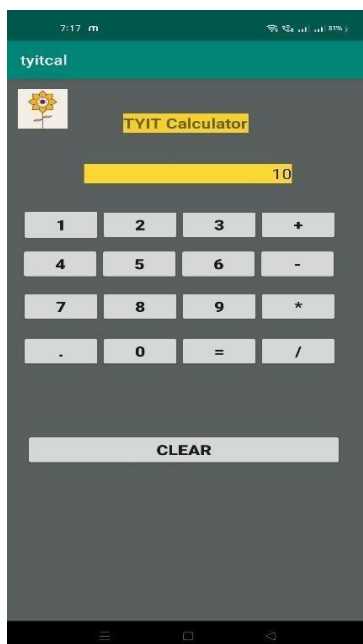
        if (Addition == true) {
```

```
        editText.setText( Valueone + Valuetwo + "");
        Addition = false;
    }
    if (Substraction == true) {
        editText.setText(Valueone - Valuetwo + "");
        Substraction = false;
    }
    if (Multiplication == true) {
        editText.setText(Valueone * Valuetwo + "");
        Multiplication = false;
    }
    if (Division == true)
        editText.setText(Valueone / Valuetwo + "");
        Division = false;
    }
});

buttonclr.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        editText.setText("");
    }
});
}
```

**Addition operation :**

**Output:**



# **EXPERIMENT NO. 4**

**Aim : Create an android app that demonstrate Screen Navigation**

**Name: Ankit Singh Chauhan**

**Roll no: 64**

**Class: T.Y.BSc.IT**

**Subject: Advanced Mobile Programming**

**Marks\Grade:**

**Sign:**

## First Page Code:

### activity\_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:background="#4A3E61"
tools:context=".MainActivity">

<TextView
    android:id="@+id/textView1"
    style="@android:style/Widget.DeviceDefault.Light.TextView.SpinnerItem"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="SCREEN NAVIGATION"
    android:textColor="#FFB300"
    android:textSize="28sp"
    android:textStyle="bold"
    app:fontFamily="@font/aclonica"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.115" />

<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginStart="52dp"
    android:layout_marginLeft="52dp"
    android:layout_marginTop="32dp"
    android:text="User Name:"
    android:textColor="#FDD835"
    android:textSize="24sp"
    android:textStyle="bold"
    app:fontFamily="@font/amarante"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.068"
```

```
app:layout_constraintStart_toStartOf="parent"  
app:layout_constraintTop_toBottomOf="@+id/textView1" />
```

<EditText

```
    android:id="@+id/editText1"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_marginStart="52dp"  
    android:layout_marginLeft="52dp"  
    android:layout_marginBottom="468dp"  
    android:ems="10"  
    android:hint="Enter user Name"  
    android:inputType="textPersonName"  
    android:lines="2"  
    android:singleLine="true"  
    android:textAppearance="@style/TextAppearance.AppCompat.Medium"  
    android:textColor="#FFB300"  
    android:visibility="visible"  
    app:layout_constraintBottom_toBottomOf="parent"  
    app:layout_constraintEnd_toEndOf="parent"  
    app:layout_constraintHorizontal_bias="0.109"  
    app:layout_constraintStart_toStartOf="parent"  
    app:layout_constraintTop_toBottomOf="@+id/textView3"  
    app:layout_constraintVertical_bias="1.0" />
```

<TextView

```
    android:id="@+id/textView4"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="52dp"  
    android:text="Password :"  
    android:textColor="#FDD835"  
    android:textSize="24sp"  
    android:textStyle="bold"  
    app:fontFamily="@font/amarante"  
    app:layout_constraintBottom_toBottomOf="parent"  
    app:layout_constraintEnd_toEndOf="parent"  
    app:layout_constraintHorizontal_bias="0.251"  
    app:layout_constraintStart_toStartOf="parent"  
    app:layout_constraintTop_toBottomOf="@+id/editText1"  
    app:layout_constraintVertical_bias="0.01" />
```

<EditText

```
    android:id="@+id/editText2"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="56dp"  
    android:ems="10"  
    android:hint="Enter Password"  
    android:inputType="textPassword"
```

```
android:lines="2"
android:textAppearance="@style/TextAppearance.AppCompat.Medium"
android:textColor="#FDD835"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.343"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/textView4"
app:layout_constraintVertical_bias="0.0" />
```

<Button

```
android:id="@+id/button"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginTop="68dp"
android:background="#FDD835"
android:gravity="center"
android:text="LOGIN"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.498"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/editText2"
app:layout_constraintVertical_bias="0.022" />
```

</androidx.constraintlayout.widget.ConstraintLayout>

### **MainActivity.class**

```
package com.example.tyitscreennavigation;
```

```
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.Toast;
import android.widget.Button;
```

```
public class MainActivity extends AppCompatActivity {
    Button button;          //creating objects
    EditText editText1,editText2;
```

**@Override**

```
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    button = findViewById(R.id.button); //get id of button
    editText1 = findViewById(R.id.editText1); //get id of editText1
    editText2 = findViewById(R.id.editText2); //get id of editText2
```



```
button.setOnClickListener(new View.OnClickListener() //to perform click event
{
    @Override
    public void onClick(View v) {
        if (editText1.getText().length() == 0 && editText2.getText().length()==0)
        {
            Toast.makeText(getApplicationContext(), "UserName and Password cannot be
empty ",Toast.LENGTH_SHORT).show(); // display information for the short period of time
        }
        else if (editText1.getText().length() == 0)
        {
            Toast.makeText(getApplicationContext(), "UserName cannot be
empty",Toast.LENGTH_SHORT).show();
        }

        else if (editText2.getText().length() == 0)
        {
            Toast.makeText(getApplicationContext(), "Password cannot be empty",
Toast.LENGTH_SHORT).show();
        }
        else
        {

// start a new instance of an Activity by passing an Intent to startActivity()
        Intent wel = new Intent(MainActivity.this, welcomety.class);
        startActivity(wel);
        }

    }
});
}
```

### **Second Page Code:**

#### **activity\_welcomety.xml:**

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:background="#4A3E61"
tools:context=".welcomety">
```

```
<TextView
    android:id="@+id/textView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="92dp"
    android:text="Welcome to Android Studio"
    android:textColor="#FDD835"
    android:textSize="24sp"
    app:fontFamily="@font/aclonica"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.497"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

<Button
    android:id="@+id/button2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="100dp"
    android:background="#FDD835"
    android:text="BACK"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.269"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/imageView"
    app:layout_constraintVertical_bias="0.025" />

<ImageView
    android:id="@+id/imageView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="62dp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView"
    app:srcCompat="@drawable/welcome" />

<Button
    android:id="@+id/button3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="100dp"
    android:background="#FDD835"
    android:text="NEXT"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.418"
    app:layout_constraintStart_toEndOf="@+id/button2"
    app:layout_constraintTop_toBottomOf="@+id/imageView"
```

```
app:layout_constraintVertical_bias="0.025" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

### **Welcomety.class:**

```
package com.example.tyitscreennavigation;

import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import com.example.tyitscreennavigation.MainActivity;
import com.example.tyitscreennavigation.R;

public class welcomety extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_welcomety);

        Button buttonback,buttonnext;
        buttonback = findViewById(R.id.button2);
        buttonnext =findViewById(R.id.button3);

        buttonnext.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent intent = new Intent(welcomety.this, welcomety2.class);
                startActivity(intent);
            }
        });

        buttonback.setOnClickListener(new View.OnClickListener()
        {
            @Override
            public void onClick(View v)
            {
                Intent intent = new Intent(welcomety.this, MainActivity.class);
                startActivity(intent);
            }
        });
    }
}
```

### Third Page Code:

#### activity\_welcomety.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#4A3E61"
    tools:context=".welcomety2">

    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="49dp"
        android:layout_marginLeft="49dp"
        android:layout_marginTop="58dp"
        android:layout_marginEnd="262dp"
        android:layout_marginRight="262dp"
        android:layout_marginBottom="654dp"
        android:text="Andriod Studio :"
        android:textColor="#FDD835"
        android:textSize="30sp"
        app:fontFamily="@font/carter_one"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.135"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.542" />

    <Button
        android:id="@+id/button4"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:background="#FDD835"
        android:text="BACK"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.498"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView5"
        app:layout_constraintVertical_bias="0.344" />

    <TextView
```

```
    android:id="@+id/textView5"
    android:layout_width="345dp"
    android:layout_height="562dp"
    android:layout_marginTop="56dp"
    android:gravity="center"
    android:text="Android Studio is the official integrated development environment for
Google's Android operating system, built on JetBrains' IntelliJ IDEA software and designed
specifically for Android development. Android Studio provides a unified environment where
you can build apps for Android phones, tablets, Android Wear, Android TV, and Android
Auto."
    android:textColor="#FDD835"
    android:textSize="18sp"
    android:textStyle="italic"
    app:fontFamily="@font/cherry_swash"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView2" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

### Welcomety2.class:

```
package com.example.tyitscreennavigation;

import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

public class welcomety2 extends AppCompatActivity {

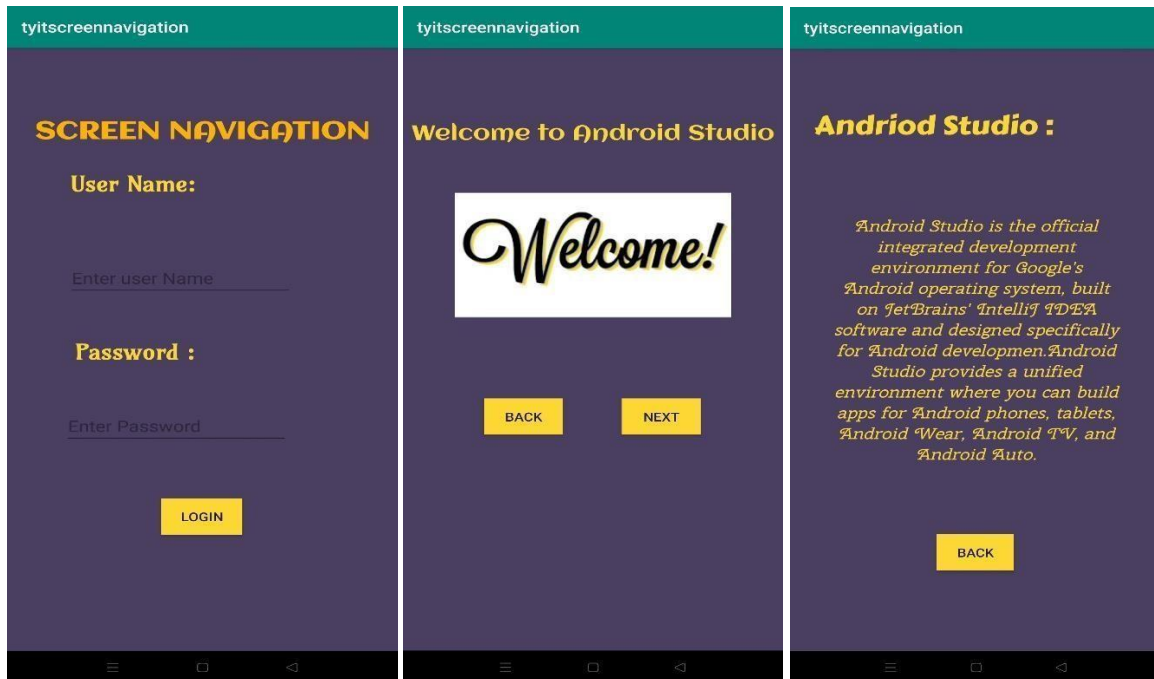
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_welcomety2);

        Button buttonback;
        buttonback = findViewById(R.id.button4);

        buttonback.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(welcomety2.this, welcomety.class);
                startActivity(intent);
            }
        });
    }
}
```

```
}  
}
```

Output:



# **EXPERIMENT NO. 5**

**Aim : Create an android app that demonstrates the use of Table layout using page adapter and fragment.**

**Name: Ankit Singh Chauhan**

**Roll no: 64**

**Class: T.Y.BSc.IT**

**Subject: Advanced Mobile Programming**

**Marks\Grade:**

**Sign:**

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <com.google.android.material.tabs.TabLayout
        android:id="@+id/tablayout1"
        android:layout_width="424dp"
        android:layout_height="58dp"
        android:background="#1B6B6B"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.4"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:tabTextAppearance="@style/TextAppearance.AppCompat.Medium"
        app:tabTextColor="#43A047">

        <com.google.android.material.tabs.TabItem
            android:id="@+id/tab1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:foreground="@android:color/holo_green_dark"
            android:text="CHAT" />

        <com.google.android.material.tabs.TabItem
            android:id="@+id/tab2"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="STATUS" />

        <com.google.android.material.tabs.TabItem
            android:id="@+id/tab3"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
```

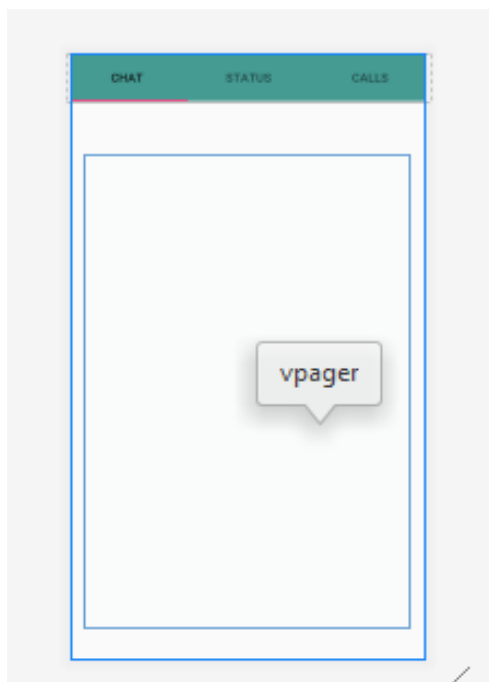


```
        android:text="CALLS" />
    </com.google.android.material.tabs.TabLayout>

    <androidx.viewpager.widget.ViewPager
        android:id="@+id/vpager"
        android:layout_width="0dp"
        android:layout_height="0dp"
        android:background="#FAFCFC"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.515"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/tablayout1"
        app:layout_constraintVertical_bias="0.0" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

### Output:



### Main\_Activity.java:

```
package com.example.tab;
import android.os.Bundle;
import androidx.appcompat.app.AppCompatActivity;
import androidx.viewpager.widget.ViewPager;
import com.google.android.material.tabs.TabItem;
import com.google.android.material.tabs.TabLayout;
```

```
public class MainActivity extends AppCompatActivity {
    TabItem tabItem1,tabItem2,tabItem3;
    TabLayout tabLayout;
    ViewPager viewPager;
    pageadapter pageAdapter;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        tabLayout=(TabLayout)findViewById(R.id.tablayout1);
        viewPager=(ViewPager) findViewById(R.id.vpager);
        tabItem1 = (TabItem)findViewById(R.id.tab1);
        tabItem2 = (TabItem)findViewById(R.id.tab2);
        tabItem3 = (TabItem)findViewById(R.id.tab3);
        //pageadapter supports data set change,removed changing possition//
        //fragment represents UI manages layout//
        pageAdapter = new pageadapter(getSupportFragmentManager(),
tabLayout.getTabCount());

        //view pager is a layout manager that allows the user to flip//
        // left and right through pages of data//
        viewPager.setAdapter(pageAdapter);

        tabLayout.setOnTabSelectedListener(new TabLayout.OnTabSelectedListener() {
            @Override
            public void onTabSelected(TabLayout.Tab tab)
            {
                viewPager.setCurrentItem(tab.getPosition());

                if(tab.getPosition()==0|| tab.getPosition()==1|| tab.getPosition()==2)
                    //adapter is changed//
                    pageAdapter.notifyDataSetChanged();
            }

            @Override
            public void onTabUnselected(TabLayout.Tab tab) {
            }

            @Override
            public void onTabReselected(TabLayout.Tab tab) {
            }
        });
        viewPager.addOnPageChangeListener(new
        TabLayout.TabLayoutOnPageChangeListener(tabLayout));
    }
}
```

### pageadapter.java:

*//pageadapter supports data set change,removed changing possition//*

**package** com.example.tab;

**import** androidx.fragment.app.Fragment;

**import** androidx.fragment.app.FragmentManager;

**import** androidx.fragment.app.FragmentPagerAdapter;

**public class** pageadapter **extends** FragmentPagerAdapter {

**int** tabcount;

**public** pageadapter( FragmentManager fm, **int** behavior) {

**super**(fm, behavior);

        tabcount=behavior;

    }

**@Override**

**public** Fragment getItem(**int** position)

    {

**switch** (position)

        {

**case** 0:

**return new** ftab1();

**case** 1:

**return new** ftab2();

**case** 2:

**return new** ftab3();

**default**:

**return null**;

        }

    }

**@Override**

**public int** getCount()

    {

**return** tabcount;

    }

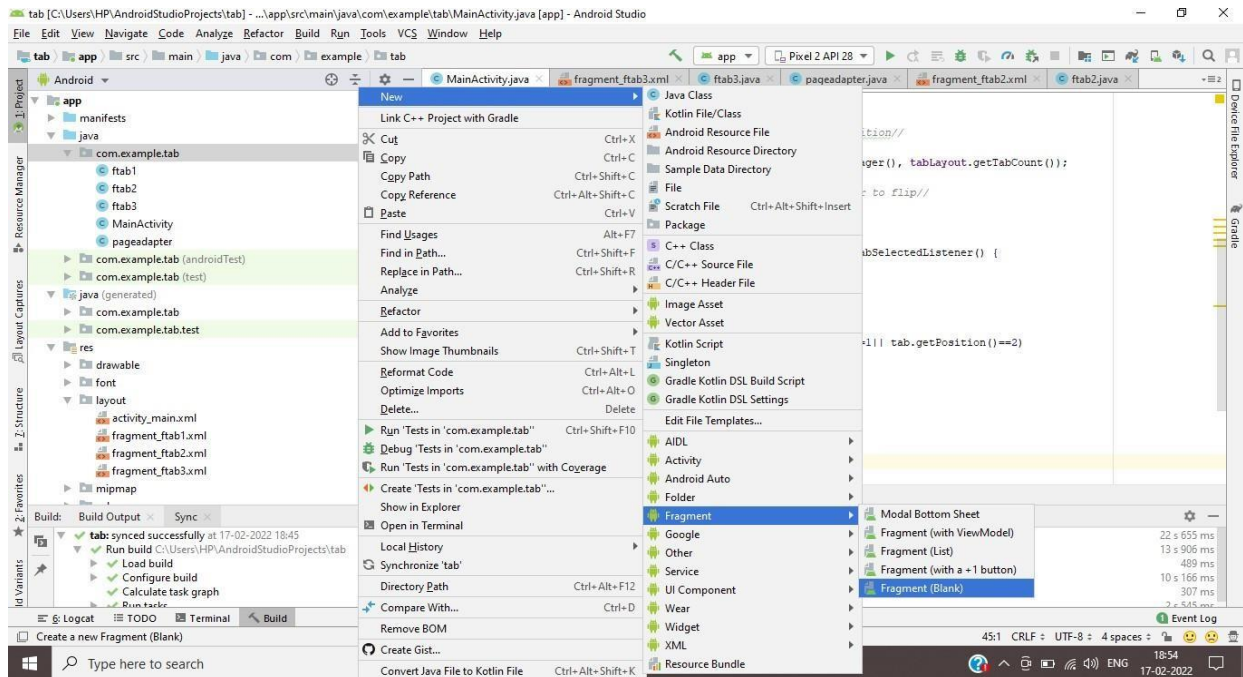
}

### fragment\_ftab1:

*//for each tab required fragment layout//*

*//fragment represents UI manages layout//*

*//to add fragment right click on project main source file -new-fragment-fragmnt blank//*



```
<?xml version="1.0" encoding="utf-8"?>
```

```
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".ftab1">
```

```
<!-- TODO: Update blank fragment layout -->
```

```
<TextView
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#175555"
    android:gravity="center|top"
    android:text="CHATS"
    android:textColor="#26B62C"
    android:textSize="24sp"
    android:textStyle="bold|italic"
    app:fontFamily="@font/berkshire_swash" />
```

```
<ImageView
    android:id="@+id/imageView3"
    android:layout_width="381dp"
    android:layout_height="250dp"
    android:layout_gravity="center"
    android:drawingCacheQuality="auto"
    android:src="@drawable/chats" />
```

</FrameLayout>

**ftab1.java:**

```
package com.example.tab;
```

```
import android.os.Bundle;
```

```
import android.view.LayoutInflater;
```

```
import android.view.View;
```

```
import android.view.ViewGroup;
```

```
import androidx.fragment.app.Fragment;
```

```
public class ftab1 extends Fragment {
```

```
    public ftab1() {
```

```
        // Required empty public constructor
```

```
    }
```

```
    @Override
```

```
    public View onCreateView(LayoutInflater inflater, ViewGroup container,  
        Bundle savedInstanceState) {
```

```
        return inflater.inflate(R.layout.fragment_ftab1, container, false);
```

```
    }
```

```
}
```

**fragment\_ftab2.xml:**

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"  
    xmlns:app="http://schemas.android.com/apk/res-auto"  
    xmlns:tools="http://schemas.android.com/tools"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    tools:context=".ftab2">
```

```
<!-- TODO: Update blank fragment layout -->
```

```
<TextView
```

```
    android:layout_width="match_parent"
```

```
    android:layout_height="match_parent"
```

```
    android:background="#175555"
```

```
    android:gravity="center|top"
```

```
    android:text="STATUS"
```

```
    android:textColor="#26B62C"
```

```
    android:textSize="24sp"
```

```
    android:textStyle="bold|italic"
```

```
    app:fontFamily="@font/berkshire_swash" />
```

```
<ImageView
    android:id="@+id/imageView2"
    android:layout_width="343dp"
    android:layout_height="248dp"
    android:layout_gravity="center"
    android:src="@drawable/status" />

</FrameLayout>
```

**ftab2.java:**

```
package com.example.tab;

import android.os.Bundle;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;

import androidx.fragment.app.Fragment;

public class ftab2 extends Fragment {
    public ftab2() {
        // Required empty public constructor
    }
    @Override
    public View onCreateView(LayoutInflater inflater, ViewGroup container,
        Bundle savedInstanceState) {
        return inflater.inflate(R.layout.fragment_ftab2, container, false);
    }
}
```

**fragment\_ftab3.xml:**

```
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".ftab3">

    <!-- TODO: Update blank fragment layout -->
    <TextView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_gravity="top"
        android:background="#175555"
        android:gravity="center|top"
        android:text="CALLS"
```

```
        android:textColor="#26B62C"
        android:textSize="24sp"
        android:textStyle="bold|italic"
        app:fontFamily="@font/berkshire_swash" />

<ImageView
    android:id="@+id/imageView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:src="@drawable/calls" />

</FrameLayout>

ftab3.java:

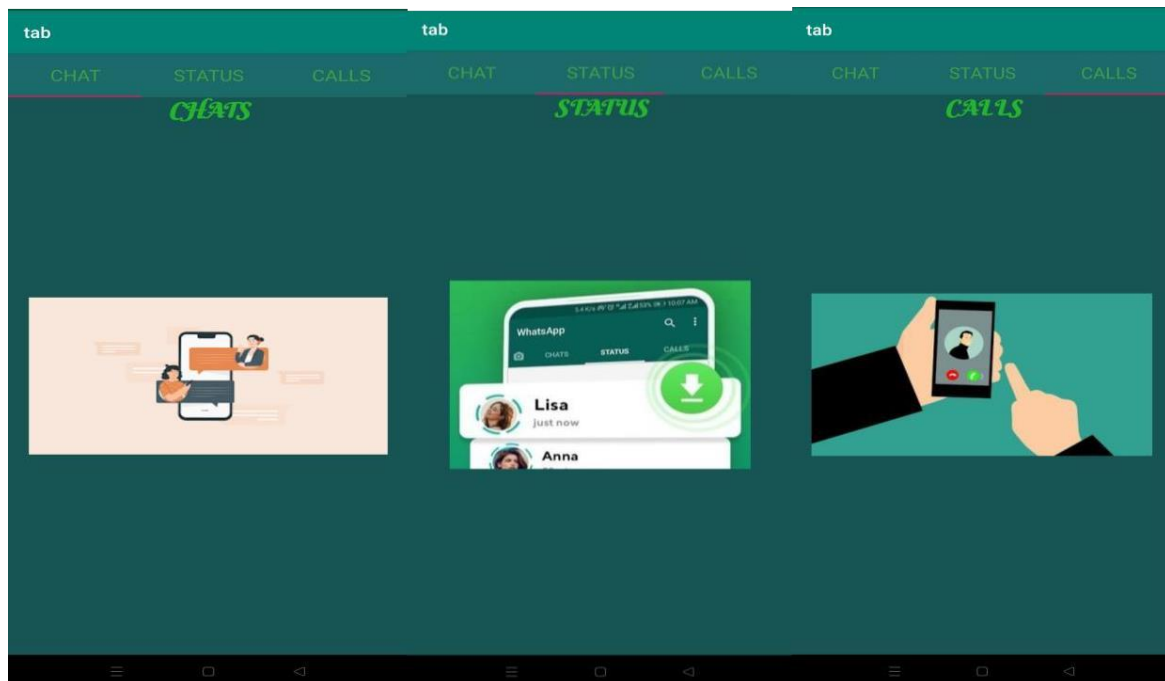
package com.example.tab;

import android.os.Bundle;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;

import androidx.fragment.app.Fragment;

public class ftab3 extends Fragment {
    public ftab3() {
        // Required empty public constructor
    }
    @Override
    //reading a XML Layout//
    public View onCreateView(LayoutInflater inflater, ViewGroup container,
        Bundle savedInstanceState) {
        return inflater.inflate(R.layout.fragment_ftab3, container, false);
    }
}
```

## Output:





# **EXPERIMENT NO. 6**

**Aim : Develop An Application Demonstrating Internal Storage To Store Private Data On The Device Memory.**

**Name: Ankit Singh Chauhan**

**Roll no: 64**

**Class: T.Y.BSc.IT**

**Subject: Advanced Mobile Programming**

**Marks\Grade:**

**Sign:**

**activity\_main.xml:**

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:background="#B2B9B8"
tools:context=".MainActivity">

<RelativeLayout
    android:layout_width="329dp"
    android:layout_height="672dp"
    android:layout_marginLeft="8dp"
    android:layout_marginTop="8dp"
    android:layout_marginEnd="56dp"
    android:layout_marginRight="56dp"
    android:layout_marginBottom="8dp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.488">

<TextView
    android:id="@+id/textView1"
    android:layout_width="279dp"
    android:layout_height="136dp"
    android:layout_alignParentLeft="true"
    android:layout_alignParentTop="true"
    android:layout_alignParentRight="true"
    android:layout_marginLeft="27dp"
    android:layout_marginTop="20dp"
    android:layout_marginRight="23dp"
    android:gravity="center"
    android:padding="5dp"
    android:shadowColor="#7A6142"
    android:text="Android Read and Write Text from/to a File"
    android:textColor="#F4511E"
    android:textSize="28sp"
    android:textStyle="bold"
    app:fontFamily="@font/andada" />
```

```
<EditText
    android:id="@+id/editText1"
    android:layout_width="335dp"
    android:layout_height="62dp"
    android:layout_below="@+id/textView1"
    android:layout_alignParentLeft="true"
    android:layout_alignParentRight="true"
    android:layout_marginStart="5dp"
    android:layout_marginLeft="5dp"
    android:layout_marginTop="72dp"
    android:layout_marginEnd="5dp"
    android:layout_marginRight="47dp"
    android:layout_marginBottom="5dp"
    android:gravity="right"
    android:hint="file name"
    android:minLines="5">

    <requestFocus />
</EditText>

<Button
    android:id="@+id/button1"
    android:layout_width="111dp"
    android:layout_height="81dp"
    android:layout_below="@+id/editText1"
    android:layout_alignEnd="@+id/editText1"
    android:layout_alignRight="@+id/editText1"
    android:layout_alignParentBottom="false"
    android:layout_marginStart="36dp"
    android:layout_marginLeft="36dp"
    android:layout_marginTop="144dp"
    android:layout_marginEnd="26dp"
    android:layout_marginRight="26dp"
    android:layout_marginBottom="481dp"
    android:layout_toEndOf="@+id/button2"
    android:layout_toRightOf="@+id/button2"
    android:background="#ACCE88"
    android:onClick="WriteBtn"
    android:text="Write Text into File"
    android:textColor="#5E35B1"
    tools:ignore="OnClick" />

<Button
    android:id="@+id/button2"
    android:layout_width="110dp"
    android:layout_height="81dp"
    android:layout_below="@+id/editText1"
    android:layout_alignStart="@+id/editText1"
    android:layout_alignLeft="@+id/editText1"
    android:layout_alignParentBottom="true"
```

```
android:layout_marginStart="35dp"  
android:layout_marginLeft="35dp"  
android:layout_marginTop="144dp"  
android:layout_marginBottom="151dp"  
android:background="#ACCE88"  
android:onClick="ReadBtn"  
android:text="Read Text From file"  
android:textColor="#5E35B1"  
tools:ignore="OnClick" />
```

```
</RelativeLayout>
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.Java:

```
package com.example.date;
```

```
import androidx.appcompat.app.AppCompatActivity;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.EditText;  
import android.widget.Toast;
```

```
import java.io.FileInputStream;  
import java.io.FileOutputStream;  
import java.io.IOException;  
import java.io.InputStreamReader;  
import java.io.OutputStreamWriter;
```

```
public class MainActivity extends AppCompatActivity {  
    EditText textmsg;  
    static final int READ_BLOCK_SIZE = 100;
```

```
@Override
```

```
protected void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
    setContentView(R.layout.activity_main);  
    textmsg=(EditText)findViewById(R.id.editText1);  
}
```

```
public void WriteBtn(View v) {
```

```
    // add-write text into file
```

```
    try {
```

```
        FileOutputStream fileout=openFileOutput("mytextfile.txt", MODE_PRIVATE);  
        OutputStreamWriter outputWriter=new OutputStreamWriter(fileout);  
        outputWriter.write(textmsg.getText().toString());  
        outputWriter.close();
```

```
//display file saved message
Toast.makeText(getApplicationContext(), "File saved successfully!",
    Toast.LENGTH_SHORT).show();

} catch (Exception e) {
    e.printStackTrace();
}
}

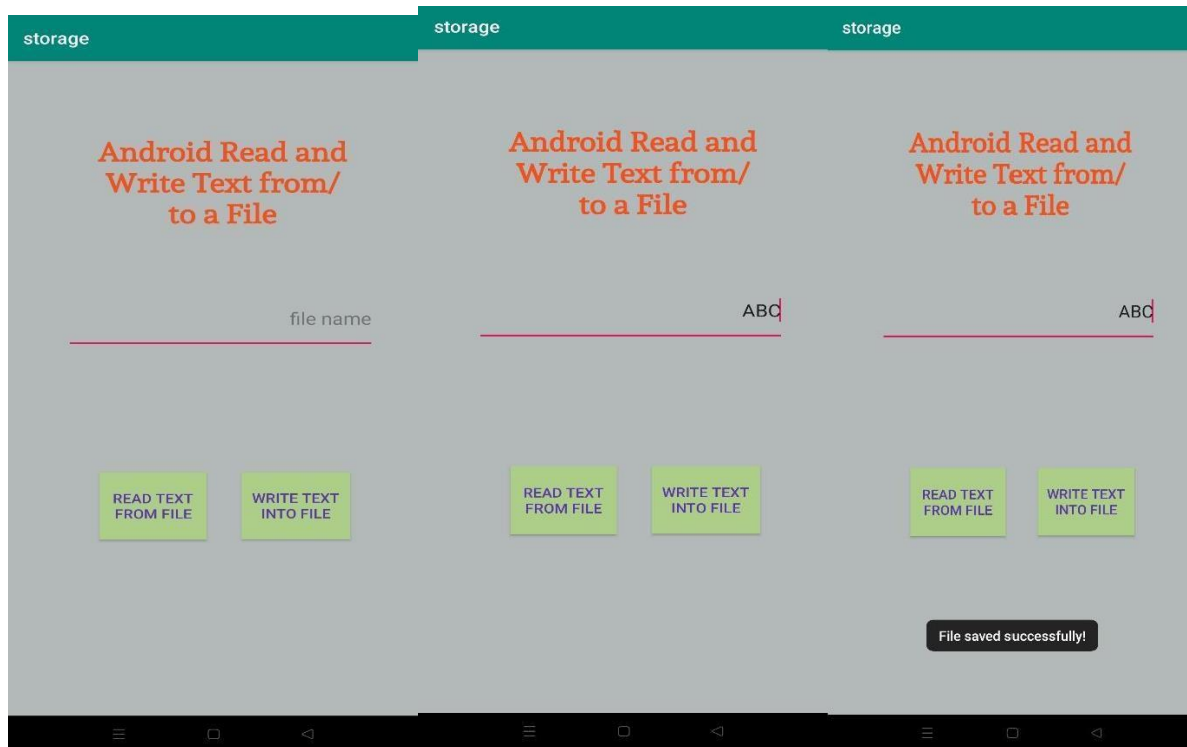
// Read text from file
public void ReadBtn(View v) {
    //reading text from file
    try {
        FileInputStream fileIn=openFileInput("mytextfile.txt");
        InputStreamReader InputRead= new InputStreamReader(fileIn);

        char[] inputBuffer= new char[READ_BLOCK_SIZE];
        String s="";
        int charRead;

        while ((charRead=InputRead.read(inputBuffer))>0) {
            // char to string conversion
            String readstring=String.valueOf(inputBuffer,0,charRead);
            s +=readstring;
        }
        InputRead.close();
        txtmsg.setText(s);

    } catch (Exception e) {
        e.printStackTrace();
    }
}
}
```

## Output:



## Note:

### Writing file

In order to use internal storage to write some data in the file, call the `openFileOutput()` method with the name of the file and the mode. The mode could be private, public, etc. Its syntax is given below –

```
FileOutputStream fOut = openFileOutput("file name here",MODE_WORLD_READABLE);
```

The method `openFileOutput()` returns an instance of `FileOutputStream`. So you receive it in the object of `FileInputStream`.

### Reading file

In order to read from the file you just created, call the `openFileInput()` method with the name of the file. It returns an instance of `FileInputStream`. Its syntax is given below –

```
FileInputStream fin = openFileInput(file);
```

# **EXPERIMENT NO. 7**

**Aim : Develop an application for working with graphics and animation.**

**Name: Ankit Singh Chauhan**

**Roll no: 64**

**Class: T.Y.BSc.IT**

**Subject: Advanced Mobile Programming**

**Marks\Grade:**

**Sign:**

**Activity\_main.xml:**

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@drawable/bkddd"
    tools:context=".MainActivity">

    <ImageView
        android:id="@+id/imageview"
        android:layout_width="253dp"
        android:layout_height="155dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginStart="83dp"
        android:layout_marginLeft="83dp"
        android:layout_marginTop="114dp"
        android:contentDescription="@string/app_name"
        android:src="@drawable/stud" />

    <LinearLayout
        android:id="@+id/linear1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_below="@id/imageview"
        android:layout_marginTop="75dp"
        android:orientation="horizontal"
        android:weightSum="3">

        <!--To start the blink animation of the image-->

        <Button
            android:id="@+id/BTNblink"
            style="@style/TextAppearance.AppCompat.Widget.Button"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_margin="10dp"
            android:layout_weight="1"
```



```
android:padding="3dp"  
android:text="@string/blink"  
android:textColor="#D81B60"  
android:textStyle="italic" />
```

*<!--To start the rotate animation of the image-->*

```
<Button  
    android:id="@+id/BTNrotate"  
    style="@style/TextAppearance.AppCompat.Widget.Button"  
    android:layout_width="0dp"  
    android:layout_height="wrap_content"  
    android:layout_margin="10dp"  
    android:layout_weight="1"  
    android:padding="3dp"  
    android:text="@string/clockwise"  
    android:textColor="#D81B60"  
    android:textStyle="italic" />
```

*<!--To start the fading animation of the image-->*

```
<Button  
    android:id="@+id/BTNfade"  
    style="@style/TextAppearance.AppCompat.Widget.Button"  
    android:layout_width="0dp"  
    android:layout_height="wrap_content"  
    android:layout_margin="10dp"  
    android:layout_weight="1"  
    android:padding="3dp"  
    android:text="@string/fade"  
    android:textColor="#D81B60"  
    android:textStyle="italic" />
```

</LinearLayout>

<LinearLayout

```
    android:id="@+id/linear2"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:layout_below="@id/linear1"  
    android:layout_marginTop="30dp"  
    android:orientation="horizontal"  
    android:weightSum="3">
```

*<!--To start the move animation of the image-->*

<Button

```
android:id="@+id/BTNmove"
style="@style/TextAppearance.AppCompat.Widget.Button"
android:layout_width="0dp"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:layout_weight="1"
android:padding="3dp"
android:text="@string/move"
android:textColor="#D81B60"
android:textStyle="italic" />
```

*<!--To start the slide animation of the image-->*

```
<Button
    android:id="@+id/BTNslide"
    style="@style/TextAppearance.AppCompat.Widget.Button"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:layout_weight="1"
    android:padding="3dp"
    android:text="@string/slide"
    android:textColor="#D81B60"
    android:textStyle="italic" />
```

*<!--To start the zoom animation of the image-->*

```
<Button
    android:id="@+id/BTNzoom"
    style="@style/TextAppearance.AppCompat.Widget.Button"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:layout_weight="1"
    android:padding="3dp"
    android:text="@string/zoom"
    android:textColor="#D81B60"
    android:textStyle="italic" />
</LinearLayout>
```

```
<Button
    android:id="@+id/BTNstop"
    android:layout_width="104dp"
    android:layout_height="60dp"
    android:layout_below="@id/linear2"
    android:layout_alignParentBottom="true"
    android:layout_centerHorizontal="true"
    android:layout_marginLeft="30dp"
```

```
android:layout_marginTop="49dp"
android:layout_marginRight="30dp"
android:layout_marginBottom="112dp"
android:text="@string/stop_animation"
android:textColor="#D81B60"
android:textStyle="italic" />
```

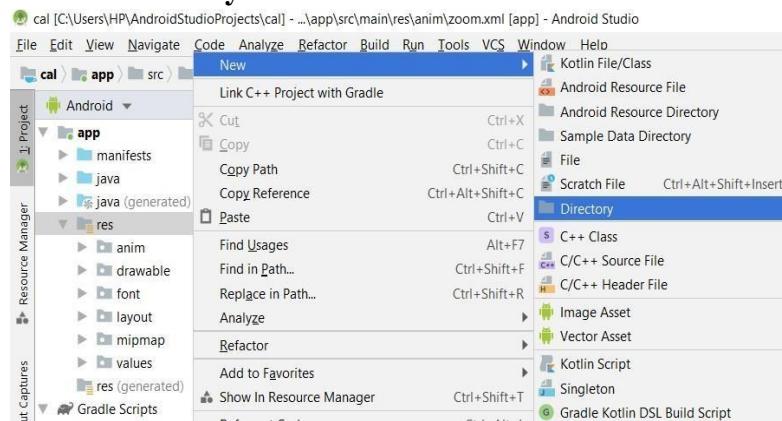
```
<TextView
    android:id="@+id/textView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentTop="true"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="27dp"
    android:text="Animation and Graphics"
    android:textColor="#5E35B1"
    android:textColorLink="#3949AB"
    android:textSize="30sp"
    app:fontFamily="@font/caveat_brush" />
```

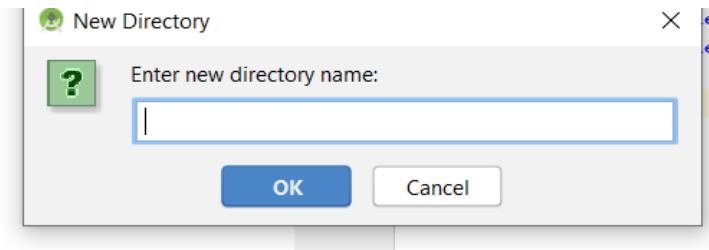
```
</RelativeLayout>
```

### Create 6 different types of animation for ImageView

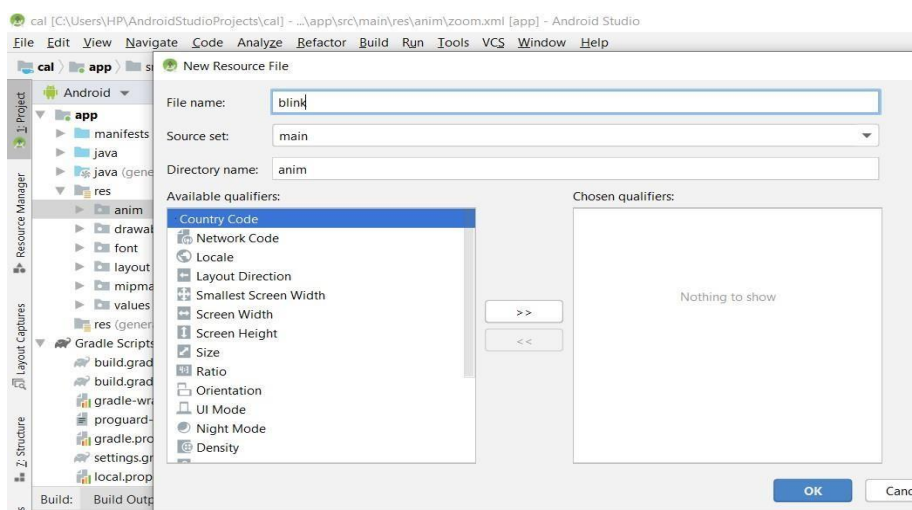
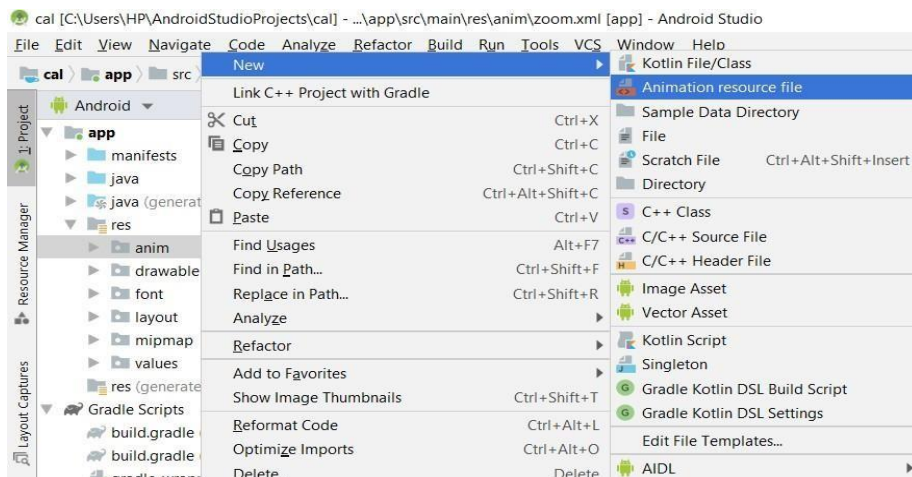
To create new animations we have to create a new directory for storing all our animations. Navigate to the **app > res > Right-Click on res >> New >> Directory >> Name your directory as “anim”**. Inside this directory, we will create our animations. For creating a new anim right click on the anim directory >> Animation Resource file and give the name to your file. Below is the code snippet for 6 different animations.

### Create Directory anim:





## Create Animation Files:



## Blink:

### Blink.xml

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
  <alpha android:fromAlpha="0.0"
    android:toAlpha="1.0"
    android:interpolator="@android:anim/accelerate_interpolator"
    android:duration="500"
    android:repeatMode="reverse"
    android:repeatCount="infinite"/>
</set>
```

### **Fade:**

#### **Fade.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">

    <!-- duration is the time for which animation will work-->
    <alpha
        android:duration="1000"
        android:fromAlpha="0"
        android:toAlpha="1" />
    <alpha
        android:duration="1000"
        android:fromAlpha="1"
        android:startOffset="2000"
        android:toAlpha="0" />
</set>
```

### **Move:**

#### **Move.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
    <translate
        android:fromXDelta="0%p"
        android:toXDelta="75%p"
        android:duration="700" />
</set>
```

### **Rotate:**

#### **Rotate.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
    <rotate
        android:duration="6000"
        android:fromDegrees="0"
        android:pivotX="50%"
        android:pivotY="50%"
        android:toDegrees="360" />

    <rotate
        android:duration="6000"
        android:fromDegrees="360"
        android:pivotX="50%"
        android:pivotY="50%"
        android:startOffset="6000"
        android:toDegrees="0" />
</set>
```

### **Slide:**

### Slide.xml

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
    <scale
        android:duration="500"
        android:fromXScale="1.0"
        android:fromYScale="1.0"
        android:interpolator="@android:anim/linear_interpolator"
        android:toXScale="1.0"
        android:toYScale="0.0" />
</set>
```

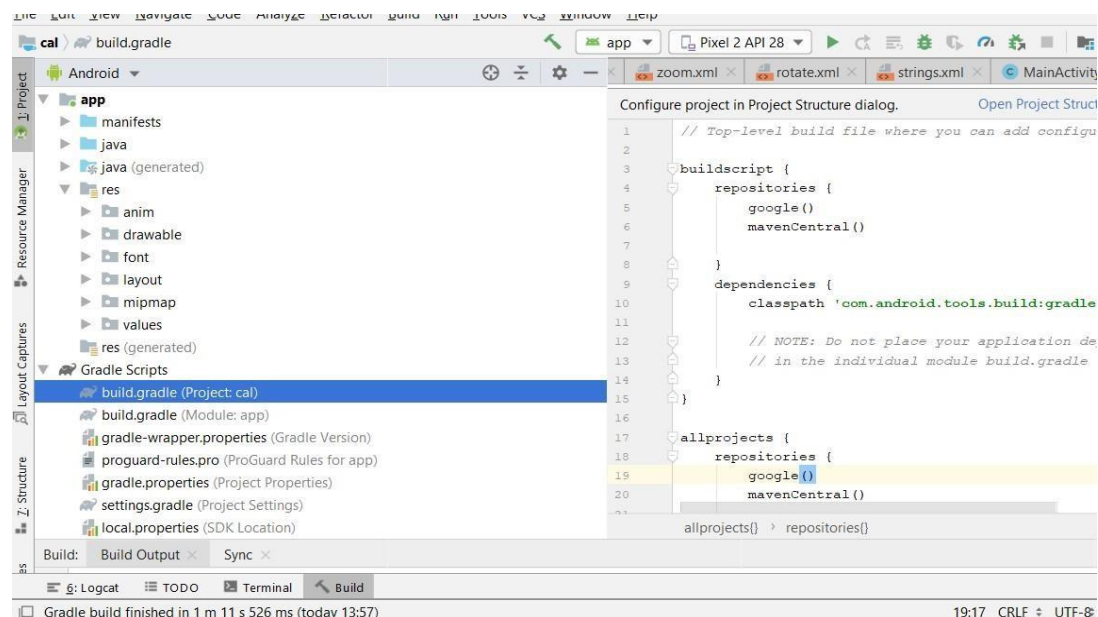
### Zoom:

#### Zoom.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android" android:fillAfter="true" >
    <scale
        android:duration="500"
        android:fromXScale="1.0"
        android:fromYScale="1.0"
        android:interpolator="@android:anim/linear_interpolator"
        android:toXScale="2.0"
        android:toYScale="2.0" />

</set>
```

**Add google repository in the build.gradle file of the application project if by default it is not there.**



### Build.gradle

*// Top-level build file where you can add configuration options common to all sub-projects/modules.*

*//only change jcenter to mavencentral()*

```
buildscript {
    repositories {
        google()
        mavenCentral()

    }
    dependencies {
        classpath 'com.android.tools.build:gradle:3.5.3'

        // NOTE: Do not place your application dependencies here; they belong
        // in the individual module build.gradle files
    }
}

allprojects {
    repositories {
        google()
        mavenCentral()

    }
}

task clean(type: Delete) {
    delete rootProject.buildDir
}
```

### **// Working with the strings.xml file**

Strings.xml can be found from the **app > res > values > strings.xml**. Below is the snippet for the **strings.xml** file.

#### **String.xml:**

```
<resources>
    <string name="app_name">Animation</string>
    <string name="blink">BLINK</string>
    <string name="clockwise">ROTATE</string>
    <string name="fade">FADE</string>
    <string name="move">MOVE</string>
    <string name="slide">SLIDE</string>
    <string name="zoom">ZOOM</string>
    <string name="stop_animation">STOP</string>

</resources>
```

#### **MainActivity.Java**

```
package com.example.cal;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.view.animation.Animation;
import android.view.animation.AnimationUtils;
import android.widget.Button;
import android.widget.ImageView;

public class MainActivity extends AppCompatActivity {

    ImageView imageView;

    Button blinkBTN, rotateBTN, fadeBTN, moveBTN, slideBTN, zoomBTN, stopBTN;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        imageView = findViewById(R.id.imageview);

        blinkBTN = findViewById(R.id.BTNblink);

        rotateBTN = findViewById(R.id.BTNrotate);

        fadeBTN = findViewById(R.id.BTNfade);

        moveBTN = findViewById(R.id.BTNmove);

        slideBTN = findViewById(R.id.BTNslide);

        zoomBTN = findViewById(R.id.BTNzoom);

        stopBTN = findViewById(R.id.BTNstop);

        blinkBTN.setOnClickListener(new View.OnClickListener() {

            @Override
            public void onClick(View v) {

                // To add blink animation

                Animation animation = AnimationUtils.loadAnimation(getApplicationContext(),
R.anim.blink);

                imageView.startAnimation(animation);

            }

        });

    }

}
```



```
});

rotateBTN.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View v) {

        // To add rotate animation

        Animation animation = AnimationUtils.loadAnimation(getApplicationContext(),
R.anim.rotate);

        imageView.startAnimation(animation);

    }

});

fadeBTN.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View v) {

        // To add fade animation

        Animation animation = AnimationUtils.loadAnimation(getApplicationContext(),
R.anim.fade);

        imageView.startAnimation(animation);

    }

});

moveBTN.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View v) {

        // To add move animation

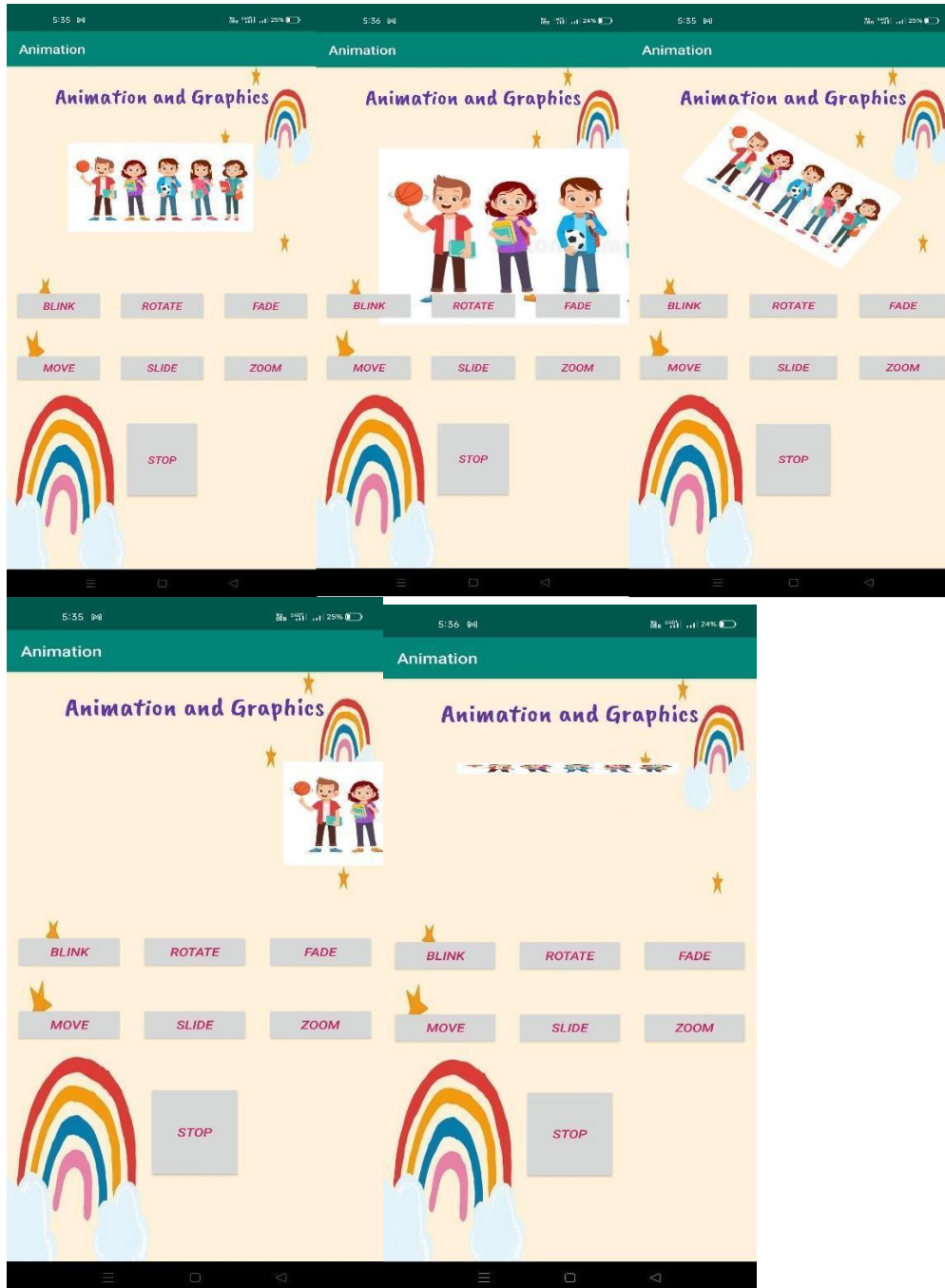
        Animation animation = AnimationUtils.loadAnimation(getApplicationContext(),
R.anim.move);

        imageView.startAnimation(animation);
```

```
    }  
  
    });  
  
    slideBTN.setOnClickListener(new View.OnClickListener() {  
  
        @Override  
  
        public void onClick(View v) {  
  
            // To add slide animation  
  
            Animation animation = AnimationUtils.loadAnimation(getApplicationContext(),  
R.anim.slide);  
  
            imageView.startAnimation(animation);  
  
        }  
  
    });  
  
    zoomBTN.setOnClickListener(new View.OnClickListener() {  
  
        @Override  
  
        public void onClick(View v) {  
  
            // To add zoom animation  
  
            Animation animation = AnimationUtils.loadAnimation(getApplicationContext(),  
R.anim.zoom);  
  
            imageView.startAnimation(animation);  
  
        }  
  
    });  
  
    stopBTN.setOnClickListener(new View.OnClickListener() {  
  
        @Override  
  
        public void onClick(View v) {  
  
            // To stop the animation going on imageview  
  
            imageView.clearAnimation();  
        }  
    });
```

```
}  
}
```

## Output:



# **EXPERIMENT NO. 8**

**Aim : Develop An Application For Working With Camera**

**Name: Ankit Singh Chauhan**

**Roll no: 64**

**Class: T.Y.BSc.IT**

**Subject: Advanced Mobile Programming**

**Marks\Grade:**

**Sign:**

### activity\_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#ACB2DB"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="8dp"
        android:layout_marginLeft="8dp"
        android:layout_marginRight="8dp"
        android:layout_marginTop="8dp"
        android:onClick="takePhotos"
        android:text="take a photo"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintHorizontal_bias="0.414"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.868"
        tools:ignore="OnClick" />

    <ImageView
        android:id="@+id/imageView"
        android:layout_width="fill_parent"
        android:layout_height="fill_parent"
        android:layout_alignParentTop="true"
        android:background="#AFC8D5"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.0"
        tools:ignore="MissingConstraints"></ImageView>
```

```
<TextView
    android:id="@+id/textView"
    android:layout_width="277dp"
    android:layout_height="69dp"
    android:layout_marginTop="224dp"
    android:gravity="start"
    android:text="Camera Example"
    android:textSize="30sp"
    app:layout_constraintBottom_toBottomOf="@+id/imageView"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.626"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.0" />

<ImageView
    android:id="@+id/imageView2"
    android:layout_width="275dp"
    android:layout_height="192dp"
    android:layout_marginTop="16dp"
    android:foregroundGravity="center"
    app:layout_constraintBottom_toTopOf="@+id/button"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.432"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView"
    app:srcCompat="@drawable/camera2" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

### MainActivity.java:

```
package com.example.cameraexample;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.graphics.Bitmap;
import android.os.Bundle;
import android.provider.MediaStore;
import android.view.View;
import android.widget.ImageView;

public class MainActivity extends AppCompatActivity {
    private static final int REQUEST_CODE = 1;
    ImageView imageView;
```

### @Override

```
protected void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
    setContentView(R.layout.activity_main);  
    imageView = (ImageView) this.findViewById(R.id.imageView);  
}
```

```
public void takePhotos(View v) {  
    Intent cameraIntent = new Intent(MediaStore.ACTION_IMAGE_CAPTURE);  
    startActivityForResult(cameraIntent, REQUEST_CODE);  
}
```

### @Override

```
protected void onActivityResult(int requestCode, int resultCode, Intent data) {  
    super.onActivityResult(requestCode, resultCode, data);  
    if (requestCode == REQUEST_CODE && resultCode == RESULT_OK && data !=  
null)  
    {  
        Bitmap photo = (Bitmap) data.getExtras().get("data");  
        imageView.setImageBitmap(photo);  
    }  
}
```

## Output:

