

# Frame Layout

- Frame Layout is designed to block out an area on the screen to display a single item.
- Generally, `FrameLayout` should be used to hold a single child view, because it can be difficult to organize child views in a way that's scalable to different screen sizes without the children overlapping each other.
- However, multiple children can be added to a `FrameLayout` and control their position within the `FrameLayout` by assigning gravity to each child, using the `android:layout_gravity` attribute.
- `FrameLayout` can become more useful when elements are hidden and displayed programmatically
- If the gravity is not set then the text would have appeared at the top left of the screen



FrameLayout

ImageView big

Imageview small

Textview

# Attributes

Sr.No	Attribute & Description
1	<b>android:id</b> This is the ID which uniquely identifies the layout.
2	<b>android:foreground</b> This defines the drawable to draw over the content and possible values may be a color value, in the form of "#rgb", "#argb", "#rrgbbb", or "#aarrgbbb".
3	<b>android:foregroundGravity</b> Defines the gravity to apply to the foreground drawable. The gravity defaults to fill. Possible values are top, bottom, left, right, center, center_vertical, center_horizontal etc.
4	<b>android:measureAllChildren</b> Determines whether to measure all children or just those in the VISIBLE or INVISIBLE state when measuring. Defaults to false.

Create an android application that displays image using frame layout and when user clicks on that image another image should display on the screen.



## activity\_main.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=".MainActivity">

    <ImageView
        android:id="@+id/imageView1"
        android:layout width="wrap content"
        android:layout height="wrap_content"
        android:scaleType="fitXY"
        android:visibility="visible"
        app:srcCompat="@drawable/image1" />

    <ImageView
        android:id="@+id/imageView2"
        android:layout width="wrap content"
        android:layout height="wrap_content"
        android:scaleType="fitXY"
        app:srcCompat="@drawable/image2" />

</FrameLayout>
```

## MainActivity.java

```
package com.example.linearlayout;

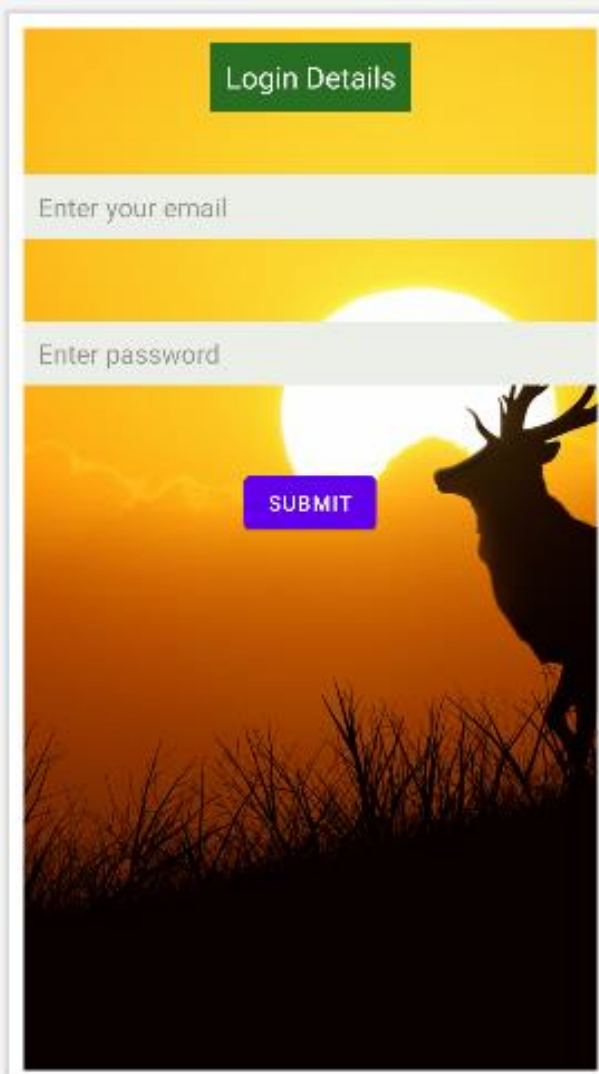
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.ImageView;

public class MainActivity3 extends AppCompatActivity {
    ImageView image1,image2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main3);
        image1=findViewById(R.id.imageView1);
        image2=findViewById(R.id.imageView2);
        //Set OnClickListener using anonymous class:
        image1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                image1.setVisibility(View.GONE);
                image2.setVisibility(View.VISIBLE);
            }
        });
    }
}
```

```
//Set OnClickListener using anonymous class:
    image2.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            image1.setVisibility(View.VISIBLE);
            image2.setVisibility(View.GONE);
        }
    });
}
```

## Design following UI using fame Layout



The image shows a mobile app login screen. The background is a vibrant sunset with a large sun partially obscured by a silhouette of a deer's head on the right. The bottom of the screen shows a silhouette of tall grass. The login form is overlaid on this background. It consists of a yellow header bar with a green button labeled 'Login Details'. Below this are two white input fields with grey placeholder text: 'Enter your email' and 'Enter password'. At the bottom of the form is a purple button labeled 'SUBMIT'.

Login Details

Enter your email

Enter password

SUBMIT



## Activity\_main.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"
    android:padding="10dp"
    tools:context=".MainActivity2">

    <ImageView
        android:id="@+id/imgvw1"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:scaleType="centerCrop"
        app:srcCompat="@drawable/nature" />

    <TextView
        android:id="@+id/txtvw1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="10dp"
        android:background="#286F24"
        android:padding="10dp"
        android:text="Login Details"
        android:textColor="#FFFFFF"
        android:textSize="20sp"
        android:layout_gravity="center_horizontal"/>
```

```
<EditText
    android:id="@+id/editText1"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="100dp"
    android:background="#ECEE8"
    android:padding="10dp"
    android:hint="Enter your email" />
```

```
<EditText
    android:id="@+id/editText2"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="200dp"
    android:background="#ECEE8"
    android:padding="10dp"
    android:hint="Enter password"/>
```

```
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text= "Submit"
    android:layout_marginTop="300dp"
    android:layout_gravity="center_horizontal"/>
```

```
</FrameLayout>
```