

Practical No.: 18

Aim: Simple Animation

Activity_main.xml

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

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/textView"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:textSize="30sp"
        android:text="@string/image_animation"/>

    <ImageView
        android:id="@+id/imageView"
        android:layout_width="325dp"
        android:layout_height="208dp"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="71dp"
        android:contentDescription="@string/flowers"
        android:src="@drawable/flower" />

    <Button
        android:id="@+id/btnExpand"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignTop="@+id/btnRotate"
        android:layout_marginLeft="17dp"
        android:layout_marginStart="17dp"
        android:text="@string/expand" />

    <Button
        android:id="@+id/btnRotate"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignTop="@+id/btnMove"
        android:layout_marginLeft="17dp"
        android:layout_marginStart="134dp"
        android:text="@string/rotate" />

    <Button
        android:id="@+id/btnMove"
        android:layout_width="wrap_content"
```

```

        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true"
        android:layout_alignParentRight="true"
        android:layout_alignParentEnd="true"
        android:layout_marginBottom="139dp"
        android:layout_marginEnd="39dp"
        android:layout_marginRight="39dp"
        android:text="@string/move" />

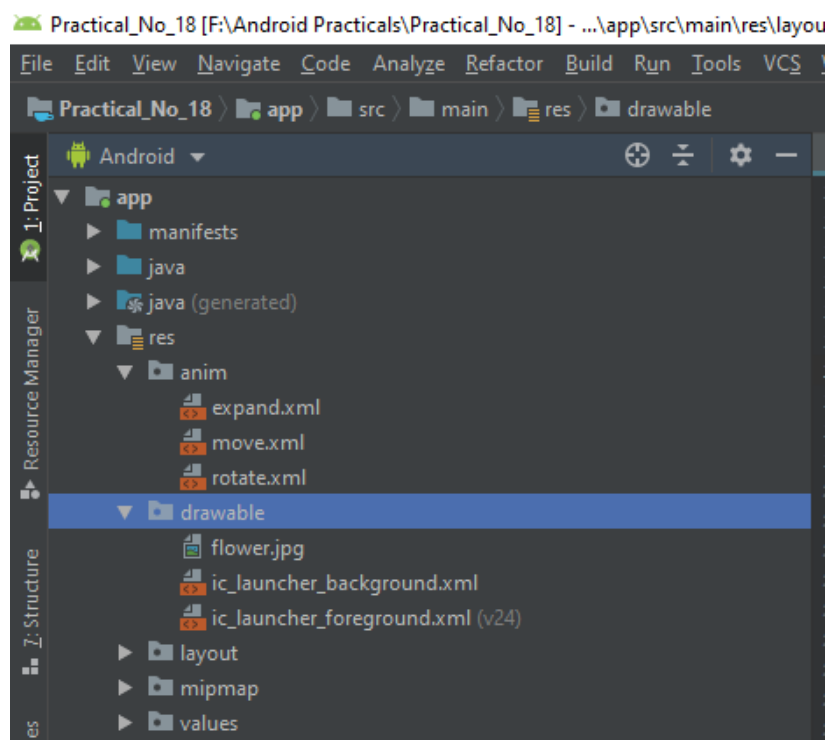
```

</RelativeLayout>

Right click on res → New → Directory → name: **anim**

Right click on **anim** folder → New Animation Resource file → **expand, rotate, move**

Right Click on drawable folder → paste an image



Expand.xml

```

<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
    <scale
        android:duration="1000"
        android:fromXScale="1"
        android:fromYScale="1"
        android:pivotX="50%"
        android:pivotY="50%"
        android:toXScale="3"
        android:toYScale="3" >
    </scale>
</set>

```

Move.xml

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:tools="http://schemas.android.com/tools"
    xmlns:android="http://schemas.android.com/apk/res/android"
    tools:ignore="ExtraText">
    android:interpolator="@android:anim/linear_interpolator"
    android:fillAfter="true">
    <translate
        android:fromXDelta="0%p"
        android:toXDelta="75%p"
        android:duration="800" />
</set>
```

Rotate.xml

```
<?xml version="1.0" encoding="utf-8"?>
<set xmlns:android="http://schemas.android.com/apk/res/android">
    <rotate android:fromDegrees="0"
        android:toDegrees="360"
        android:pivotX="50%"
        android:pivotY="50%"
        android:duration="600"
        android:repeatMode="restart"
        android:repeatCount="infinite"
        android:interpolator="@android:anim/cycle_interpolator"/>
</set>
```

MainActivity.java

```
package com.example.practical_no_18;

import androidx.appcompat.app.AppCompatActivity;
import android.graphics.Bitmap;
import android.graphics.drawable.BitmapDrawable;
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 {

    Button btnExpand, btnRotate, btnMove;
    Animation animExpand, animRotate, animMove;
    ImageView imageView;
    private Bitmap bmp;
    private Bitmap operation;

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

```

btnExpand=findViewById(R.id.btnExpand);
btnRotate=findViewById(R.id.btnRotate);
btnMove=findViewById(R.id.btnMove);

imageView=findViewById(R.id.imageView);
BitmapDrawable abmp= (BitmapDrawable) imageView.getDrawable();
bmp=abmp.getBitmap();

//Expand
animExpand= AnimationUtils.loadAnimation(getApplicationContext(),R.anim.expand);
btnExpand.setOnClickListener(
    new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            imageView.setVisibility(View.VISIBLE);
            imageView.startAnimation(animExpand);
        }
    }
);

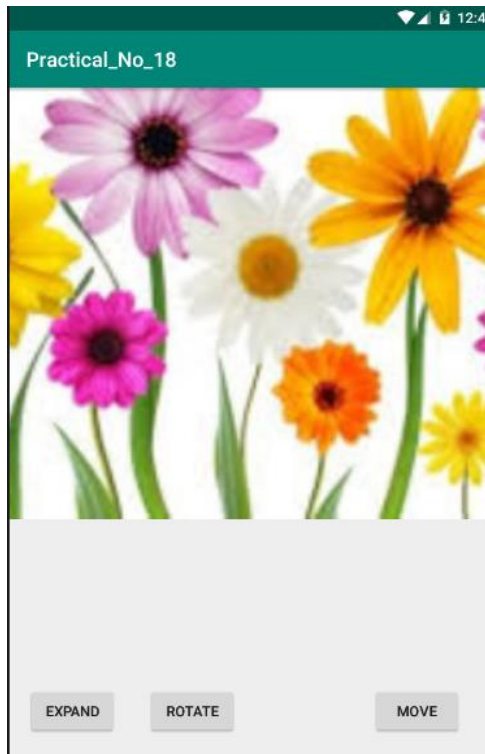
//Rotate
animRotate=AnimationUtils.loadAnimation(getApplicationContext(),R.anim.rotate);
btnRotate.setOnClickListener(
    new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            imageView.startAnimation(animRotate);
        }
    }
);

//Move
animMove=AnimationUtils.loadAnimation(getApplicationContext(),R.anim.move);
btnMove.setOnClickListener(
    new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            imageView.startAnimation(animMove);
        }
    }
);
}
}

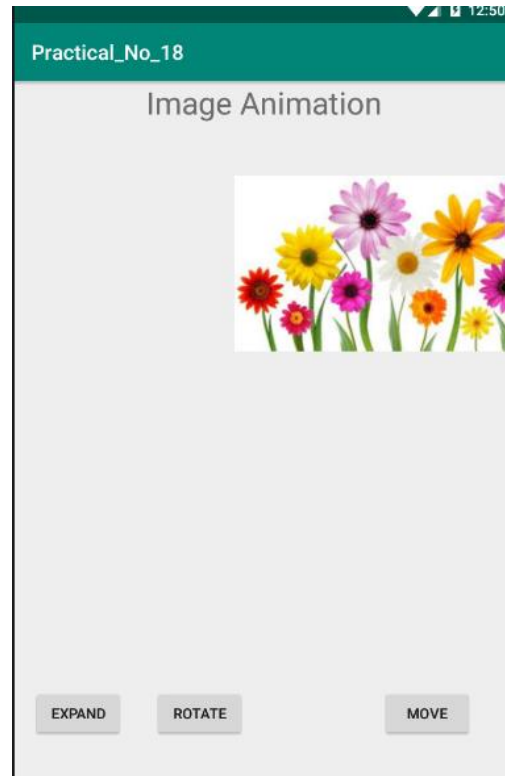
```

Output:

Expand



Move



Rotate

