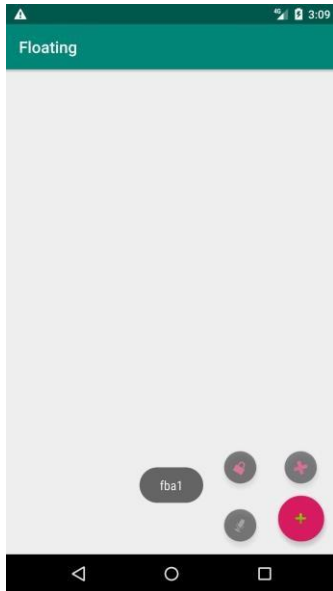


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1. Design a Floating action button demo. Initially only the pink button should display when the the pink button is click the rest of the three buttons should be displayed. When each button is clicked then taost message should be displayed. When the pink button is pressed again the three buttons should hide.



Activity_main.xml:

```
package com.example.fab;
import androidx.appcompat.app.AppCompatActivity;
import android.annotation.SuppressLint;
import android.os.Bundle;
import android.view.View;
import android.view.animation.Animation;
import android.view.animation.AnimationUtils;
import android.widget.Toast;

import
```

```

com.google.android.material.floatingactionbutton.FloatingActionButton;
public class MainActivity extends AppCompatActivity {
    Animation fab_open, fab_close, fab_clock, fab_counterclockwise;
    FloatingActionButton fab_plus, fab_audio, fab_camera, fab_cal;
    boolean isOpen, isClose;
    @SuppressWarnings("ResourceType")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        fab_plus = (FloatingActionButton)
findViewById(R.id.floatingActionButton1);
        fab_audio = (FloatingActionButton)
findViewById(R.id.floatingActionButton2);
        fab_audio.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Toast.makeText(getApplicationContext(), "audio",
Toast.LENGTH_LONG).show();
            }
        });
        fab_camera = (FloatingActionButton)
findViewById(R.id.floatingActionButton3);
        fab_camera.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Toast.makeText(getApplicationContext(), "camera",
Toast.LENGTH_LONG).show();
            }
        });
        fab_cal = (FloatingActionButton)
findViewById(R.id.floatingActionButton4);
        fab_cal.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Toast.makeText(getApplicationContext(), "cal",
Toast.LENGTH_LONG).show();
            }
        });
        fab_open = AnimationUtils.loadAnimation(getApplicationContext(),
R.anim.fab_open);
        fab_close =
AnimationUtils.loadAnimation(getApplicationContext(), R.anim.fab_close);
        fab_clock =
AnimationUtils.loadAnimation(getApplicationContext(), R.anim.fab_clock);
        fab_counterclockwise =
AnimationUtils.loadAnimation(getApplicationContext(), R.anim.fab_counterclockwise);
        fab_plus.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if (!isOpen)
                {
                    fab_audio.startAnimation(fab_open);
                    fab_camera.startAnimation(fab_open);
                    fab_cal.startAnimation(fab_open);
                    fab_plus.startAnimation(fab_clock);
                    fab_audio.setClickable(true);
                    fab_camera.setClickable(true);
                    fab_cal.setClickable(true);
                    isOpen = true;
                } else {

```

```
        fab_audio.startAnimation(fab_close);
        fab_camera.startAnimation(fab_close);
        fab_cal.startAnimation(fab_close);
        fab_plus.startAnimation(fab_anticlockwise);
        fab_audio.setClickable(false);
        fab_camera.setClickable(false);
        fab_cal.setClickable(false);
        isOpen = false;
    }
}
});
}
```

fab_open.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"
    tools:context=".MainActivity">
    <TextView
        android:id="@+id/textView"
        android:layout_width="253dp"
        android:layout_height="42dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginStart="90dp"
        android:layout_marginTop="27dp"
        android:text="Floating Action Button"
        android:textColor="#9C27B0"
        android:textSize="24sp" />
    <com.google.android.material.floatingactionbutton.FloatingActionButton
        android:id="@+id/floatingActionButton1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="36dp"
        android:layout_marginBottom="29dp"
        android:clickable="true"
        app:srcCompat="@android:drawable/ic_input_add" />
    <com.google.android.material.floatingactionbutton.FloatingActionButton
        android:id="@+id/floatingActionButton2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="35dp"
        android:layout_marginBottom="121dp"
        android:clickable="true"
        app:srcCompat="@android:drawable/presence_audio_online" />

    <com.google.android.material.floatingactionbutton.FloatingActionButton
        android:id="@+id/floatingActionButton3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="132dp"
        android:layout_marginBottom="124dp"
        android:clickable="true"
        app:srcCompat="@android:drawable/ic_menu_camera" />

    <com.google.android.material.floatingactionbutton.FloatingActionButton
        android:id="@+id/floatingActionButton4"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="133dp"
        android:layout_marginBottom="36dp"
        android:clickable="true"
        app:srcCompat="@android:drawable/ic_menu_my_calendar" />
</RelativeLayout>
```

fab_close.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"
    tools:context=".MainActivity">
    <TextView
        android:id="@+id/textView"
        android:layout_width="253dp"
        android:layout_height="42dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginStart="90dp"
        android:layout_marginTop="27dp"
        android:text="Floating Action Button"
        android:textColor="#9C27B0"
        android:textSize="24sp" />
    <com.google.android.material.floatingactionbutton.FloatingActionButton
        android:id="@+id/floatingActionButton1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="36dp"
        android:layout_marginBottom="29dp"
        android:clickable="true"
        app:srcCompat="@android:drawable/ic_input_add" />
    <com.google.android.material.floatingactionbutton.FloatingActionButton
        android:id="@+id/floatingActionButton2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="35dp"
        android:layout_marginBottom="121dp"
        android:clickable="true"
        app:srcCompat="@android:drawable/presence_audio_online" />
    <com.google.android.material.floatingactionbutton.FloatingActionButton
        android:id="@+id/floatingActionButton3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="132dp"
        android:layout_marginBottom="124dp"
        android:clickable="true"
        app:srcCompat="@android:drawable/ic_menu_camera" />
    <com.google.android.material.floatingactionbutton.FloatingActionButton
        android:id="@+id/floatingActionButton4"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentEnd="true"
        android:layout_alignParentBottom="true"
        android:layout_marginEnd="133dp"
        android:layout_marginBottom="36dp"
        android:clickable="true"
        app:srcCompat="@android:drawable/ic_menu_my_calendar" />
</RelativeLayout>
```

fab_clock.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<set
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:fillAfter="true"
    android:interpolator="@android:anim/linear_interpolator">
    <rotate
        android:duration="500" android:fromDegrees="0"
        android:toDegrees="45" android:pivotX="50%" android:pivotY="50%"/>
    </set>
```

fab_anticlock.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<set
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:fillAfter="true"
    android:interpolator="@android:anim/linear_interpolator">
    <rotate
        android:duration="500" android:fromDegrees="45"
        android:toDegrees="0" android:pivotX="50%" android:pivotY="50%"/>
    </set>
```

MainaActivity.java:

```
package com.example.fab;
import androidx.appcompat.app.AppCompatActivity;
import android.annotation.SuppressLint;
import android.os.Bundle;
import android.view.View;
import android.view.animation.Animation; import
android.view.animation.AnimationUtils; import android.widget.Toast;

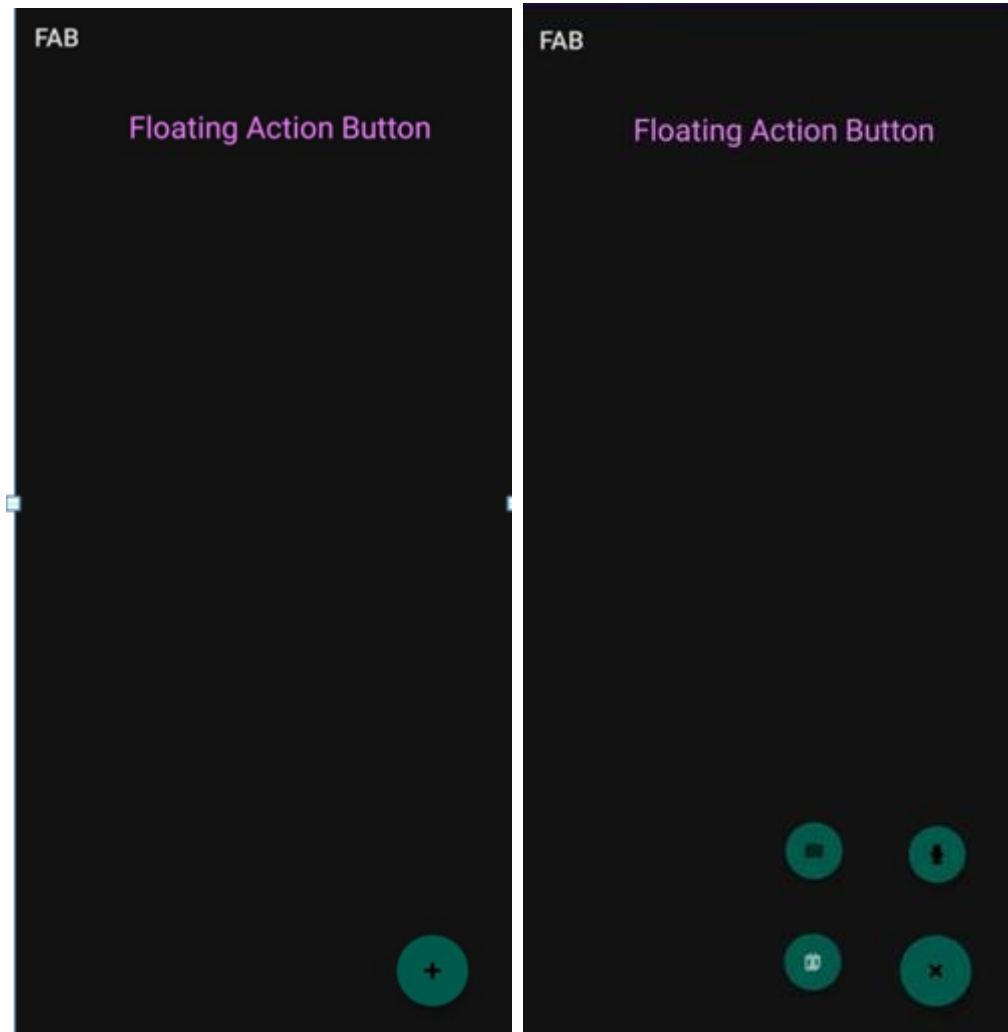
import
com.google.android.material.floatingactionbutton.FloatingActionButton;
public class MainActivity extends AppCompatActivity {
    Animation fab_open, fab_close, fab_clock, fab_anticlockwise;
    FloatingActionButton fab_plus, fab_audio, fab_camera, fab_cal; boolean isOpen,
    isClose;
    @SuppressLint("ResourceType") @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState); setContentView(R.layout.activity_main);
        fab_plus = (FloatingActionButton)
            findViewById(R.id.floatingActionButton1);
        fab_audio = (FloatingActionButton)
            findViewById(R.id.floatingActionButton2);
        fab_audio.setOnClickListener(new View.OnClickListener() { @Override
            public void onClick(View view) {
                Toast.makeText(getApplicationContext(), "audio",
                    Toast.LENGTH_LONG).show();
            }
        });
        fab_camera = (FloatingActionButton)
            findViewById(R.id.floatingActionButton3);
        fab_camera.setOnClickListener(new View.OnClickListener() { @Override
            public void onClick(View view) {
                Toast.makeText(getApplicationContext(), "camera",
                    Toast.LENGTH_LONG).show();
            }
        });
        fab_cal = (FloatingActionButton)
```

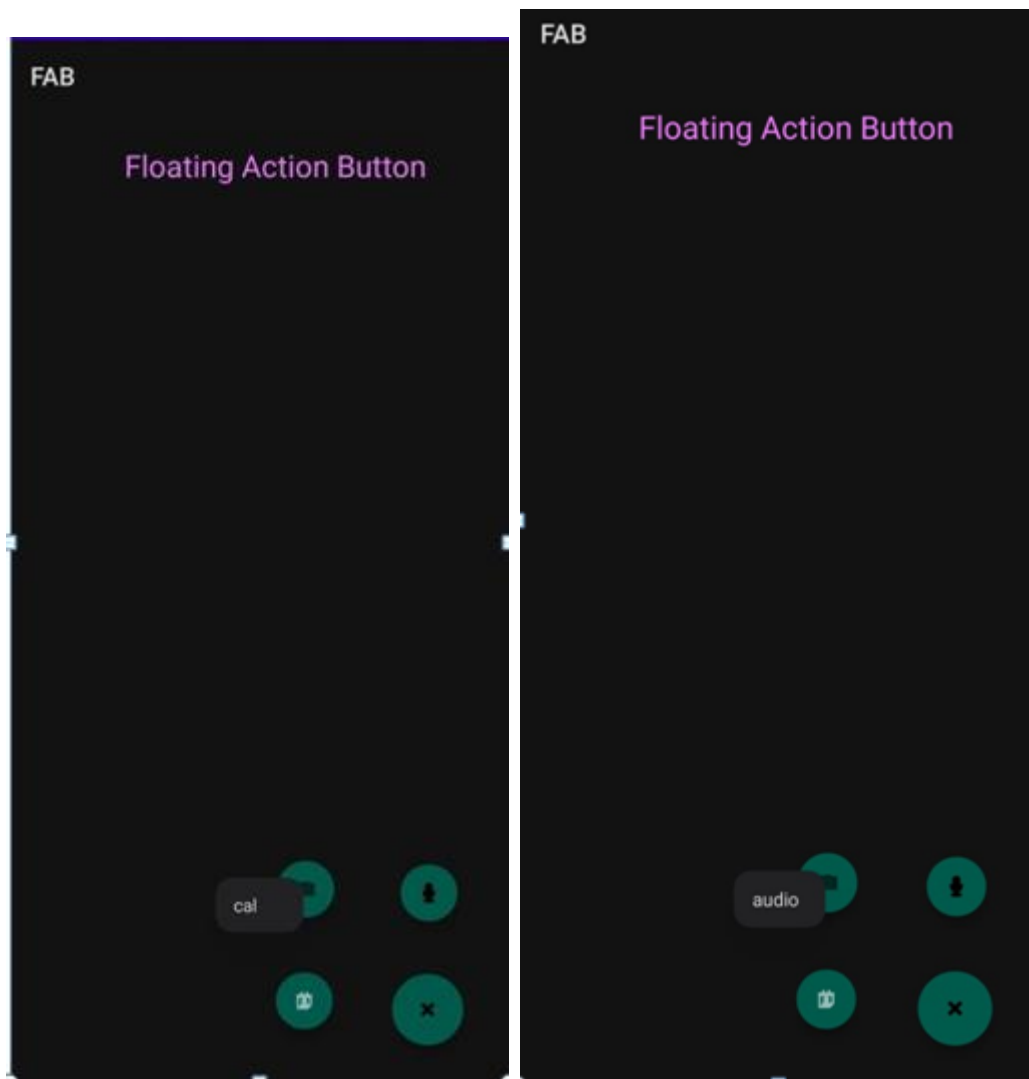
```

findViewById(R.id.floatingActionButton4);
    fab_cal.setOnClickListener(new View.OnClickListener() { @Override
    public void onClick(View view) {
Toast.makeText(getApplicationContext(), "cal",
    Toast.LENGTH_LONG).show();
    }
    });
    fab_open = AnimationUtils.loadAnimation(getApplicationContext(),
R.anim.fab_open);
    fab_close =
AnimationUtils.loadAnimation(getApplicationContext(),R.anim.fab_close);
    fab_clock =
AnimationUtils.loadAnimation(getApplicationContext(),R.anim.fab_clock);
    fab_anticlockwise =
AnimationUtils.loadAnimation(getApplicationContext(),R.anim.fab_anticlock);
    fab_plus.setOnClickListener(new View.OnClickListener() { @Override
    public void onClick(View v) {
        if (!isOpen)
        {
            fab_audio.startAnimation(fab_open);
fab_camera.startAnimation(fab_open); fab_cal.startAnimation(fab_open);
fab_plus.startAnimation(fab_clock); fab_audio.setClickable(true);
fab_camera.setClickable(true); fab_cal.setClickable(true);
            isOpen = true;
        } else {
            fab_audio.startAnimation(fab_close);
fab_camera.startAnimation(fab_close); fab_cal.startAnimation(fab_close);
fab_plus.startAnimation(fab_anticlockwise); fab_audio.setClickable(false);
fab_camera.setClickable(false); fab_cal.setClickable(false);
            isOpen = false;
        }
    }
    });
}
}

```

Output:





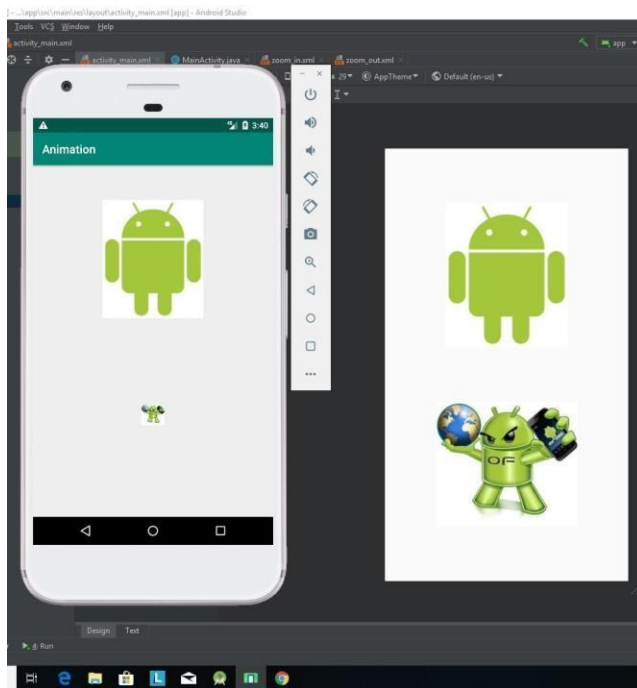
FAB

Floating Action Button

camera



2. Design an App to scale one image big and one image small and vice versa.



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">

    <ImageView
        android:id="@+id/imageView2" android:layout_width="0dp"
        android:layout_height="0dp" android:layout_marginTop="96dp"
        android:layout_marginBottom="91dp"
        app:layout_constraintBottom_toTopOf="@+id/imageView3"
        app:layout_constraintStart_toStartOf="@+id/imageView3"
        app:layout_constraintTop_toTopOf="parent"
        app:srcCompat="@android:drawable/star_big_on" />

    <ImageView
        android:id="@+id/imageView3" android:layout_width="124dp"
        android:layout_height="0dp" android:layout_marginBottom="149dp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/imageView2"

        app:srcCompat="@android:drawable/star_big_off" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

anime.xml :

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

    <scale android:fromXScale="50dp" android:fromYScale="50dp"
        android:pivotX="25%" android:pivotY="25%" android:toXScale="250dp"
        android:toYScale="250dp" android:duration="5000"/>
```

```
</set>
```

anime1.xml :

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

    <scale android:fromXScale="250dp" android:fromYScale="250dp"
    android:pivotX="75%" android:pivotY="75%" android:toXScale="50dp"
    android:toYScale="50dp" android:duration="5000"/>
</set>
```

anime2.xml :

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

    <scale android:fromXScale="250dp" android:fromYScale="250dp"
    android:pivotX="75%" android:pivotY="75%" android:toXScale="50dp"
    android:toYScale="50dp" android:duration="5000"/>
</set>
```

anime3.xml :

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

    <scale android:fromXScale="50dp" android:fromYScale="50dp"
    android:pivotX="25%" android:pivotY="25%" android:toXScale="250dp"

        android:toYScale="250dp" android:duration="5000"/>

</set>
```

Mainactivity.java :

```
package com.example.animation;

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.ImageView;

public class MainActivity extends AppCompatActivity { ImageView a1,a2;
    int flag=0; @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState); setContentView(R.layout.activity_main);
        a1=findViewById(R.id.imageView2); a2=findViewById(R.id.imageView3);
    }

    public void res(View view)
    {
        if(flag==0) {
            Animation obj =
            AnimationUtils.loadAnimation(getApplicationContext(), R.anim.anime);
            Animation obj1 =
            AnimationUtils.loadAnimation(getApplicationContext(), R.anim.anime1);
            a1.startAnimation(obj); a2.startAnimation(obj1); flag=1;
        }
    }
}
```

```
        else
        {
            Animation obj =
            AnimationUtils.loadAnimation(getApplicationContext(), R.anim.anime2);
            Animation obj1 =
            AnimationUtils.loadAnimation(getApplicationContext(), R.anim.anime3);
            a1.startAnimation(obj); a2.startAnimation(obj1); flag=0;
        }
    }
}
```

output :

Animation



Animation

