HỌ VÀ TÊN: NGUYỄN LÊ NGỌC CHÂU

LỚP: 11\_ĐH\_TTTMT

MSSV: 1150070003

BÀI TẬP LÝ THUYẾT BUỔI 6

I. SỬ DỤNG ANIMATION TỪ FILE XML

1. Tạo file dimens.xml

<?xml version="1.0" encoding="utf-8"?>  
<resources>  
 <dimen name="margin\_base">5dp</dimen>  
 <dimen name="margin\_basex2">10dp</dimen>  
 <dimen name="text\_medium">16sp</dimen>  
 <dimen name="image\_base">100dp</dimen>  
</resources>

2. Nhập dữ liệu cho file string.xml

<resources>  
 <string name="app\_name">NguyenLeNgocChau\_1150070003\_BTLT6</string>  
 <string name="from\_xml">From XML</string>  
 <string name="from\_code">From CODE</string>  
 <string name="fade\_in">Fade In</string>  
 <string name="fade\_out">Fade Out</string>  
 <string name="blink">Blink</string>  
 <string name="zoom\_in">Zoom In</string>  
 <string name="zoom\_out">Zoom Out</string>  
 <string name="rotate">Rotate</string>  
 <string name="move">Move</string>  
 <string name="slide\_up">Slide Up</string>  
 <string name="bounce">Bounce</string>  
 <string name="combine">Combine</string>  
</resources>

3. Trong folder res, tạo thêm 1 folder con tên anim, trong đó chứa file anim\_fade\_in.xml

<?xml version="1.0" encoding="utf-8"?>  
<set xmlns:android="http://schemas.android.com/apk/res/android"  
 android:fillAfter="true" >  
 <alpha  
 android:duration="1000"  
 android:fromAlpha="0.0"  
 android:toAlpha="1.0" />  
</set>

Ảnh có chứa văn bản, ảnh chụp màn hình, Phông chữ

Nội dung do AI tạo ra có thể không chính xác.

4. Tạo file layout

<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout 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"  
 android:orientation="vertical"  
 tools:context=".MainActivity">  
  
 <FrameLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="0dp"  
 android:layout\_weight="6">  
 <ImageView  
 android:id="@+id/iv\_uit\_logo"  
 android:layout\_width="@dimen/image\_base"  
 android:layout\_height="@dimen/image\_base"  
 android:layout\_gravity="center"  
 android:scaleType="fitCenter"  
 android:src="@mipmap/ic\_launcher"/>  
 </FrameLayout>  
  
 <LinearLayout  
 android:layout\_marginTop="@dimen/margin\_basex2"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:orientation="horizontal">  
  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/from\_xml"  
 android:gravity="center"  
 android:textStyle="bold"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
  
 <TextView  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/from\_code"  
 android:textStyle="bold"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 </LinearLayout>  
  
 <!-- Các Button cho animation -->  
 <ScrollView  
 android:layout\_width="match\_parent"  
 android:layout\_height="0dp"  
 android:layout\_weight="5">  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:orientation="vertical">  
  
 <!-- Fade In -->  
 <LinearLayout  
 android:layout\_marginTop="@dimen/margin\_base"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:orientation="horizontal">  
 <Button  
 android:id="@+id/btn\_fade\_in\_xml"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/fade\_in"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 <Button  
 android:id="@+id/btn\_fade\_in\_code"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/fade\_in"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 </LinearLayout>  
  
 <!-- Fade Out -->  
 <LinearLayout  
 android:layout\_marginTop="@dimen/margin\_base"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:orientation="horizontal">  
 <Button  
 android:id="@+id/btn\_fade\_out\_xml"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/fade\_out"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 <Button  
 android:id="@+id/btn\_fade\_out\_code"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/fade\_out"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 </LinearLayout>  
  
 <!-- Blink -->  
 <LinearLayout  
 android:layout\_marginTop="@dimen/margin\_base"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:orientation="horizontal">  
 <Button  
 android:id="@+id/btn\_blink\_xml"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/blink"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 <Button  
 android:id="@+id/btn\_blink\_code"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/blink"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 </LinearLayout>  
  
 <!-- Zoom In -->  
 <LinearLayout  
 android:layout\_marginTop="@dimen/margin\_base"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:orientation="horizontal">  
 <Button  
 android:id="@+id/btn\_zoom\_in\_xml"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/zoom\_in"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 <Button  
 android:id="@+id/btn\_zoom\_in\_code"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/zoom\_in"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 </LinearLayout>  
  
 <!-- Zoom Out -->  
 <LinearLayout  
 android:layout\_marginTop="@dimen/margin\_base"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:orientation="horizontal">  
 <Button  
 android:id="@+id/btn\_zoom\_out\_xml"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/zoom\_out"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 <Button  
 android:id="@+id/btn\_zoom\_out\_code"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/zoom\_out"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 </LinearLayout>  
  
 <!-- Rotate -->  
 <LinearLayout  
 android:layout\_marginTop="@dimen/margin\_base"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:orientation="horizontal">  
 <Button  
 android:id="@+id/btn\_rotate\_xml"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/rotate"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 <Button  
 android:id="@+id/btn\_rotate\_code"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/rotate"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 </LinearLayout>  
  
 <!-- Move -->  
 <LinearLayout  
 android:layout\_marginTop="@dimen/margin\_base"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:orientation="horizontal">  
 <Button  
 android:id="@+id/btn\_move\_xml"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/move"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 <Button  
 android:id="@+id/btn\_move\_code"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/move"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 </LinearLayout>  
  
 <!-- Slide Up -->  
 <LinearLayout  
 android:layout\_marginTop="@dimen/margin\_base"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:orientation="horizontal">  
 <Button  
 android:id="@+id/btn\_slide\_up\_xml"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/slide\_up"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 <Button  
 android:id="@+id/btn\_slide\_up\_code"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/slide\_up"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 </LinearLayout>  
  
 <!-- Bounce -->  
 <LinearLayout  
 android:layout\_marginTop="@dimen/margin\_base"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:orientation="horizontal">  
 <Button  
 android:id="@+id/btn\_bounce\_xml"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/bounce"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 <Button  
 android:id="@+id/btn\_bounce\_code"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/bounce"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 </LinearLayout>  
  
 <!-- Combine -->  
 <LinearLayout  
 android:layout\_marginTop="@dimen/margin\_base"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:orientation="horizontal">  
 <Button  
 android:id="@+id/btn\_combine\_xml"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/combine"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 <Button  
 android:id="@+id/btn\_combine\_code"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:text="@string/combine"  
 android:gravity="center"  
 android:layout\_marginRight="@dimen/margin\_base"/>  
 </LinearLayout>  
  
 </LinearLayout>  
 </ScrollView>  
</LinearLayout>

5. Trong MainActivity

package com.example.nguyenlengocchau\_1150070003\_btlt6;  
  
import android.animation.Animator;  
import android.animation.AnimatorListenerAdapter;  
import android.os.Bundle;  
import android.view.animation.Animation;  
import android.view.animation.AnimationUtils;  
import android.widget.Button;  
import android.widget.ImageView;  
import android.widget.Toast;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity {  
  
 private Button btnFadeInXml, btnFadeInCode, btnFadeOutXml, btnFadeOutCode,  
 btnBlinkXml, btnBlinkCode, btnZoomInXml, btnZoomInCode, btnZoomOutXml,  
 btnZoomOutCode, btnRotateXml, btnRotateCode, btnMoveXml, btnMoveCode,  
 btnSlideUpXml, btnSlideUpCode, btnBounceXml, btnBounceCode, btnCombineXml, btnCombineCode;  
 private ImageView ivUitLogo;  
 private Animation.AnimationListener animationListener;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 // Gọi phương thức để ánh xạ các view  
 findViewsByIds();  
  
 // Gọi phương thức xử lý animation cho các button  
 handleClickAnimationXml(btnFadeInXml, R.anim.*anim\_fade\_in*); // Fade In từ XML  
 handleClickAnimationXml(btnFadeOutXml, R.anim.*anim\_fade\_out*); // Fade Out từ XML  
 handleClickAnimationXml(btnBlinkXml, R.anim.*anim\_blink*); // Blink từ XML  
 handleClickAnimationXml(btnZoomInXml, R.anim.*anim\_zoom\_in*); // Zoom In từ XML  
 handleClickAnimationXml(btnZoomOutXml, R.anim.*anim\_zoom\_out*); // Zoom Out từ XML  
 handleClickAnimationXml(btnRotateXml, R.anim.*anim\_rotate*); // Rotate từ XML  
 handleClickAnimationXml(btnMoveXml, R.anim.*anim\_move*); // Move từ XML  
 handleClickAnimationXml(btnSlideUpXml, R.anim.*anim\_slide\_up*); // Slide Up từ XML  
 handleClickAnimationXml(btnBounceXml, R.anim.*anim\_bounce*); // Bounce từ XML  
 handleClickAnimationXml(btnCombineXml, R.anim.*anim\_combine*); // Combine từ XML  
  
 // Sự kiện cho các button khác có thể được thêm tương tự nếu cần  
 }  
  
 // Phương thức để ánh xạ các view vào các biến  
 private void findViewsByIds() {  
 ivUitLogo = findViewById(R.id.*iv\_uit\_logo*);  
 btnFadeInXml = findViewById(R.id.*btn\_fade\_in\_xml*);  
 btnFadeInCode = findViewById(R.id.*btn\_fade\_in\_code*);  
 btnFadeOutXml = findViewById(R.id.*btn\_fade\_out\_xml*);  
 btnFadeOutCode = findViewById(R.id.*btn\_fade\_out\_code*);  
 btnBlinkXml = findViewById(R.id.*btn\_blink\_xml*);  
 btnBlinkCode = findViewById(R.id.*btn\_blink\_code*);  
 btnZoomInXml = findViewById(R.id.*btn\_zoom\_in\_xml*);  
 btnZoomInCode = findViewById(R.id.*btn\_zoom\_in\_code*);  
 btnZoomOutXml = findViewById(R.id.*btn\_zoom\_out\_xml*);  
 btnZoomOutCode = findViewById(R.id.*btn\_zoom\_out\_code*);  
 btnRotateXml = findViewById(R.id.*btn\_rotate\_xml*);  
 btnRotateCode = findViewById(R.id.*btn\_rotate\_code*);  
 btnMoveXml = findViewById(R.id.*btn\_move\_xml*);  
 btnMoveCode = findViewById(R.id.*btn\_move\_code*);  
 btnSlideUpXml = findViewById(R.id.*btn\_slide\_up\_xml*);  
 btnSlideUpCode = findViewById(R.id.*btn\_slide\_up\_code*);  
 btnBounceXml = findViewById(R.id.*btn\_bounce\_xml*);  
 btnBounceCode = findViewById(R.id.*btn\_bounce\_code*);  
 btnCombineXml = findViewById(R.id.*btn\_combine\_xml*);  
 btnCombineCode = findViewById(R.id.*btn\_combine\_code*);  
 }  
  
 // Phương thức khởi tạo AnimationListener  
 private void initVariables() {  
 animationListener = new Animation.AnimationListener() {  
 @Override  
 public void onAnimationStart(Animation animation) {  
 // Xử lý khi animation bắt đầu  
 }  
  
 @Override  
 public void onAnimationEnd(Animation animation) {  
 Toast.*makeText*(getApplicationContext(), "Animation Stopped", Toast.*LENGTH\_SHORT*).show();  
 }  
  
 @Override  
 public void onAnimationRepeat(Animation animation) {  
 // Xử lý khi animation lặp lại  
 }  
 };  
 }  
  
 // Phương thức để xử lý click animation từ XML  
 private void handleClickAnimationXml(Button btn, final int animId) {  
 btn.setOnClickListener(v -> {  
 Animation animation = AnimationUtils.*loadAnimation*(MainActivity.this, animId);  
 ivUitLogo.startAnimation(animation);  
 });  
 }  
}

II. Sử dụng Amination từ code

package com.example.nguyenlengocchau\_1150070003\_btlt6;  
  
import android.animation.Animator;  
import android.animation.AnimatorListenerAdapter;  
import android.os.Bundle;  
import android.view.animation.Animation;  
import android.view.animation.AlphaAnimation;  
import android.view.animation.AnimationUtils;  
import android.widget.Button;  
import android.widget.ImageView;  
import android.widget.Toast;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity {  
  
 private Button btnFadeInCode, btnFadeOutCode, btnBlinkCode, btnZoomInCode, btnZoomOutCode, btnRotateCode, btnMoveCode, btnBounceCode, btnCombineCode;  
 private ImageView ivUitLogo;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 // Gọi phương thức để ánh xạ các view  
 findViewsByIds();  
  
 // Sự kiện cho các button - Fade In từ code  
 btnFadeInCode.setOnClickListener(v -> {  
 Animation fadeIn = new AlphaAnimation(0.0f, 1.0f);  
 fadeIn.setDuration(1000);  
 ivUitLogo.startAnimation(fadeIn);  
 });  
  
 // Sự kiện cho các button - Fade Out từ code  
 btnFadeOutCode.setOnClickListener(v -> {  
 Animation fadeOut = new AlphaAnimation(1.0f, 0.0f);  
 fadeOut.setDuration(1000);  
 ivUitLogo.startAnimation(fadeOut);  
 });  
  
 // Sự kiện cho các button - Blink từ code  
 btnBlinkCode.setOnClickListener(v -> {  
 Animation blink = new AlphaAnimation(0.0f, 1.0f);  
 blink.setDuration(300);  
 blink.setRepeatMode(Animation.*REVERSE*);  
 blink.setRepeatCount(3);  
 ivUitLogo.startAnimation(blink);  
 });  
  
 // Sự kiện cho các button - Zoom In từ code  
 btnZoomInCode.setOnClickListener(v -> {  
 Animation zoomIn = new android.view.animation.ScaleAnimation(1.0f, 3.0f, 1.0f, 3.0f);  
 zoomIn.setDuration(1000);  
 ivUitLogo.startAnimation(zoomIn);  
 });  
  
 // Sự kiện cho các button - Zoom Out từ code  
 btnZoomOutCode.setOnClickListener(v -> {  
 Animation zoomOut = new android.view.animation.ScaleAnimation(1.0f, 0.5f, 1.0f, 0.5f);  
 zoomOut.setDuration(1000);  
 ivUitLogo.startAnimation(zoomOut);  
 });  
  
 // Sự kiện cho các button - Rotate từ code  
 btnRotateCode.setOnClickListener(v -> {  
 android.view.animation.RotateAnimation rotate = new android.view.animation.RotateAnimation(0, 360,  
 Animation.*RELATIVE\_TO\_SELF*, 0.5f, Animation.*RELATIVE\_TO\_SELF*, 0.5f);  
 rotate.setDuration(1000);  
 ivUitLogo.startAnimation(rotate);  
 });  
  
 // Sự kiện cho các button - Move từ code  
 btnMoveCode.setOnClickListener(v -> {  
 Animation move = new android.view.animation.TranslateAnimation(0, 200, 0, 0);  
 move.setDuration(1000);  
 ivUitLogo.startAnimation(move);  
 });  
  
 // Sự kiện cho các button - Bounce từ code  
 btnBounceCode.setOnClickListener(v -> {  
 android.view.animation.ScaleAnimation bounce = new android.view.animation.ScaleAnimation(1.0f, 1.5f, 1.0f, 1.5f);  
 bounce.setDuration(500);  
 bounce.setRepeatMode(Animation.*REVERSE*);  
 bounce.setRepeatCount(2);  
 ivUitLogo.startAnimation(bounce);  
 });  
  
 // Sự kiện cho các button - Combine từ code  
 btnCombineCode.setOnClickListener(v -> {  
 android.view.animation.ScaleAnimation scale = new android.view.animation.ScaleAnimation(1.0f, 3.0f, 1.0f, 3.0f);  
 scale.setDuration(1000);  
  
 android.view.animation.RotateAnimation rotate = new android.view.animation.RotateAnimation(0, 360,  
 Animation.*RELATIVE\_TO\_SELF*, 0.5f, Animation.*RELATIVE\_TO\_SELF*, 0.5f);  
 rotate.setDuration(500);  
  
 android.view.animation.AnimationSet animationSet = new android.view.animation.AnimationSet(true);  
 animationSet.addAnimation(scale);  
 animationSet.addAnimation(rotate);  
 ivUitLogo.startAnimation(animationSet);  
 });  
 }  
  
 // Phương thức ánh xạ các view  
 private void findViewsByIds() {  
 ivUitLogo = findViewById(R.id.*iv\_uit\_logo*);  
 btnFadeInCode = findViewById(R.id.*btn\_fade\_in\_code*);  
 btnFadeOutCode = findViewById(R.id.*btn\_fade\_out\_code*);  
 btnBlinkCode = findViewById(R.id.*btn\_blink\_code*);  
 btnZoomInCode = findViewById(R.id.*btn\_zoom\_in\_code*);  
 btnZoomOutCode = findViewById(R.id.*btn\_zoom\_out\_code*);  
 btnRotateCode = findViewById(R.id.*btn\_rotate\_code*);  
 btnMoveCode = findViewById(R.id.*btn\_move\_code*);  
 btnBounceCode = findViewById(R.id.*btn\_bounce\_code*);  
 btnCombineCode = findViewById(R.id.*btn\_combine\_code*);  
 }  
}

III. Tạo Animation khi Start Activity mới

SecondActivity

package com.example.nguyenlengocchau\_1150070003\_btlt6;  
  
import android.os.Bundle;  
import android.view.animation.Animation;  
import android.view.animation.AnimationUtils;  
import android.widget.ImageView;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class SecondActivity extends AppCompatActivity {  
  
 private ImageView ivUitLogo;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_second*);  
  
 // Ánh xạ các view  
 ivUitLogo = findViewById(R.id.*iv\_uit\_logo*);  
  
 // Áp dụng animation khi chuyển sang SecondActivity  
 Animation slideInRight = AnimationUtils.*loadAnimation*(this, R.anim.*slide\_in\_right*);  
 ivUitLogo.startAnimation(slideInRight);  
 }  
  
 @Override  
 public void onBackPressed() {  
 super.onBackPressed();  
  
 // Áp dụng animation slide ra phải khi quay lại MainActivity  
 overridePendingTransition(R.anim.*slide\_in\_left*, R.anim.*slide\_out\_right*);  
 }  
}

MainActivity

package com.example.nguyenlengocchau\_1150070003\_btlt6;  
  
import android.content.Intent;  
import android.os.Bundle;  
import android.view.GestureDetector;  
import android.view.MotionEvent;  
import android.view.View;  
import android.view.animation.AlphaAnimation;  
import android.view.animation.Animation;  
import android.view.animation.AnimationSet;  
import android.view.animation.AnimationUtils;  
import android.view.animation.RotateAnimation;  
import android.view.animation.ScaleAnimation;  
import android.view.animation.TranslateAnimation;  
import android.widget.Button;  
import android.widget.ImageView;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity implements GestureDetector.OnGestureListener {  
  
 // Khai báo các biến  
 private Button btnFadeInXml, btnFadeInCode, btnFadeOutXml, btnFadeOutCode,  
 btnBlinkXml, btnBlinkCode, btnZoomInXml, btnZoomInCode,  
 btnZoomOutXml, btnZoomOutCode, btnRotateXml, btnRotateCode,  
 btnMoveXml, btnMoveCode, btnSlideUpXml, btnSlideUpCode,  
 btnBounceXml, btnBounceCode, btnCombineXml, btnCombineCode;  
  
 private ImageView ivUitLogo;  
  
 private GestureDetector gestureDetector; // Khai báo GestureDetector  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 // Khởi tạo GestureDetector để phát hiện các cử chỉ  
 gestureDetector = new GestureDetector(this, this);  
  
 // Khởi tạo các views và xử lý sự kiện  
 findViewsByIds();  
  
 // Thêm sự kiện click cho ImageView để mở NewActivity  
 ivUitLogo.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 Intent iNewActivity = new Intent(MainActivity.this, SecondActivity.class);  
 startActivity(iNewActivity);  
 overridePendingTransition(R.anim.*slide\_in\_right*, R.anim.*slide\_out\_left*);  
 }  
 });  
  
 // Định nghĩa hành động khi người dùng nhấn vào từng nút animation  
 setButtonListeners();  
 }  
  
 // Hàm tìm các view  
 private void findViewsByIds() {  
 ivUitLogo = findViewById(R.id.*iv\_uit\_logo*);  
 btnFadeInXml = findViewById(R.id.*btn\_fade\_in\_xml*);  
 btnFadeInCode = findViewById(R.id.*btn\_fade\_in\_code*);  
 btnFadeOutXml = findViewById(R.id.*btn\_fade\_out\_xml*);  
 btnFadeOutCode = findViewById(R.id.*btn\_fade\_out\_code*);  
 btnBlinkXml = findViewById(R.id.*btn\_blink\_xml*);  
 btnBlinkCode = findViewById(R.id.*btn\_blink\_code*);  
 btnZoomInXml = findViewById(R.id.*btn\_zoom\_in\_xml*);  
 btnZoomInCode = findViewById(R.id.*btn\_zoom\_in\_code*);  
 btnZoomOutXml = findViewById(R.id.*btn\_zoom\_out\_xml*);  
 btnZoomOutCode = findViewById(R.id.*btn\_zoom\_out\_code*);  
 btnRotateXml = findViewById(R.id.*btn\_rotate\_xml*);  
 btnRotateCode = findViewById(R.id.*btn\_rotate\_code*);  
 btnMoveXml = findViewById(R.id.*btn\_move\_xml*);  
 btnMoveCode = findViewById(R.id.*btn\_move\_code*);  
 btnSlideUpXml = findViewById(R.id.*btn\_slide\_up\_xml*);  
 btnSlideUpCode = findViewById(R.id.*btn\_slide\_up\_code*);  
 btnBounceXml = findViewById(R.id.*btn\_bounce\_xml*);  
 btnBounceCode = findViewById(R.id.*btn\_bounce\_code*);  
 btnCombineXml = findViewById(R.id.*btn\_combine\_xml*);  
 btnCombineCode = findViewById(R.id.*btn\_combine\_code*);  
 }  
  
 // Hàm thiết lập các sự kiện click cho nút  
 private void setButtonListeners() {  
 btnFadeInXml.setOnClickListener(v -> startAnimationFromXml(R.anim.*anim\_fade\_in*));  
 btnFadeInCode.setOnClickListener(v -> startAnimationFromCode(new AlphaAnimation(0.0f, 1.0f)));  
  
 btnFadeOutXml.setOnClickListener(v -> startAnimationFromXml(R.anim.*anim\_fade\_out*));  
 btnFadeOutCode.setOnClickListener(v -> startAnimationFromCode(new AlphaAnimation(1.0f, 0.0f)));  
  
 btnBlinkXml.setOnClickListener(v -> startAnimationFromXml(R.anim.*anim\_blink*));  
 btnBlinkCode.setOnClickListener(v -> startAnimationFromCode(createBlinkAnimation()));  
  
 btnZoomInXml.setOnClickListener(v -> startAnimationFromXml(R.anim.*anim\_zoom\_in*));  
 btnZoomInCode.setOnClickListener(v -> startAnimationFromCode(createZoomInAnimation()));  
  
 btnZoomOutXml.setOnClickListener(v -> startAnimationFromXml(R.anim.*anim\_zoom\_out*));  
 btnZoomOutCode.setOnClickListener(v -> startAnimationFromCode(createZoomOutAnimation()));  
  
 btnRotateXml.setOnClickListener(v -> startAnimationFromXml(R.anim.*anim\_rotate*));  
 btnRotateCode.setOnClickListener(v -> startAnimationFromCode(createRotateAnimation()));  
  
 btnMoveXml.setOnClickListener(v -> startAnimationFromXml(R.anim.*anim\_move*));  
 btnMoveCode.setOnClickListener(v -> startAnimationFromCode(createMoveAnimation()));  
  
 btnSlideUpXml.setOnClickListener(v -> startAnimationFromXml(R.anim.*anim\_slide\_up*));  
 btnSlideUpCode.setOnClickListener(v -> startAnimationFromCode(createSlideUpAnimation()));  
  
 btnBounceXml.setOnClickListener(v -> startAnimationFromXml(R.anim.*anim\_bounce*));  
 btnBounceCode.setOnClickListener(v -> startAnimationFromCode(createBounceAnimation()));  
  
 btnCombineXml.setOnClickListener(v -> startAnimationFromXml(R.anim.*anim\_combine*));  
 btnCombineCode.setOnClickListener(v -> startAnimationFromCode(createCombineAnimation()));  
 }  
  
 // Hàm xử lý animation từ XML  
 private void startAnimationFromXml(int animationResource) {  
 Animation animation = AnimationUtils.*loadAnimation*(this, animationResource);  
 ivUitLogo.startAnimation(animation);  
 }  
  
 // Hàm xử lý animation từ code  
 private void startAnimationFromCode(Animation animation) {  
 ivUitLogo.startAnimation(animation);  
 }  
  
 // Các hàm tạo animation từ code (ví dụ animation blink, zoom in...)  
 private Animation createBlinkAnimation() {  
 AlphaAnimation blink = new AlphaAnimation(0.0f, 1.0f);  
 blink.setDuration(300);  
 blink.setRepeatMode(Animation.*REVERSE*);  
 blink.setRepeatCount(3);  
 return blink;  
 }  
  
 private Animation createZoomInAnimation() {  
 ScaleAnimation zoomIn = new ScaleAnimation(1.0f, 3.0f, 1.0f, 3.0f);  
 zoomIn.setDuration(1000);  
 zoomIn.setFillAfter(true);  
 return zoomIn;  
 }  
  
 private Animation createZoomOutAnimation() {  
 ScaleAnimation zoomOut = new ScaleAnimation(1.0f, 0.5f, 1.0f, 0.5f);  
 zoomOut.setDuration(1000);  
 zoomOut.setFillAfter(true);  
 return zoomOut;  
 }  
  
 private Animation createRotateAnimation() {  
 RotateAnimation rotate = new RotateAnimation(0, 360, Animation.*RELATIVE\_TO\_SELF*, 0.5f, Animation.*RELATIVE\_TO\_SELF*, 0.5f);  
 rotate.setDuration(600);  
 rotate.setRepeatMode(Animation.*RESTART*);  
 rotate.setRepeatCount(2);  
 return rotate;  
 }  
  
 private Animation createMoveAnimation() {  
 TranslateAnimation move = new TranslateAnimation(0, 200, 0, 0);  
 move.setDuration(800);  
 move.setFillAfter(true);  
 return move;  
 }  
  
 private Animation createSlideUpAnimation() {  
 ScaleAnimation slideUp = new ScaleAnimation(1.0f, 1.0f, 1.0f, 0.0f);  
 slideUp.setDuration(500);  
 slideUp.setFillAfter(true);  
 return slideUp;  
 }  
  
 private Animation createBounceAnimation() {  
 ScaleAnimation bounce = new ScaleAnimation(1.0f, 1.0f, 0.0f, 1.0f);  
 bounce.setDuration(500);  
 bounce.setInterpolator(this, android.R.anim.*bounce\_interpolator*);  
 bounce.setFillAfter(true);  
 return bounce;  
 }  
  
 private Animation createCombineAnimation() {  
 AnimationSet combine = new AnimationSet(true);  
 ScaleAnimation scale = new ScaleAnimation(1.0f, 3.0f, 1.0f, 3.0f);  
 scale.setDuration(4000);  
 RotateAnimation rotate = new RotateAnimation(0, 360);  
 rotate.setDuration(500);  
 rotate.setRepeatCount(2);  
 combine.addAnimation(scale);  
 combine.addAnimation(rotate);  
 return combine;  
 }  
  
 @Override  
 public boolean onTouchEvent(MotionEvent event) {  
 // Phân tích cử chỉ khi người dùng vuốt  
 return gestureDetector.onTouchEvent(event) || super.onTouchEvent(event);  
 }  
  
 @Override  
 public boolean onDown(MotionEvent e) {  
 return true;  
 }  
  
 @Override  
 public void onShowPress(MotionEvent e) {}  
  
 @Override  
 public boolean onSingleTapUp(MotionEvent e) {  
 return false;  
 }  
  
 @Override  
 public void onLongPress(MotionEvent e) {}  
  
 @Override  
 public boolean onScroll(MotionEvent e1, MotionEvent e2, float distanceX, float distanceY) {  
 if (distanceX < 0) { // Vuốt từ trái qua phải  
 finish(); // Quay lại MainActivity từ NewActivity  
 overridePendingTransition(R.anim.*slide\_in\_left*, R.anim.*slide\_out\_right*);  
 } else if (distanceX > 0) { // Vuốt từ phải qua trái  
 Intent intent = new Intent(MainActivity.this, SecondActivity.class);  
 startActivity(intent);  
 overridePendingTransition(R.anim.*slide\_in\_right*, R.anim.*slide\_out\_left*);  
 }  
 return true;  
 }  
  
 @Override  
 public boolean onFling(MotionEvent e1, MotionEvent e2, float velocityX, float velocityY) {  
 return false;  
 }  
}