2.7 gesture

mainActivity.java

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| package com.example.mygesture;  import android.opengl.Matrix; import android.os.Bundle;  import com.google.android.material.floatingactionbutton.FloatingActionButton; import com.google.android.material.snackbar.Snackbar;  import androidx.appcompat.app.AppCompatActivity; import androidx.appcompat.widget.Toolbar; import android.app.Activity; import android.graphics.Matrix; import android.opengl.Matrix; import android.view.MotionEvent; import android.view.ScaleGestureDetector; import android.view.View; import android.view.Menu; import android.view.MenuItem; import android.widget.ImageView;  public class MainActivity extends AppCompatActivity {  private ImageView iv;  private Matrix matrix = new Matrix();  private float scale = 1f;  private ScaleGestureDetector SGD;   @Override  protected void onCreate(Bundle savedInstanceState) {  super.onCreate(savedInstanceState);  setContentView(R.layout.*activity\_main*);  Toolbar toolbar = findViewById(R.id.*toolbar*);  setSupportActionBar(toolbar);   iv = (ImageView) findViewById(R.id.*imageView*);  SGD = new ScaleGestureDetector(this, new ScaleListener());   }   public boolean onTouchEvent(MotionEvent ev){  SGD.onTouchEvent(ev);  return true;  }   private class ScaleListener extends ScaleGestureDetector.SimpleOnScaleGestureListener {  @Override  public boolean onScale(ScaleGestureDetector detector) {  scale \*= detector.getScaleFactor();  scale = Math.*max*(0.1f, Math.*min*(scale, 5.0f));   matrix.setScale(scale, scale);  iv.setImageMatrix(matrix);  return true;  }   } } |

Context\_main.xml

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| <?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:paddingLeft="@dimen/activity\_horizontal\_margin"  android:paddingRight="@dimen/activity\_horizontal\_margin"  android:paddingTop="@dimen/activity\_vertical\_margin"  android:paddingBottom="@dimen/activity\_vertical\_margin"  tools:context=".MainActivity"  tools:showIn="@layout/activity\_main">   <TextView  android:text="Gesture Example"  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:id="@+id/textView"  android:textSize="35dp"  android:layout\_alignParentTop="true"  android:layout\_centerHorizontal="true" />   <ImageView  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:id="@+id/imageView"  android:src="@mipmap/ic\_launcher"  android:scaleType="matrix"  android:layout\_below="@+id/textView"  android:layout\_alignParentLeft="true"  android:layout\_alignParentStart="true"  android:layout\_alignParentBottom="true"  android:layout\_alignParentRight="true"  android:layout\_alignParentEnd="true"/>  </RelativeLayout> |