



Name: Avinash Kumar

CSU ID: 2739849

Android Sensor Programming

Homework #12

AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.homework12">
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportRtl="true"
        android:theme="@style/AppTheme">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>
</manifest>
```

Activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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="com.example.homework12.MainActivity"
    android:orientation="horizontal">
    <GridView
        android:id="@+id/gridview"
        android:layout_width="120dp"
        android:layout_height="match_parent" />
    <ImageSwitcher
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_alignParentStart="true"
        android:id="@+id/imageSwitcher"
        android:layout_alignParentLeft="true"/>
</LinearLayout>
```

MainActivity.java

```
package com.example.homework12;
import android.content.Context;
import android.os.Bundle;
import android.view.View;
import android.view.ViewGroup;
import android.view.animation.AnimationUtils;
import android.widget.AdapterView;
import android.widget.BaseAdapter;
import android.widget.Button;
import android.widget.GridView;
import android.widget.ImageSwitcher;
import android.widget.ImageView;
import android.widget.Toast;
import android.widget.ViewSwitcher;

import androidx.appcompat.app.ActionBar;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    private ImageSwitcher imgSwitcher;
    //private Button btnViewWindows,btnViewButterfly;
    Integer[] imageIDs = {R.mipmap.butterfly,
        R.mipmap.windows,
        R.mipmap.flowers,
        R.mipmap.bridge,
        R.mipmap.fall,
        R.mipmap.ic_launcher_round};
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        imgSwitcher = (ImageSwitcher) findViewById(R.id.imageSwitcher);
        imgSwitcher.setInAnimation(AnimationUtils.loadAnimation(this,
            android.R.anim.fade_in));
        imgSwitcher.setOutAnimation(AnimationUtils.loadAnimation(this,
            android.R.anim.fade_out));
        GridView gridView = findViewById(R.id.gridview);
        gridView.setAdapter(new ImageAdapter(this));
        gridView.setOnItemClickListener(new AdapterView.OnItemClickListener()
        {
            public void onItemClick(AdapterView parent, View v, int position, long id) {
```

```

        imgSwitcher.setImageResource(imageIds[position]);
        Toast.makeText(getBaseContext(),
            "pic" + (position + 1) + " selected",
            Toast.LENGTH_SHORT).show();
    }
});
imgSwitcher = (ImageSwitcher) findViewById(R.id.imageSwitcher);
imgSwitcher.setInAnimation(AnimationUtils.loadAnimation(this,
    android.R.anim.fade_in));
imgSwitcher.setOutAnimation(AnimationUtils.loadAnimation(this,
    android.R.anim.fade_out));
imgSwitcher.setFactory(new ViewSwitcher.ViewFactory() {
    @Override
    public View makeView() {
        ImageView myView = new ImageView(getApplicationContext());
        myView.setScaleType(ImageView.ScaleType.FIT_CENTER);
        myView.setLayoutParams(new ImageSwitcher.LayoutParams(
            ActionBar.LayoutParams.WRAP_CONTENT,
            ActionBar.LayoutParams.WRAP_CONTENT));
        return myView;
    }
});
}

public class ImageAdapter extends BaseAdapter {
    private Context context;
    public ImageAdapter(Context c) { context = c; }
    //---returns the number of images---
    public int getCount() { return imageIds.length; }
    //---returns the item---
    public Object getItem(int position) { return position; }
    //---returns the ID of an item---
    public long getItemId(int position) { return position; }
    //---returns an ImageView view---
    public View getView(int position, View convertView, ViewGroup parent) {
        ImageView imageView;
        if (convertView == null) {
            imageView = new ImageView(context);
            imageView.setLayoutParams(new GridView.LayoutParams(150, 150));
            imageView.setScaleType(ImageView.ScaleType.CENTER_CROP);
            imageView.setPadding(5, 5, 5, 5);
        } else {
            imageView = (ImageView) convertView;
        }
        imageView.setImageResource(imageIds[position]);
    }
}

```

```
        return imageView;  
    }  
}  
}
```

Screenshot



