Program 9. Demonstrate ImageView and GridView.

XML CODE-1:

```xml
<?xml version="1.0" encoding="utf-8"?>
<GridView xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/gridview"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:columnWidth="120dp"
    android:numColumns="3"
    android:verticalSpacing="30dp"
    android:horizontalSpacing="5dp"
    android:stretchMode="columnWidth"
    android:gravity="center"
    />
```

JAVA CODE-1:

```java
package com.example.pgm91;

import androidx.appcompat.app.AppCompatActivity;
import android.app.Activity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.GridView;
public class MainActivity extends Activity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        GridView 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){
// Send intent to SingleViewActivity
                                                Intent i = new
Intent(getApplicationContext(),

SingleViewActivity.class);
// Pass image index

                                                i.putExtra("id", position);
                                                startActivity(i);
                                            }
                                        });
    }
}
```

JAVA CODE-2:

```java
package com.example.pgm91;

import android.content.Context;
import android.view.View;
import android.view.ViewGroup;
import android.widget.BaseAdapter;
import android.widget.GridView;
import android.widget.ImageView;
class ImageAdapter extends BaseAdapter {
    private Context mContext;
    // Constructor
    public ImageAdapter(Context c) {
        mContext = c;
    }
    public int getCount() {
        return picIds.length;
    }
    public Object getItem(int position) {
        return null;
    }
    public long getItemId(int position) {
        return 0;
    }
    // create a new ImageView for each item referenced by the Adapter
    public View getView(int position, View
            convertView, ViewGroup parent) {
        ImageView imageView;
        if (convertView == null) {
            imageView = new ImageView(mContext);
            imageView.setLayoutParams(new
                    GridView.LayoutParams(85, 85));
            imageView.setScaleType(ImageView.ScaleType.CENTER_CROP);
            imageView.setPadding(8, 8, 8, 8);
        } else {
            imageView = (ImageView) convertView;
        }
        imageView.setImageResource(picIds[position]);
        return imageView;
    }
    // Keep all Images in array
    public Integer[] picIds = {
            R.drawable.a,
            R.drawable.b,
            R.drawable.c,
            R.drawable.d,
            R.drawable.e,
    };

    }
```

XML CODE-2:

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical" >
    <ImageView android:id="@+id/SingleView"
        android:layout_width="fill_parent"
        android:layout_height="fill_parent"/>
</LinearLayout>
```

JAVA CODE-3:

```java
package com.example.pgm91;

import androidx.appcompat.app.AppCompatActivity;
import android.app.Activity;
import android.content.Intent;
import android.os.Bundle;
import android.widget.ImageView;
public class SingleViewActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_single_view);
        // Get intent data
        Intent i = getIntent();
// Selected image id
        int position = i.getExtras().getInt("id");
        ImageAdapter imageAdapter = new ImageAdapter(this);
        ImageView imageView = (ImageView)
                findViewById(R.id.SingleView);
        imageView.setImageResource(imageAdapter.picIds[position]);
    }
}
```

OUTPUT: