Program

Aim: Program to develop an application that use GridView with images and display Alert box on selection.

XML Code:

```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">

    <GridView
        android:id="@+id/idGVcourses"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:horizontalSpacing="6dp"
        android:numColumns="2"
        android:verticalSpacing="6dp" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

#carditem.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<!--XML implementation of Card Layout-->
<androidx.cardview.widget.CardView
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    android:layout_width="match_parent"
    android:layout_height="120dp"
    android:layout_gravity="center"
    android:layout_margin="5dp"
    app:cardCornerRadius="5dp"
    app:cardElevation="5dp">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="vertical">

        <ImageView
            android:id="@+id/image"
```

```xml
        android:layout_width="100dp"
        android:layout_height="100dp"
        android:layout_gravity="center"
        android:src="@mipmap/ic_launcher" />

    <TextView
        android:id="@+id/flower"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="@string/app_name"
        android:textAlignment="center" />

    </LinearLayout>

</androidx.cardview.widget.CardView>
```

Java Code:

```java
package com.example.myapplication;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.GridView;
import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {
    GridView images;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        coursesGV = findViewById(R.id.idimages);

        ArrayList<image> imageArrayList;
        imageArrayList = new ArrayList<image>();
        imageArrayList.add(new image("Flower1", R.drawable.img));
        imageArrayList.add(new image("Flower2", R.drawable.img_1));
        imageArrayList.add(new image("Flower3",R.drawable.img_2));
        imageArrayList.add(new image("Flower4", R.drawable.img_3));
        imageArrayList.add(new image("Flower5", R.drawable.img_4));
        imageArrayList.add(new image("Flower6", R.drawable.img_5));

        imageAdapter adapter = new imageAdapter(this, imageArrayList);
        image.setAdapter(adapter);


    }
}
```

#Adapter

```java
package com.example.myapplication;

import android.content.Context;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.ArrayAdapter;
import android.widget.ImageView;
import android.widget.TextView;
import androidx.annotation.NonNull;
import androidx.annotation.Nullable;
import java.util.ArrayList;

public class imageAdapter extends ArrayAdapter<image> {
    public imageAdapter(@NonNull Context context, ArrayList<image> imageArrayList) {
        super(context, 0, imageArrayList);
    }

    @NonNull
    @Override
    public View getView(int position, @Nullable View convertView, @NonNull ViewGroup
parent) {
        View listitemView = convertView;
        if (listitemView == null) {
            // Layout Inflater inflates each item to be displayed in GridView.
            listitemView = LayoutInflater.from(getContext()).inflate(R.layout.card_item, parent,
false);
        }
        Image image = getItem(position);
        TextView image = listitemView.findViewById(R.id.flower);
        ImageView image = listitemView.findViewById(R.id.image);
        courseTV.setText(image.getCourse_name());
        courseIV.setImageResource(image.getImgid());
        return listitemView;
    }
}
```

Output:

Myapplication

Flower1   Flower2

Flower3   Flower4

Flower5   Flower6