PROGRAM 8: Implement Adapters and perform exception handling

CODE:

activity_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout 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:padding="16dp"
tools:context=".MainActivity">
<GridView
    android:id="@+id/gridView"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:numColumns="2"
    />
</RelativeLayout>
```

MainActivity.java

```
package com.example.adapter;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.GridView;
import android.widget.Toast;
import java.util.ArrayList;
```

```
import java.util.List;
public class MainActivity extends AppCompatActivity {
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        GridView gridView = findViewById(R.id.gridView);
        final List<String> data = fetchData();
                ArrayAdapter<String> adapter = new ArrayAdapter<>(this,
           android.R.layout.simple_list_item_1, data);
        gridView.setAdapter(adapter);
        gridView.setOnItemClickListener(new AdapterView.OnItemClickListener() {
            public void onItemClick(AdapterView<?> parent, View view, int position, long id) {
                try {
                    String item = data.get(position);
                        Toast.makeText(MainActivity.this, "Clicked: " + item,
                        Toast.LENGTH_SHORT).show();
                } catch (IndexOutOfBoundsException e) {
                    e.printStackTrace();
        Toast.makeText(MainActivity.this, "Item not found", Toast.LENGTH_SHORT).show();
                }
            }
        });
    }
    private List<String> fetchData() {
        List<String> data = new ArrayList<>();
        data.add("Item 1");
        data.add("Item 2");
        data.add("Item 3");
```

```
        data.add("Item 4");
        return data;
    }
}
```

OUTPUT: