

**Experiment no: 6**

**Date:**

## **Adapters with Exception Handling**

### **Aim:**

Implement Adapters and perform exception handling.

### **ALGORITHM:**

**Step 1:** Create a ListView or RecyclerView in the layout.

**Step 2:** Prepare a dataset (array/list of strings).

**Step 3:** Use an **ArrayAdapter** or **RecyclerView.Adapter** to bind data.

**Step 4:** Set the adapter to the ListView/RecyclerView.

**Step 5:** Wrap code in try-catch blocks to handle exceptions like null or empty data.

**Step 6:** Display error message if exception occurs.

### **CODE:**

#### **Mainactivity.java:**

```
package com.example.adapter;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.ArrayAdapter;
import android.widget.ListView;
import android.widget.Toast;

import com.example.adapter.R;

public class MainActivity extends AppCompatActivity {

    ListView listView;
    String[] fruits = {"Apple", "Banana", "Orange", "Mango", "Pineapple", "Grapes"};

    @Override
```

```
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);

    listView = findViewById(R.id.listView);

    try {
        // Enable single choice mode for highlighting
        listView.setChoiceMode(ListView.CHOICE_MODE_SINGLE);

        // Use built-in layout that supports highlighting
        ArrayAdapter<String> adapter = new ArrayAdapter<>(
            this,
            android.R.layout.simple_list_item_activated_1, // supports highlight
            fruits
        );

        listView.setAdapter(adapter);

        // Handle item clicks
        listView.setOnItemClickListener((parent, view, position, id) -> {
            try {
                // Highlight the clicked item
                listView.setItemChecked(position, true);

                // Show Toast with item name
                String item = fruits[position];
                Toast.makeText(this, "You selected: " + item, Toast.LENGTH_SHORT).show();

            } catch (Exception e) {
                Toast.makeText(this, "Error: " + e.getMessage(), Toast.LENGTH_SHORT).show();
            }
        });

    } catch (Exception e) {
        Toast.makeText(this, "Adapter Error: " + e.getMessage(), Toast.LENGTH_LONG).show();
    }
}
```

```
}
```

**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"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/title"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Fruit List"
        android:textSize="22sp"
        android:gravity="center"
        android:padding="16dp"
        android:textStyle="bold"
        android:textColor="@android:color/black" />

    <ListView
        android:id="@+id/listView"
        android:layout_below="@id/title"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:divider="@android:color/darker_gray"
        android:dividerHeight="1dp"
        android:choiceMode="singleChoice"/>
</RelativeLayout>
```

## **OUTPUT:**



