Experiment no 10:

ARRAY ADAPTER

ALGORITHM

S1 : Design a page with constrain layout contain listview having 5 items

S2 : Define an array of strings representing the items to be displayed in the listview

S3 : Create an ArrayAdapter to adapt the data to the listview

S4 : Set the created adapter to the listview to populate it with the data

S5 : Set an item click listener to the listview to perform an action when item is clicked.

S6 : Implement a method to display a Toast message

S7 : Stop

Experiment No : 10

Date:

ARRAY ADAPTER

AIM

Develop an application that uses ArrayAdapter with ListView

SOURCE CODE

Design

ActivityMain.xml

```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">

<ListView
android:id="@+id/listview"
android:layout_width="409dp"
android:layout_height="729dp"
android:layout_marginStart="1dp"
android:layout_marginEnd="1dp"
android:layout_marginBottom="2dp"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```java
// MainActivity.java

package com.example.arrayadapter;


import android.os.Bundle;

import android.view.View;

import android.widget.AdapterView;

import android.widget.ArrayAdapter;

import android.widget.ListView;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        // Define a data source (array of strings)

        String[] data = {"Item 1", "Item 2", "Item 3", "Item 4", "Item 5"};

        // Get the ListView from the layout

        ListView listView = findViewById(R.id.listview);

        // Create an ArrayAdapter

        ArrayAdapter<String> adapter = new ArrayAdapter<>(this, android.R.layout.simple_list_item_1, data);

        // Set the adapter to the ListView

        listView.setAdapter(adapter);

        // Set item click listener for the ListView

        listView.setOnItemClickListener(new AdapterView.OnItemClickListener() {

            @Override

            public void onItemClick(AdapterView<?> parent, View view, int position, long id) {

                // Display a Toast message on item click

                showToast("You selected: " + data[position]);

            }

        });

    }

    private void showToast(String message) {
```
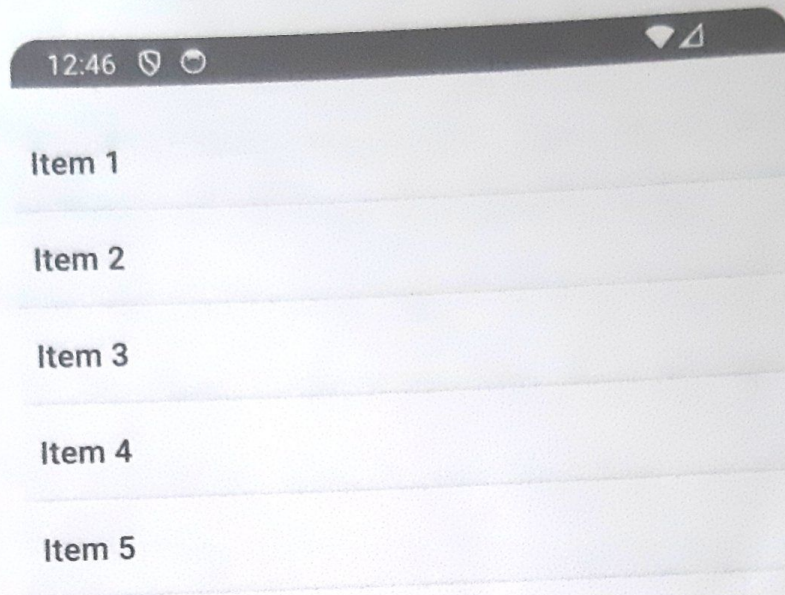
```
   // Display a Toast message

   Toast.makeText(this, message, Toast.LENGTH_SHORT).show();

   }

}
```

OUTPUT

12:46	

Item 1

Item 2

Item 3

Item 4

Item 5

You selected: Item 2