

Exercise 10 - Menu Driven application

Objective

Develop a Menu driven App that displays the option menu that contains names of different countries and when each of the country is clicked, the description about the country should be displayed.

Algorithm

1. Initialize the Project:
 - Open Android Studio and create a new Android Project.
2. Create Menu Items:
 - Define a set of country names as menu items in the `res/menu` directory.
3. Design UI:
 - Design the main activity layout with a ListView or RecyclerView to display country names.
4. Handle Menu Clicks:
 - Implement an `onOptionsItemSelected` method to handle clicks on menu items.
5. Display Country Information:
 - Create separate layouts or use a TextView to display detailed information about the selected country.
6. Populate Country Information:
 - Populate the detailed information based on the selected country when a menu item is clicked.

Features used

Main Features:

- Menu-driven app with country names as menu items.
- Use of ListView or RecyclerView to display the list of countries.
- Handling menu item clicks in the `onOptionsItemSelected` method.
- Displaying detailed information about the selected country.

Source Code

MainActivity.java:

```
package com.example.menucountry;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuInflater;
import android.view.MenuItem;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
    TextView country, desc;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        country = findViewById(R.id.country);
        desc = findViewById(R.id.desc);
    }
    public boolean onCreateOptionsMenu(Menu menu) {
        MenuInflater inflater = getMenuInflater();
        inflater.inflate(R.menu.country, menu);
        return true;
    }
    @Override
    public boolean onOptionsItemSelected(MenuItem item) {
        int id = item.getItemId();
        switch (id){
            case R.id.ind:
```

```

// Toast.makeText(getApplicationContext(),"Item 1
Selected",Toast.LENGTH_LONG).show(); country.setText("India");
desc.setText(R.string.india);
return true;
case R.id.bah:
// Toast.makeText(getApplicationContext(),"Item 2
Selected",Toast.LENGTH_LONG).show(); country.setText("Bahrain");
desc.setText(R.string.bahrain);
return true;
case R.id.pak:
// Toast.makeText(getApplicationContext(),"Item 3
Selected",Toast.LENGTH_LONG).show(); country.setText("Pak");
desc.setText(R.string.pakistan);
return true;
case R.id.is:
// Toast.makeText(getApplicationContext(),"Item 3
Selected",Toast.LENGTH_LONG).show(); country.setText("Israel");
desc.setText(R.string.israel);
return true;
case R.id.chn:
// Toast.makeText(getApplicationContext(),"Item 3
Selected",Toast.LENGTH_LONG).show(); country.setText("China");
desc.setText(R.string.china);
return true;
case R.id.can:
// Toast.makeText(getApplicationContext(),"Item 3
Selected",Toast.LENGTH_LONG).show(); country.setText("Canada");
desc.setText(R.string.canada);
return true;
case R.id.uk:
// Toast.makeText(getApplicationContext(),"Item 3
Selected",Toast.LENGTH_LONG).show(); country.setText("UK");
desc.setText(R.string.uk);
return true;
default:
return super.onOptionsItemSelected(item);
}
}
}

```

activity_main.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">
<TextView
android:id="@+id/country"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text=""
android:textColor="@color/black"
android:layout_margin="48dp"
android:padding="24dp"
android:textSize="24dp"
android:textStyle="bold"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent" />
<TextView
android:padding="24dp"
android:layout_margin="24dp"
android:id="@+id/desc"
android:layout_width="320dp"
android:layout_height="wrap_content"
app:layout_constraintTop_toBottomOf="@+id/country"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout> Country.xml:
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android"> <item
android:id="@+id/ind"
android:title="India" />
<item android:id="@+id/bah"
android:title="Bahrain" />
<item android:id="@+id/pak"
android:title="Pakistan" />
```

```

<item android:id="@+id/is"
android:title="Israel" />
<item android:id="@+id/can"
android:title="Canada" />
<item android:id="@+id/uk"
android:title="UK" />
<item android:id="@+id/chn"
android:title="China" />
</menu>

```

Strings.xml:

```

<resources>
<string name="app_name">Menu Country App</string>
<string name="india">India, officially the Republic of India (ISO: Bhārat Gaṇarājya), is a country in South Asia. It is the seventh-largest country by area; the most populous country as of June 2023; and from the time of its independence in 1947, the world\'s most populous democracy</string> <string name="pakistan">
ISO (Pakistan of Republic Islamic the officially]
d[,])pa:kista:n [پَاکِسْتَان:Urdu (Pakistaں کب آپ, islāmi jamhūriyāh pākistān), is a country in South Asia.
</string>
<string name="bahrain">
Bahrain (/bɑːˈreɪn/bah-RAYN, /ˈreɪn/; Arabic: البحرين, romanized: al-Baḥrayn, locally [æɪ baħˈreːn]), officially the Kingdom of Bahrain,[a] is an island country in West Asia.
</string>
<string name="israel">
Israel is a country in West Asia. It is bordered by Lebanon to the north, by Syria to the northeast, by Jordan to the east, by the Red Sea to the south, by Egypt to the southwest, by the Mediterranean Sea to the west, and by the Palestinian territories – the West Bank along the east and the Gaza Strip along the southwest. In war please try later
</string>
<string name="china">
China , officially the People\'s Republic of China (PRC),[k] is a country in East Asia. </string>
<string name="canada">
Canada is a country in North America. Its ten provinces and three territories extend from the Atlantic Ocean to the Pacific Ocean and northward into the Arctic Ocean, making it the world\'s second-largest country by total area,

```

```
</string>  
<string name="uk">  
The United Kingdom of Great Britain and Northern Ireland, commonly known as  
the United Kingdom (UK) or Britain,[k][14] is an island country in  
Northwestern Europe, off the north-western coast of the continental mainland.  
</string>  
</resources>
```

Output Screenshots





Result

Thus a Menu-Driven application to describe country information, was implemented

Best Practices

1. User friendly design
2. Readable layouts
3. Modularity
4. Used apt names for xml and java files.
5. Set padding and margins for dynamically added elements

Learning outcomes

- Learnt to edit the menu on android studio
- Learnt the steps to deploy a new resource file