**Problem Statement:** Create an application using Grid Layout to display onClick popup.

**AndroidManifest.xml Manifest File:**

<?xml version="1.0" encoding="utf-8"?>

<manifest xmlns:android="http://schemas.android.com/apk/res/android"

xmlns:tools="http://schemas.android.com/tools">

<application

android:allowBackup="true"

android:dataExtractionRules="@xml/data\_extraction\_rules"

android:fullBackupContent="@xml/backup\_rules"

android:icon="@mipmap/ic\_launcher"

android:label="@string/app\_name"

android:roundIcon="@mipmap/ic\_launcher\_round"

android:supportsRtl="true"

android:theme="@style/Theme.MyApplication7"

tools:targetApi="31">

<activity

android:name=".MainActivity"

android:exported="true">

<intent-filter>

<action android:name="android.intent.action.MAIN" />

<category android:name="android.intent.category.LAUNCHER" />

</intent-filter>

<meta-data

android:name="android.app.lib\_name"

android:value="" />

</activity>

</application>

</manifest>

**activity\_main.xml Layout Resource File:**

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout 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">

<androidx.gridlayout.widget.GridLayout

android:layout\_width="409dp"

android:layout\_height="729dp"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent">

<Button

android:id="@+id/popupbtn"

android:layout\_width="203dp"

android:layout\_height="232dp"

android:text="Popup Button"

app:layout\_column="0"

app:layout\_row="0" />

<Button

android:id="@+id/popupbtn1"

android:layout\_width="206dp"

android:layout\_height="233dp"

android:text="Popup Button 1"

app:layout\_column="1"

app:layout\_row="0" />

</androidx.gridlayout.widget.GridLayout>

</RelativeLayout>

**popup.xml Menu Resource File:**

<?xml version="1.0" encoding="utf-8"?>

<menu xmlns:android="http://schemas.android.com/apk/res/android">

<item

android:id="@+id/popup\_item1"

android:title="Item1"/>

<item

android:id="@+id/popup\_item2"

android:title="Item2"/>

</menu>

**popup1.xml Menu Resource File:**

<?xml version="1.0" encoding="utf-8"?>

<menu xmlns:android="http://schemas.android.com/apk/res/android">

<item

android:id="@+id/popup1\_item1"

android:title="Entc"/>

<item

android:id="@+id/popup2\_item2"

android:title="Mechanical"/>

</menu>

**colors.xml Values Resource File:**

<?xml version="1.0" encoding="utf-8"?>

<resources>

<color name="purple\_200">#FFBB86FC</color>

<color name="purple\_500">#FF6200EE</color>

<color name="purple\_700">#FF3700B3</color>

<color name="teal\_200">#FF03DAC5</color>

<color name="teal\_700">#FF018786</color>

<color name="black">#FF000000</color>

<color name="white">#FFFFFFFF</color>

</resources>

**strings.xml Values Resource File:**

<resources>

<string name="app\_name">My Application7</string>

<string name="a">A</string>

</resources>

**MainActivity.java JAVA File:**

package com.example.myapplication7;

import android.os.Bundle;

import android.view.MenuItem;

import android.view.View;

import android.widget.Button;

import android.widget.PopupMenu;

import android.widget.Toast;

import androidx.activity.EdgeToEdge;

import androidx.appcompat.app.AppCompatActivity;

import androidx.core.graphics.Insets;

import androidx.core.view.ViewCompat;

import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

EdgeToEdge.enable(this);

setContentView(R.layout.activity\_main);

// ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {

// Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());

// v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);

// return insets;

// });

Button popupButton = findViewById(R.id.popupbtn);

popupButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

showPopup(v);

}

});

Button popupButton1 = findViewById(R.id.popupbtn1);

popupButton1.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

showPopup1(v);

}

});

}

private void showPopup(View v) {

PopupMenu popupMenu = new PopupMenu(this, v);

popupMenu.getMenuInflater().inflate(R.menu.popup, popupMenu.getMenu());

popupMenu.setOnMenuItemClickListener(new PopupMenu.OnMenuItemClickListener() {

@Override

public boolean onMenuItemClick(MenuItem item) {

Toast.makeText(MainActivity.this, item.getTitle() + " clicked", Toast.LENGTH\_SHORT).show();

return true;

}

});

popupMenu.show();

}

private void showPopup1(View v) {

PopupMenu popupMenu = new PopupMenu(this, v);

popupMenu.getMenuInflater().inflate(R.menu.popup1, popupMenu.getMenu());

popupMenu.setOnMenuItemClickListener(new PopupMenu.OnMenuItemClickListener() {

@Override

public boolean onMenuItemClick(MenuItem item) {

Toast.makeText(MainActivity.this, item.getTitle() + " clicked", Toast.LENGTH\_SHORT).show();

return true;

}

});

popupMenu.show();

}

}

**OUTPUT:**





