Practical No. 3.B

Aim: Write an Android program to demonstrate the working of different views (Spinner, ListView, Menu).

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:tools="http://schemas.android.com/tools"
  android:layout height="match_parent"
  android:layout width="match parent"
  xmlns:android="http://schemas.android.com/apk/res/android">
  <TextView
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:id="@+id/tvSpinner"
    android:text="Spinner"
    android:textSize="35dp"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="30dp" />
  <Spinner
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/spinner1"
    android:layout_marginRight="20dp"
    android:layout_below="@id/tvSpinner"/>
  <Spinner
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:id="@+id/spinner2"
    android:layout_toRightOf="@+id/spinner1"
    android:layout_below="@id/tvSpinner"/>
  <Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/btn_click"
    android:text="Click Here"
    android:layout_below="@id/spinner1"
    android:textSize="20dp"/>
  <TextView
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:id="@+id/tvSpinnerOutput"
    android:layout below="@id/btn click"
    android:textSize="20dp"/>
```

```
<TextView
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:id="@+id/tvListView"
    android:text="ListView"
    android:textSize="35dp"
    android:layout_centerHorizontal="true"
    android:layout below="@id/tvSpinnerOutput"
    android:layout_marginTop="30dp" />
  <ListView
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:id="@+id/listView"
    android:layout below="@+id/tvListView"/>
  <TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/tvListViewOutput"
    android:layout_below="@id/listView"
    android:textSize="20dp"/>
  <TextView
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:id="@+id/tvMenu"
    android:text="Menu"
    android:textSize="35dp"
    android:layout_centerHorizontal="true"
    android:layout_below="@id/tvListViewOutput"
    android:layout marginTop="30dp" />
  <TextView
    android:layout_width="wrap_content"
    android:layout height="wrap content"
    android:id="@+id/tvMenuOutput"
    android:layout below="@id/tvMenu"
    android:textSize="20dp"/>
</RelativeLayout>
strings.xml
<resources>
  <string name="app_name">My Application</string>
  <string-array name="country_name">
    <item>India</item>
    <item>South Afrcia</item>
    <item>Brazil</item>
    <item>New Zealand</item>
```

```
<item>Australia</item>
  </string-array>
</resources>
mymenu.xml
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">
  <item
    android:id="@+id/bm"
    android:title="Bookmarks"/>
    android:id="@+id/sr"
    android:title="Search"/>
    android:id="@+id/sa"
    android:title="Save"/>
    android:id="@+id/sh"
    android:title="Share"/>
  <item
    android:id="@+id/dlt"
    android:title="Delete"/>
</menu>
MainActivity.kt
package com.example.lifecycle
import android.annotation.SuppressLint
import android.os.Bundle
import android.view.Menu
import android.view.MenuInflater
import android.view.MenuItem
import android.widget.*
import androidx.appcompat.app.AppCompatActivity
import androidx.core.view.get
class MainActivity : AppCompatActivity() {
  @SuppressLint("MissingInflatedId")
  override fun onCreate(savedInstanceState: Bundle?) {
     super.onCreate(savedInstanceState)
     setContentView(R.layout.activity_main)
     val sp1 = findViewById<Spinner>(R.id.spinner1)
     val sp2 = findViewById<Spinner>(R.id.spinner2)
    val btnClick = findViewById < Button > (R.id.btn_click)
    val tvSpinnerOutput = findViewById<TextView>(R.id.tvSpinnerOutput)
     val Iv = findViewById<ListView>(R.id.listView)
     val tvListViewOutput = findViewById<TextView>(R.id.tvListViewOutput)
```

```
val lst = ArrayList<String>()
     lst.add("ABC")
     lst.add("PQR")
     lst.add("XYZ")
     val os = arrayOf<String>("Windows","IOS","Linux","Android")
     val adp1 = ArrayAdapter(this, android.R.layout.simple spinner item,lst)
     adp1.setDropDownViewResource(android.R.layout.simple spinner dropdown item)
     sp1.adapter = adp1
     val adp2 = ArrayAdapter.createFromResource(this,
R.array.country name, android.R.layout.simple spinner item)
     adp2.setDropDownViewResource(android.R.layout.simple spinner dropdown item)
     sp2.adapter = adp2
     val adp3 = ArrayAdapter(this, android.R.layout.simple_expandable_list_item_1,os)
     lv.adapter = adp3
     btnClick.setOnClickListener {
       val str1 = sp1.selectedItem.toString()
       val str2 = sp2.selectedItem.toString()
       tvSpinnerOutput.text = "Data from Spinner1 = $str1 \nData from Spinner2 =
$str2"
     }
     lv.setOnItemClickListener { adapterView, view, i, I ->
       val str3 = adapterView.getItemAtPosition(i) as String
       tvListViewOutput.text = "Data from ListView = $str3"
     }
  }
  override fun onCreateOptionsMenu(menu: Menu?): Boolean {
     menuInflater.inflate(R.menu.mymenu,menu)
     return super.onCreateOptionsMenu(menu)
  }
  override fun onOptionsItemSelected(item: MenuItem): Boolean {
     val tvMenuOutput = findViewById<TextView>(R.id.tvMenuOutput)
     when (item.itemId){
       R.id.bm -> tvMenuOutput.text = "Bookmarks Selected"
       R.id.sr -> tvMenuOutput.text = "Search Selected"
       R.id.sa -> tvMenuOutput.text = "Save Selected"
       R.id.sh -> tvMenuOutput.text = "Share Selected"
       R.id.dlt -> tvMenuOutput.text = "Delete Selected"
     }
     return super.onOptionsItemSelected(item)
  }
}
```

Output









