

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"/>
    <item
        android:id="@+id/sr"
        android:title="Search"/>
    <item
        android:id="@+id/sa"
        android:title="Save"/>
    <item
        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 lv = 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, l ->
    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

