Report No: 02

Task Title: Single-Activity Application with Spinner, Button, and Textview

Course Title: Mobile Application Development Laboratory
Course Code: CSE-410

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GitHub Link: https://github.com/shanjida-alam/Book-Shop

XML Code:

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:padding="16dp"
    android:orientation="vertical"
    android:id="@+id/main"
    tools:context=".MainActivity">
<Spinner
    android:id="@+id/BookSpinner"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="40dp"
    android:layout_gravity="center"
    android:layout_margin="16dp"
    android:entries="@array/menu"/>
<Button
    android:id="@+id/find_book"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:layout_margin="16dp"
    android:text="@string/find_book"
    android:onClick="show"/>

<TextView
    android:id="@+id/MenuTextView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:layout_margin="16dp"
    android:text="@string/brands"
    />
```

```xml
        </LinearLayout>
```

strings.xml:

```xml
<resources>
    <string name="app_name">Lab02</string>
    <string name="find_book">Select Menu</string>
    <string name="brands">No Book Selected
 </string>
    <string      name="this_is_a_text_view_string_brands">This    is    a    text
view@string/brands</string>
    <string-array name="menu">
       <item>Fiction </item>
       <item>Non-fiction </item>
       <item>Science Fiction </item>
    </string-array>
</resources>
```

MainActivity.java:

```java
package com.example.lab02;

import android.os.Bundle;
import android.view.View;
import android.widget.Spinner;
import android.widget.TextView;

import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

import java.util.List;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
```

```java
        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;
        });
    }
    public void show(View view) {
        Spinner BookSpinner = (Spinner) findViewById(R.id.BookSpinner);
        String SelectedBook = String.valueOf(BookSpinner.getSelectedItem());
        TextView MenuTextView = (TextView) findViewById(R.id.MenuTextView);
        BookExpert f = new BookExpert();
        List<String> MealList = f.getMenu(SelectedBook);

        StringBuilder menuFormatted = new StringBuilder();
        for(String menu : MealList){
            menuFormatted.append(menu).append("\n");
        }
        MenuTextView.setText(menuFormatted);

    }
}
```
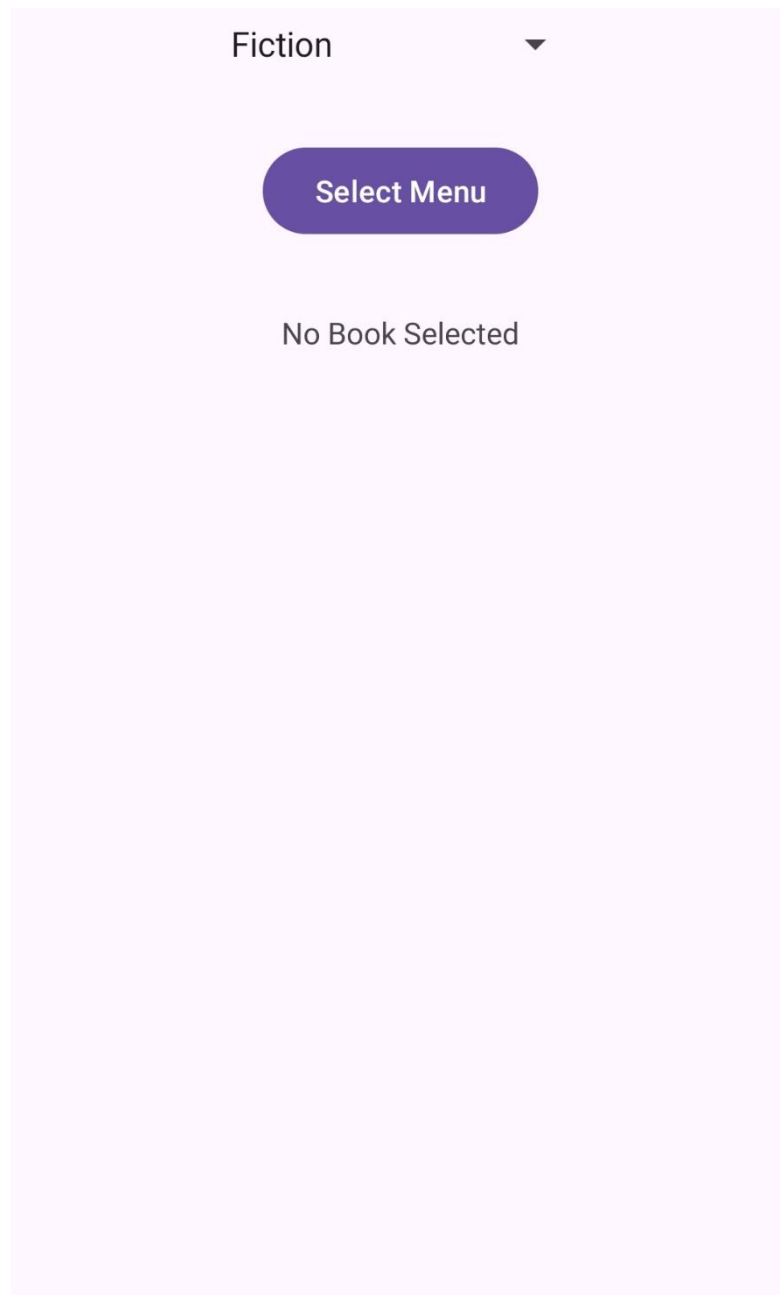
BookExpert.java:

```java
package com.example.lab02;

import java.util.ArrayList;
import java.util.List;

public class BookExpert {
    public List<String> getMenu(String Meal) {
        List<String> Menu = new ArrayList<>();
        if (Meal.equals("Fiction")) {
            Menu.add("The Alchemist");
            Menu.add("The Kite Runner");
            Menu.add("Harry Potter");
        }
        else if (Meal.equals("Non-fiction")) {
            Menu.add("In Cold Blood");
            Menu.add("Into Thin Air");
            Menu.add("The Diary of a Young Girl");
        }
        else if (Meal.equals("Science Fiction")) {
            Menu.add("The Martian");
            Menu.add("Brave New World");
            Menu.add("Fahrenheit 451");
        }
        return Menu;
    }
}
```
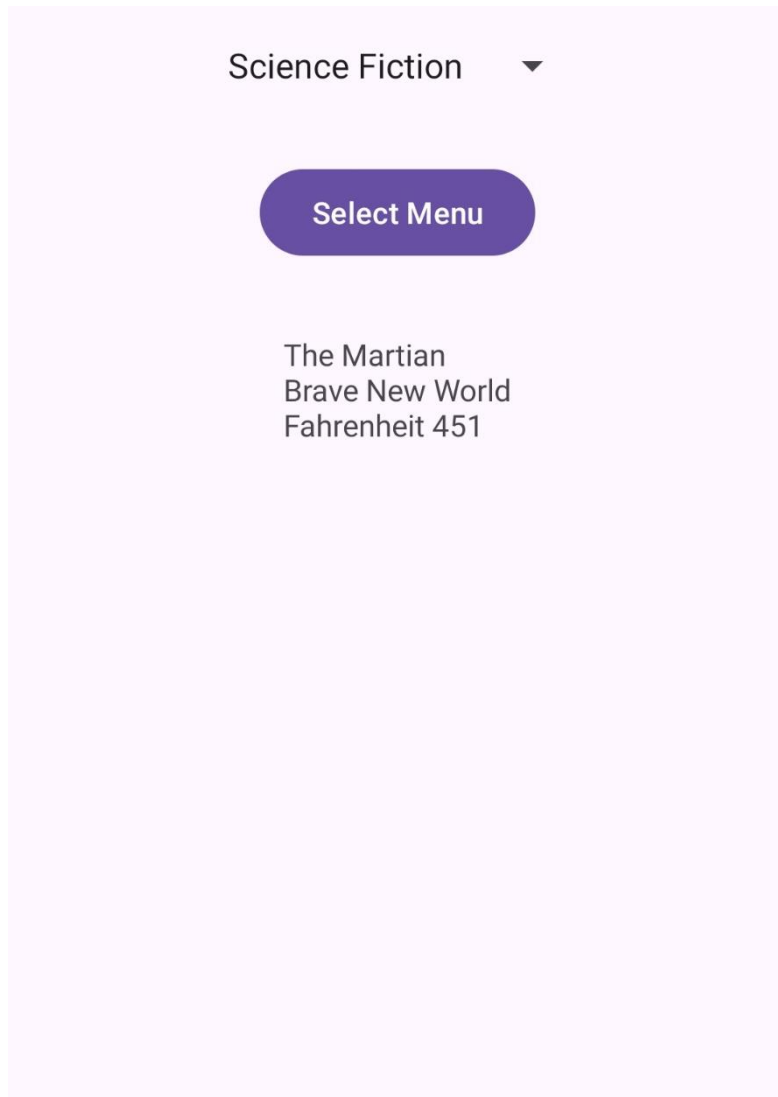
Output:

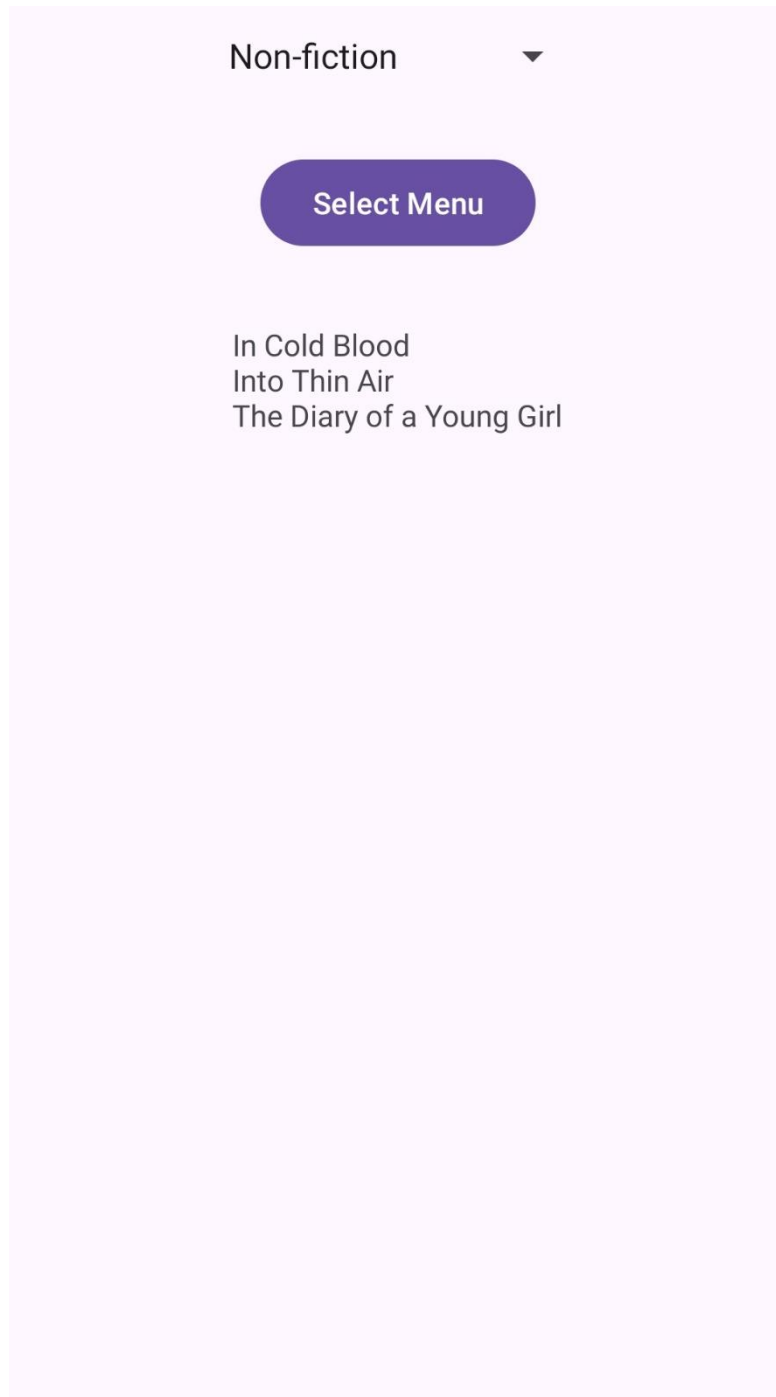**Fig-1: By default fiction is selected in the spinner button**

Fig-02: Science Fiction option is selected in the spinner button and seek button show the book list under this option.

Fig-03: Fiction option is selected in the spinner button and seek button show the book list under this option.

Fig-04: Non-Fiction option is selected in the spinner button and seek button show the book list under this option.