THOMPSON RIVERS UNIVERSITY

Computing Science Department

Lab 4: A Simple Tour Guide App (5%)

This lab assignment is worth 5% of your total grade for this course.

Introduction

A Fragment represents a behavior or a portion of a user interface in an activity. You can combine multiple fragments in a single activity to build a multi-pane UI and reuse a fragment in multiple activities. You can think of a fragment as a modular section of an activity, which has its own lifecycle, receives its own input events, and which you can add or remove while the activity is running (sort of like a "sub activity" that you can reuse in different activities). The main goal of this lab is to learn how to use fragments in Android Applications.

Objectives

After completing this lab, you will be able to:

- Combine multiple fragments in a single activity.
- Manage the life cycle of activities and fragments properly.
- Implement fragment communications.
- Use either bundle or shared preferences objects to save state data to preserve the current UI state.

App Description

In this lab, you will develop a Tour guide App. The app introduces the basic information about Canadian cities to the user. You may change the contents to something else like a description of TRU campus buildings or sightseeing locations in Kamloops, etc. The app has one activity and two fragments, as shown in Fig. 1. When a user clicks on a city name in the top fragment, the description appears in the second fragment. **The app must save state data to preserve the current UI state** so that the currently selected item does not change when users rotate the device.

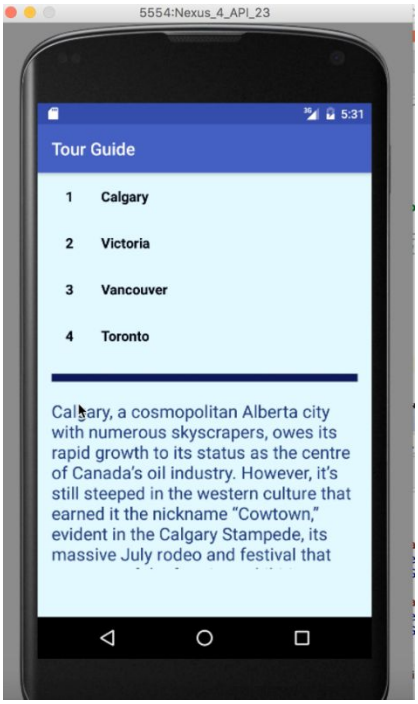

Figure 1

View video

- You may view the video, available for this lab in moodle, to see the expected behaviour of the app in different scenarios.

Design Requirements

The App should meet the following design requirements:

1. Use a fragment for the top panel and a another fragment for the bottom panel
2. All strings should be saved in strings.xml
3. Use bundle or sharedpreferences objects to save state data to preserve the current UI state at orientation change
4. Regardless of your approach, the list must be created dynamically, so if a new city is added to the list in XML data file, the app still works without any code changes in Java or XML layout

Assignment Submission **Instructions**

1. Compress your project folder and rename the file to **lab4_lastname.zip.** Upload the compressed file to the dropbox on Moodle for this assignment

Marking Rubric

Component	Marks	Description
Presentation	10	- App design style and presentation includes, fonts, colors, sizes, etc.
Basics functionality	55	- All bare basic requirements of a tour guide app are satisfied and basic functionality is working perfectly. App doesn't crash.
Usability	20	- A fragment is used for the top panel and another fragment for the bottom one. - Activity and fragments life cycles are managed properly.
User Interface quality	15	- Bundle objects is used to save state data to preserve the current UI state at orientation change.
TOTAL	**100%**	