# *Programming V (420-B51-HR)*

# *Lab 4 – Multiple Activities*

Date assigned: Monday, September 18, 2017

Date due: **Friday, September 22, 2017, 11:55 p.m.**

**Learning Objectives**

Upon successful completion of this lab exercise, the student will have:

* Write Android applications using multiple activities
* Use the Android resource folders to store our project resources.

Lab Setup

1. When creating projects use the URI ca.username.L04 where username is your name.
2. PAY ATTENTION TO THE NAME OF THE ACTIVITIES.
3. Use a graphic icon for your projects.

To do:

The purpose of this lab is to build a three activity Android app.

**Tax Calculator**

The purpose of this project is to build an android program that will accept a price and calculate the tip and total cost of the bill. The In the end this project will have 4 activities.

1. The first (opening) activity is a menu which presents three buttons, Calculate Tip, Calculate Share and About. This should be the first activity you create. Call the activity MenuActivity and give it the title Menu.
2. If the user chooses About, call the About activity to display an informational help message similar to the one pictured below. The back button on the tablet returns to the menu.
3. If the user selects Calculate Tip start an activity called CalculateTip and display a screen similar to the figure below. The user enters an amount using the **numeric** keypad and the tip and total are calculated automatically. The default tip is 15% and is always calculated. Use a SeekBar (which defaults to 15%) to allow the user to select an optional tip in whole number increments between 0 and 50%. As the user slides the SeekBar to the left or right you should update the tip amount and total in the second column automatically. The user indicates which amount he/she want to use by clicking on the desired total amount. This value must be returned to the calling activity so that it can be used in the subsequent activity.
4. A back button returns to the menu.
5. If the user selects Calculate Share, open an activity called CalcShare. Pass the activity 0 or the amount returned from the CalculateTip activity if that activity has already been called.
6. The CalcShare activity displays the amount passed to it BUT ALLOWS THE USER TO CHANGE IT.
7. It allows the user to choose the number of people to share the bill as a number between 2 and 12. Do NOT use an EditText for this, use an appropriate widget.
8. When the number of people has been selected, display the amount that each person owes as a currency amount.
9. A back button returns to the menu.

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| About  Final Price v 1.0 September 18, 2017 Author: Ron Patterson  A program to read a price from the user, then find the tax and total price for the selected region. Currently supports any province or territory in Canada. |  |

Example:

If the user selects Calculate Tip and enters an amount of $20 you would initially display a tip of $3.00 and total of $23.00 in both columns. The user then could adjust the second column values using the SeekBar. Once the user has decided on a tip and total amount he/she clicks on that value and then clicks on the back button to return to the main menu. The amount chosen is passed back to the calling program. Let’s suppose this value is $24.00.

The user then selects the Calculate Share button which displays $24.00. The user changes the value to $28.00 and selects 4 people. The app then displays that each person’s portion is $7.00

Guidelines:

* Design, design, design
* Your program should open the numeric keypad when the user selects the EditText box.
* Find or create a unique BUT APPROPRIATE icon for your program and use it
* Format all output to currency format with 2 decimal places.
* When designing the About activity make sure to use enough of the screen area to make it look good. You can also change the background color, font, font size and font color as desired.
* Format your xml file and java files appropriately for easy reading.

To submit:

Zip the project created and hand it in. Also, show me the working app before leaving.