uOttawa

SEG 3125 (Analysis and Design of User Interfaces)
Summer 2017

Lab 1:
Simple Android Tip Calculator

May 15th to June 11th

Develop an android application that calculates the tip amount to pay at a restaurant. Since we are primarily interested in the development of User Interfaces (UIs), we will describe the application in terms of its UI screens and menus. Note that this is not the ideal method to capture software requirements; nonetheless, it should be sufficient for a simple application.

The application's Graphical User Interface (GUI) is composed of the following screens and menus:

Screen or Menu	**Description**
Welcome (First) Screen	It allows the user to enter the bill amount, tip percentage and number of people that will pay (by default 1).
Summary Screen	It is displayed after the user prompts the application to calculate the tip amount in the *Welcome (First)* screen. It simply lists the bill, tip and total amounts. Optionally, if more than one person is paying, it displays the amount of money that should be paid by each individual and the tip amount each person would be paying (tip per person). *For more information, see the Example of Page 2.*
Settings Menu or Screen	It allows the user to set the default tip percentage and currency. For the default tip percentage setting, if specified, it would be automatically "auto filled" next time the application is used (although the user can always change that percentage). For the currency setting, you need to only support the following currencies: Dollar, Euro and Pound.
"Suggest a Tip" Menu or Screen	If the user is unsure about the tip percentage and needs advice, this function should come in handy. The *"Suggest a Tip"* menu or screen allows the user to rate her or his quality of experience at the restaurant through a five star rating system. Upon rating the experience, a tip percentage is calculated using the following formula: $$TipPercentage = 10 + (rating \times 2)$$ where *rating* is the number of stars out of five specified by the user. The calculated tip percentage is then displayed to the user as a suggestion.

The application should handle gracefully the following error scenarios (by displaying descriptive error messages):

- User does not enter information into one of the fields.
- User specifies an illegal or unacceptable value (e.g. negative value for the tip percentage)

Please note that the way you allow the user to access menus or navigate between screens is mostly left to your discretion. You will generally earn a good mark on your UI design if the TA can easily use your application without any instructions.

Example

If the bill amount is $30, the entered tip percentage is 15% and two people will pay the bill, then the *Summary* screen should display the following:

Bill amount: $30.00
Tip amount: $4.5
Total amount: $34. 5

Tip per person: $2.25
Each person pays: $17.25

FAQ

What to submit?
Nothing! You will simply show a demo of your application to the TA. The TA will also ask you questions about your design decision.

When can I demo?
You have at least 3 lab sessions to complete and demo your application. Demos are performed on a first come first served basis. Therefore, the TA might have lots of demos to go through on the very last session. Consequently, if you finish early, it is advisable to demo your work immediately and not way until the end.

How will I be evaluated?
This is the marking scheme:

- Application meets all the requirements specified **(30 points)**
- UI is well designed and follows the Heuristic principles seen in class **(40 points)**
- TA questions answered correctly **(30 points)**