uOttawa

SEG 3125 (Analysis and Design of User Interfaces)
Winter 2018

Lab 1:
Simple Rent Calculator

Splitting the rent fairly based on room size doesn't have to be that hard!

Jan 22th to Feb 5th

Develop an android application that calculates the rent to be paid by you and your roommates, especially when the rooms are of different sizes. 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 monthly rent, the number of rooms, their sizes, their type (single, double, triple, basement, etc.) and the number of roommates with his names. If all rooms are equal in desirability and size, the app should split the monthly rent in equal amounts.
Summary Screen	It is displayed after the user prompts the application to calculate the rent in the *Welcome (First)* screen. It simply lists the total amount and shared amounts. *For more information, see the Example of Page 2.*
Settings Menu or Screen	It allows the user to set the default currency and the measure system. You need to only support the following currencies: Dollar, Euro and Pound. As it concerns the measures, you need to support the **Imperial** and **Metric** units. In this screen, the user can also set if he/she wants the amounts to be the next quarter. The sum of all rents need to be equal to the total rent due.
More Details Screen	In this screen, the user can get more details about how the monthly rent was split.

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 size of the room units)

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 (one of the possible examples)

The floor plan has a total bedroom area of 700 sq. ft. and a monthly rent of $2,000.

Messi and Antonella want to occupy the master bedroom. Ronaldo wants the secondary bedroom.

Master bedroom has 400 sq. ft. = 57.14% of the bedroom area, rent = $1,142.80
Secondary bedroom has 300 sq. ft. = 42.86% of the bedroom area, rent = $857.20

Then the *Summary* screen should display the following:

Messi and Antonella should pay $1,142.80
Ronaldo should pay $857.20

The *More Details* screen may display the following:

Since the Master bedroom has 400 sq. ft., which corresponds to 57.14% of the bedroom area, the rent is $1,142.80.
In addition, since the Secondary bedroom has 300 sq. ft., 42.86% of the bedroom area, the rent is $857.20.

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)**