CS1073 Lab 5

March 2, 2011

User-defined Methods

For this lab you should reuse the logic (code) that you developed for Lab 2 (the instructions for Lab 2 are available on Blackboard). We will improve on the solution to Lab 2 in the following ways:

1. Decompose the problem into three methods

    (a) `main`:
        i. controls the start and end of our application
        ii. calls the other methods in the correct order.
        iii. allows the user to run the application multiple times (See note 2 below).

    (b) `getUserInput`:
        i. gets a value from the user between 0 and 999
        ii. makes use of a *while* loop to ensure that the user input is valid
        iii. returns a valid integer to main

    (c) `addDigits`:
        i. takes an integer as a parameter
        ii. returns the sum of the digits in the integer

2. You should use an iterative approach to solving this problem. By that I mean, you should code, compile and test the program starting with a single method and gradually building up to the finished program. You should not implement the multiple executions part until all the rest is successfully running.

3. You may choose to work in pairs to solve this lab. If you do, please ensure that one member is responsible for coding `addDigits`, while the other member is responsible for coding `getUserInput`. You should work on `main` together.

4. You may choose to get the user input with either dialog boxes or standard input. Be consistent with your I/O whichever method you choose.

What to Submit

Submit your .java file through Blackboard. It is important you include your name (and the name of your partner if appropriate) student number and short description of the problem in comments at the beginning.