Lab 02: Find Average of a Group of Numbers

CSci 515 Spring 2015

2015-01-23

Dates:

Due: In Lab, Wednesday January 28, by 4 pm (lab end time)

Objectives

- Practice writing sentinel-controlled loops.
- Become familiar with basic if..else decisions, and simple boolean logic.
- Practice with arithmetic and type conversion in C.

Description

Determine the average, and some other properties for an arbitrary number of integer values. The user should be prompted to enter numbers from the terminal, and to indicate when they are done entering numbers by using a sentinel (use `-9999` as your sentinel value).

Your program should report the following values after the user has indicated they are finished entering numbers. The sum of the values, the average of the values, the minimum value entered, the maximum value entered, and the total number of values the user entered. The output of a session with a user should be formatted to look exactly like this:

```
Enter integer values, when done enter -9999.
Enter next value: 3
Enter next value: 6
Enter next value: 13
Enter next value: -3
Enter next value: 8
```

```
Enter next value: -2
Enter next value: -9999

Number of Values Entered: 6
Sum of values: 25
Maximum value: 13
Minimum value: -3
Average value: 4.16667
```

Lab Submission

An eCollege dropbox has been created for this assignment. You should upload your version of the lab by the end of lab time to the eCollege dropbox named `Lab 02 Average of Values`. Work submitted by the end of lab will be considered, but after the lab ends you may no longer submit work, so make sure you submit your best effort by the lab end time in order to receive credit.

Requirements

Your programs must conform to the style and formatting guidelines given for this course. The following is a list of the guidelines that are required for the lab to be submitted this week.

- The file header and function header for your main function must be present, and filled out correctly.
- You must indent your code correctly and have no embedded tabs in your source code.
- You must not have any statements that are hacks in order to keep your terminal from closing when your program exits.
- You must have a single space before and after each binary operator.
- You must have a single blank line after the end of your declaration of variables at the top of a function, before the first code statement.

Failure to conform to these particular guidelines for this lab will result in a grade of 0 for the lab, and it being returned with an indication of which of these items your program violates. Failure to follow other class/textbook

programming guidelines may result in a loss of points, especially for those good programming practices given in chapters 1-5 of our textbook which you should have read by now.