

CS 135

Exercise #8

Point value: 40

Date due: email your source file (.cpp file) to your lab instructor by 11:59pm Fri, Mar 10

New Skills Practiced (Learning Goals)

- Problem solving and debugging.
- Linux redirection to read data from a file.
- Use of conditional loop (while).

Data File Description

A data file for this exercise will consist of several lines of text that form sentences. The text may include letters, punctuation marks, and/or digits. Each sentence will be terminated with either a period (.), an exclamation mark (!), or a question mark (?).

Design and implement a complete C++ program that will

- display your name, lection and lab section #s, and exercise #
- using Linux redirection, read the contents of the file and
 - compute the average number of letters per sentence in the file
 - count the number of digits in the file
- display the average with a label and 3 digits to the right of the decimal
- display the digit count with a label

When the program compiles and runs correctly, use the mail utility to email a copy of the program file to your lab instructor. Make sure the subject line of your email includes your name, lecture and lab section #s, and the exercise # if you wish to receive full credit.

NOTES:

- Make sure you choose enough test data to ensure that your program meets all the requirements.
- If you use any library functions in your program make sure you include the appropriate header file(s).
- It is a good idea to send a carbon copy to yourself (-c option) of all emails sent to your lab or course instructor when using the mail utility.
- A comment with your name, lecture section#, lab section#, and exercise# should be at the start of your program file.

Sample terminal session:

```
[lee@bobby keys]$ more data4eight
What is Earth Day? Earth Day is
celebrated annually on April 22 to demonstrate support for
environmental protection. It was first marked
in 1970 and is coordinated globally by the
Earth Day Network. More than
193 countries participate each year.
[lee@bobby keys]$ g++ ex08.cpp
[lee@bobby keys]$ ./a.out < data4eight
Lee Misch  Lec Sec# 10__  Lab Sec# 10__  Exercise #8
Average # of letters per sentence is 48.250
Total # of digits in the file is 9
```

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