

COP3014 - Foundations of Computer Science Assignment #7

In this assignment you will implement a program called "**charword_freq.cpp**" to determine the number of words and the number of occurrences of each letter in a block of text stored in a data file called "**word_data.txt**". Define a word to be any string of letters that is delimited at each end by either whitespace, a period, a comma, or the beginning or end of a line. You can assume that the input consists entirely of letters, whitespace, commas and periods. When outputting the number of words and letters that occur in a line, be sure to count upper- and lowercase versions of a letter as the same letter. Output the letters in alphabetical order and list only those letters that do occur in the input data file.

Consider the following example:

Block of text in the data file:

hello world ALL is great. HELLO WORLD ALL IS GREAT. hello world all iS great.

Output of your program to the screen:

15 words

6 a

3 d

6 e

3 g

3 h

3 i

15 l

6 o

6 r

3 s

3 t

3 w

Your program should be modular, meaning that you should break it up into smaller function(s). Your main program should be as small as possible and well documented.