

# CS120 - Computer Science I

## Assignment #7

### Spring 2014

The purpose of this assignment is to give you some practice using files in C++.

You are to write a program that will prompt the user for the name of a file containing text, then analyze the text to count the number of words, the number of characters, and to keep track of the longest and shortest words in the file.

Your program should handle the possibility that the user might enter a file name that doesn't exist. When this happens, your program should give the user the option either to enter a new file name or to type a 'q' to quit the program.

For this assignment, you can assume that a word is any group of characters surrounded by white space (i.e., a combination of any number of spaces, tabs, and newlines). Punctuation marks should be considered part of a word, but should not be counted in the character count for the word. You can consider any character that is not a letter, number, or white space to be a punctuation mark.

In the following example, note that there is a file of text called `gettysburg.txt`. However, the first time the user types the file name, they misspell the name, so the program prompts the user to either re-enter the file name, or quit. After counting the number of words and characters, the program asks the user for the name of another file, or quit:

```
$ ./a.out
Enter the name of the file: gettisburg.txt
That file name does not exist.
Re-enter the file name, or type 'q' to quit: gettysburg.txt
The number of words in the file is xxx.
The number of characters in the file is xxx.
The longest word contains xx characters.
The shortest word contains x characters.

Enter another file name, or type 'q' to quit : q
$
```

As usual, submit your program using `cscheckin`.