CO222: Programming Methodology
Word count

Aim: The aim of this laboratory class is to develop a solution to simple problem using the things that we discussed at the class.

Objective: The objective of this class is to develop a program that would count the number of times a word appears in a file. Your program is called *wordcount*. When one types *$wordcount sample.txt* the words in the *sample.txt* should be extracted and the number of times each work appear should be displayed with the word itself.

During the lab: During the laboratory class you are expeted to answer the following questions and implement the *int add(list_t list, char *s)* function and the main function which will read the words from the given file and insert to the list.

Questions:

1. Change the #define __H__MAP__ to #define __H__MAP__1 in the *map.h* file. Type make clean and make. What happens? So what is the purpose of this?
2. What is the deference between assert and using a if statement?

What is to be submitted (Part II):

- Note that *fscanf*, while break the strings it does not remove no characters from the string. For example, it will return '“good' and 'day”' if the string in the file is “good day”. Before inserting to the linked list your code should clean the strings. Remove all no characters in the string.
- The removal (*remove_list)* function should return strings in the alphabatical order. This can be achieved in different ways. For example, one might decide to insert the strings to its correct place in the linked list and remove the head which will have the least string. Or you can insert to the head and when removing scan the whole list to find the least string and remove that node. Removing a node from a linked list will require you to know the pointer of the previous node. You might be able to work around this by replacing the node with the head and removing the head. You are free to make your own decisions on the implementation; only thing that matters is that least string should be removed.

Submission: You should submit your answers to Part II as single tar ball. Deadline is 31st October 2019.

Some useful functions: strcmp, strdup, strlen.