

UNI CS 3470

Networking

Homework 1 – C Warm-Up (Due 8/29 at 1:00pm)

Assignment Weight:

This assignment is worth 25 of the total 1000 course points.

Assignment Description:

This project must be completed individually. The purpose of this assignment is to get you used to 1) accessing and using a Linux server, 2) learning enough basic C to understand examples I use in the rest of the class.

Before you begin, be sure your name is at the top of the program and there are at least 3 comments in the code. If either of these things are missing, points may be deducted.

After going through the short C language tutorial found on the resources class page, log onto the server student.cs.uni.edu and write a small C program called “strings” that:

- a. Takes a string as input (max length 80 characters).
- b. Counts and prints the number of vowels in the string (where “y” and “Y” are not vowels).
- c. Counts and prints the number of consonants in the string.
- d. Counts and prints the number of words in the string.
- e. Re-prompts for another group of words (e.g. starts the program again).

The program should continue prompting for strings until the user types the word “quit” by itself at the prompt.

For example, if the program is called strings, you should be able to run it like this:

```
$> ./strings
Please enter a string: All. Your base.
Number of vowels found: 5
Number of consonants found: 6
Number of words: 3

Please enter a sentence: quit
Exiting!
```

Hints:

- Don’t try to use a hash table/dictionary. They aren’t part of the C standard libraries.
- The strtok() string function might be useful. Google it!

- Even though this assignment looks easy, C string (or lack of string!) manipulation may be difficult if you haven't had much practice. Work on it in different pieces.
- Try to make your output look exactly like mine above.
- You might want to start with this starter code:
https://cs.uni.edu/~diesburg/courses/cs3470_fa18/example.c

Grading:

If the program does not compile, I will assign a zero. Make sure it compiles!!

The submission grading rubric is as follows (points out of 25 total):

Project element	Points
Counts number of vowels	5 fully working
Counts number of consonants	5 fully working
Counts total number of words found	5 fully working
Program restarts automatically	5 fully working
Program quits on exit	5 fully working

Submission Instructions:

Please submit a single file called strings.c to the "Homework" area on the eLearning website. It is your responsibility to be sure that the project file has been uploaded correctly by the deadline.