

UNI CS 3430 (Spring 2016)

Operating Systems

Project 0 – C Warm-Up (Due 1/22/2016 at 11:00am)

Assignment Weight:

This assignment is worth 5% of your total class grade.

Assignment Description:

This project must be completed individually (no partners yet).

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 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.

Grading:

- Submission grade: 60% of the project grade will be based on your final deliverable.
- Quiz grade: 40% of the project grade will be based on the project quiz in class after the project has been completed.

If the program does not compile, I will assign a zero to your submission grade.

The submission grading rubric is as follows (points out of 60 total):

Project element	Points
Correctly prompts for a sentence	10 fully working
Counts number of vowels	10 fully working
Counts number of consonants	10 fully working
Counts total number of words found	10 fully working
Program restarts automatically	10 fully working
Program quits on exit	10 fully working
Deductions	Points
Prompt or prints become garbled	Deduction of 5 or 10 points, depending on severity
No name on program	Deduction of 10 points
Less than three comments inside code	Deduction of 10 points

Submission Instructions:

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