

## Practice Exercise #34: Count Number of Words

[http://www.comp.nus.edu.sg/~cs1010/4\\_misc/practice.html](http://www.comp.nus.edu.sg/~cs1010/4_misc/practice.html)

**Reference:** Week 9

**Date of release:** 13 October 2014

**Objective:** Using character functions

### Task statement:

Write a program **countWords.c** to read an English sentence and count the number of words in the sentence.

Your program should contain a function with the following header:

```
int word_count(char str[])
```

or

```
int word_count(char *str)
```

This function takes in the sentence and counts the number of words in it. You may assume that there are at most 50 characters in the sentence.

At least one space is needed to separate words. For example, "J.K. Rowling" contains two words, but "J. K. Rowling" contains three. "A&W fast-food" contains two words.

A word must comprise at least one English letter. For example, "Jack & Jill potato chips" contains four words, not five, because "&" is not considered an English word. However, "Jack 'n Jill potato chips" contains five words, because "'n" is considered a word as it contains the letter 'n'. Likewise, "3 + 5 is 8" contains only one word.

You are to include **<ctype.h>** in your program, but you are NOT allowed to use **<string.h>**. This means that you are not allowed to use any string functions (yes, not even `strlen()`).

### Sample runs:

Enter a sentence with at most 50 characters:

```
Hello world, welcome to CS1010!
```

```
Sentence = Hello world, welcome to CS1010!
```

```
Word count = 5
```

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Enter a sentence with at most 50 characters:

**WHAT IS 1234 \* 5678 ???**

Sentence = WHAT IS 1234 \* 5678 ???

Word count = 2

---

Enter a sentence with at most 50 characters:

**Exercises r ... good4u.**

Sentence = Exercises r ... good4u.

Word count = 3

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Enter a sentence with at most 50 characters:

**J. K. Rowling wrote "Harry Potter".**

Sentence = J. K. Rowling wrote "Harry Potter".

Word count = 6

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Enter a sentence with at most 50 characters:

**Zhang Ai-Mei loves \*\*\* vanilla ice-cream \*\*\***

Sentence = Zhang Ai-Mei loves \*\*\* vanilla ice-cream \*\*\*

Word count = 5

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