Problem Set 4 Exercise #08: Count Words

Reference: Lecture 10 notes

Learning objectives: Characters and Strings; Algorithm design

Estimated completion time: 50 minutes

Problem statement:

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

Your program should contain the following function:

```
int count_words(char sentence[])
```

that takes in a sentence (less than 100 characters) and counts the number of words in it.

Words are composed of alphabets only and are separated by spaces, punctuations or other characters. Some examples are given below.

1. **"This"** is a word
2. **"You're"** are two words.
3. **"Jack & Jill potato chips"** contains four words, not five, because **"&"** is not a word.
4. **"Jack 'n Jill potato chips"** contains five words.
5. **"3 + 5 is 8"** contains only one word

A tip is given at the beginning of next page.

Sample run #1:

```
Enter a sentence: This
Word count = 1
```

Sample run #2:

```
Enter a sentence: You're
Word count = 2
```

Sample run #3:

```
Enter a sentence: 3 + 5 is 8
Word count = 1
```

Useful tips:

1. The `isalpha()` function from `<ctype.h>` may be useful.

2. You need to examine both *current* and *next* character to detect the end of a word.