

C Strings

Assignment

Write a program to read a sentence, and do the following:

- 1) Convert the sentence to upper case and display the result.
- 2) Count how many alphabets and digits there are in the sentence, not including spaces and punctuations.
- 3) Count how many vowels in the sentence and display the result.
- 4) Count how many consonants in the sentence and display the result.

Example of the program output

```
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Your sentence will be capitalized and counted.  
-----  
Enter a sentence: Today is 12/25, Christmas!  
  
Upper case: TODAY IS 12/25, CHRISTMAS!  
There are 20 characters, without counting spaces.  
There are 5 vowels.  
There are 11 consonants  
There are 4 digits  
  
Continue (y/n) ?
```

Objectives

Use functions in <cctype> and <cstring> to manipulate characters and C strings.

Program Design

Read a sentence:

To read a sentence including spaces, you cannot use cin operator; instead, you will use `cin.getline()` function.

Convert a sentence to upper case:

There is no function available to convert a whole sentence to uppercase. You will convert one character at the time. In order to do so, you need to know how long the sentence is, then convert each character in the sentence array.

Find the length of a sentence:

Function `strlen()` returns the length of a string variable.

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What To Do

1. Read the assignment.
 2. Write the program and name it ch10_Lab_Cstring.cpp.
 3. Compile and debug the program.
 4. Execute the program.
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Submission

Submit ch10_Lab_Cstring.cpp with your test results on Blackboard.