

COSC 1560 – Computer Programming II

Assignment 6

Deadline October 9, 2023

- 1) Write a function that accepts a **C-string** as an argument, and the size of the C-String, and returns the number of words contained in the array.

```
int numberWords(const char* words, int size);
```

In ‘main’, the program should ask the user to enter a line of words, ended by ‘.’, and store in a dynamically allocated **C-string** variable with a length of 60. The C-string should be passed to the function to calculate and return the number of words, and then the appropriate output displayed. This process should be repeated 2 times.

In a sentence, words could be separated by any number of ‘ ‘ or ‘,’ or both. Therefore, if the following sentence is entered:

This contains a name,address, and phone number.

it would result in a total of 8 words.

- 2) A program is required to gather statistical data about a sentence read from the user and make some specified changes to this sentence as outlined below.

Functions described in Chapter 10 should be used to accomplish these requirements.

- i) Declare a **string** variable named “words”, and initialize with the following:

“This is a 101 SAMPLE to demonstrate string processing”

- ii) Write a function to take “words” as a string argument and display the following information:
 - a) The size of the string.
 - b) The number of letters in the string.
 - c) The number of digits in the string.
 - d) The number of lower case letters in the string.
 - e) The number of upper case letters in the string.
 - f) The character that is at index 16 of the string.
 - g) The last character of the string.
 - h) The index of the first ‘a’ in the string.
 - i) The index of the second ‘a’ in the string.

THE DEPARTMENT STANDARDS FOR “STYLE GUIDELINES” SHOULD BE FOLLOWED IN ALL CODE.