

## *COSC 1560 – Computer Programming II*

### **Assignment 6**

**Deadline March 7, 2022**

- 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 50. 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 3 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 “sentence”, and initialize with the following:

“This is a 101 SAMPLE to demonstrate string processing”

- ii) Write a function to take “sentence” 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 12 of the string.
  - g) The last character of the string.
  - h) The index of the first ‘s’ in the string.
  - i) The index of the second ‘s’ in the string.

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