**Name:**

**Advanced Programming in C++**

**Lab Exercise 3/22/2024**

In this exercise, you will write some programs that work with C style strings using some of the string library functions (using #include <cstring>). You will also get some practice with using string numeric conversions. For each program you are to submit your documented source code as well as a sample of the output.

1. Write a function that accepts a C-String as an argument and displays it’s contents backwards. Demonstrate the function in a simple program that asks the user to input a string, passes it to the function which actually reverses the string. Make sure you print the reversed string from main. The prototype for this function should be:

void reverseString(char \*);

1. Write a function that accepts a C-String as an argument and returns the number of words contained in the string. Demonstrate the function in a program that asks the user to input a string and then passes it to a function. The number of words in the string are then returned to the main program which displays the original string and the number of words. The prototype for this function should be:

int numWords(char \*);

1. Write a function that returns the average word length in a string. Your function should call the numWords function previously written and divide the length of the string by the number of words. The prototype for this function should be:

double averageLength(char \*);

1. Write a program that asks the user to enter a series of single-digit numbers with nothing separating them. Read the input as a C-string. The program should display the sum of all the single-digit numbers in the string. For example, if the user enters 2514, the program should display 12, which is the sum of 2, 5, 1, and 4. The program should also display the highest and lowest digits in the string.