

CA406 - Software Lab I

Lab Exercise – 10

Date: 26/10/2018

1. Write a C program to perform operations on complex numbers. Use C structures to define a new data type for complex numbers and provide a separate C function for each of the below operations:
 - Addition of two complex numbers
 - Subtraction of two complex numbers

Implement the function without using dynamic memory allocation and by using call by value and return the structure object as a value. You should use the dot (.) operator to access the structure members.

2. Write a C program which takes a text file as command line argument and displays the number of lines and words in the input file. Use `fgets()` function to read the text file line by line and use `strtok()` function to tokenize the string into words.

Refer to the following links to know more about the `fgets()` and `strtok()` functions.

http://www.tutorialspoint.com/c_standard_library/c_function_fgets.htm

http://www.tutorialspoint.com/c_standard_library/c_function_strtok.htm

3. (Optional) Solve question 1 using call by reference and dynamic memory allocation.