Name:

Deposit your quiz solution in this directory:

/data/courses/ece\_1111/current/quizzes/qu\_05/lastname\_firstname

in a directory named *p01*.

Please remember you must follow instructions exactly in this course. Failure to follow these instructions will result in a failing grade on this quiz.

1. Write a C program that consists of a main program, *p01.cc*, and a function, *my\_array*, stored in a file *p01\_00.cc*. The function *my\_array* should use the following prototype:

long my\_array(float\* values, float a, float b, long start\_index, long stop\_index);

This function computes the equation:

$$value = a \* i + b$$

for the variable $i$ in the range $[start\\_index, stop\\_index]$. It allocates enough memory to hold the output values in an array which is passed as an input. It returns the length of the array. If an error occurs, it returns $-1$.

Your main program should accept the values $a$ and $b$ as command line arguments ($argv[1]$ and $argv[2]$), and print the values of array as shown from the main program:

values[0] = 1234.12

values[1] = 2345.67

...

for the range $[0,9]$ inclusive.

Your main program should call your function and then print the resulting values.

Note that you must do the computation in a function call. You must use our standard make file to compile and link your program. You must declare the function in a header file, *p01.h*, and include the implementation in a file named *p01\_00.cc*.

Submit your code in the usual place on the class server – *qu\_05/lastname\_firstname/p01/*.