

# CS 1313 010 Spring 2025 Homework #11

Quiz to be held in class 9:00-9:15am Mon Apr 7 2025

Please feel free to discuss these questions with your classmates, but **NOT** to copy each other.

**NOTE:** Except where and as explicitly permitted in writing (for example, in a Homework), you are **ABSOLUTELY FORBIDDEN** to **COPY EVEN A SINGLE CHARACTER** from, or to have **ANY** shared code with, **ANY** other entity, whether a human being (regardless of whether in CS1313 or not), a text resource, a computing resource or anything else, whether in person, on a local computer, online or anywhere else.

It's **INCREDIBLY EASY** for us to detect such copying, so **DON'T EVEN THINK ABOUT IT!**

**WRITE A PROGRAM** that finds the minimum value and the maximum value in a `float` array.

Specifically, the program should:

- greet the user,
- prompt for and input the length of the array;
- idiotproof the length of the array;
- dynamically allocate the array;
- check that the allocation was successful;
- prompt for and input the values in the array;
- find the minimum value in the array;
- find the maximum value in the array;
- output the minimum and maximum values in the array;
- deallocate the array.

**HINT:** To find the minimum value in an array:

1. Before you start examining the input values, the minimum value that you've seen so far is the value of the first element of the array. (You can't start the minimum value at zero, because in principle you might have an array of only positive values, in which case the minimum value in that array would be greater than zero.)
2. Examine each input value in turn. If that input value (that is, that element of the array) is **less** than the minimum value that you've seen so far, then the minimum value that you've seen so far is that element of the array.

**HINT:** To find the maximum value in an array: the procedure is basically the same as finding the minimum value, except you're checking whether each array element is **greater** than the maximum value that you've seen so far.

**NOTE:** You **MUST** calculate each of the minimum value and the maximum value in its own `for` loop; you are **ABSOLUTELY FORBIDDEN** to calculate more than one of them in the same `for` loop.

You **DON'T** have to use comments. Otherwise, all rules for Programming Projects (through PP#5) apply.

**For this Homework question only**, you **MUST** submit a script file of the standard kind, **DURING THE QUIZ TIMESLOT** (Mon Apr 7 9:00-9:15am Central Time), in place of writing the answer to this question by hand. You **DON'T** need to submit a summary, nor a C source file. You **MUST** run the program using an array length of at least 10.

**NOTE:** The script file **MUST** have been created on ssh.ou.edu, not on any other system.

If you use **ANY** resources other than Dr. Neeman, the TAs (Basiri, Bilal), the course textbook or the materials posted on the course webpage, you **MUST** reference them on the quiz. **THIS INCLUDES CLASSMATES, FRIENDS, PROFESSORS, ONLINE RESOURCES, ETC.**