Assignment 7 Group Part

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Tim Alcon

Which program did your group decide on?

Eric Buss's program was chosen for Assignment 7 (group part)

What advantages do you think that program has over the others?

Eric's program followed the straightforward approach given to the students by Professor Alcon. It first uses one loop to find the occurrences of the mode within the array provided by the user. Afterwards, it uses the mode frequency to make a second loop which designates the array elements that occur the maximum frequency, and populates them into a vector. Finally, the vector is sorted so that the elements are in ascending order.

The program is cleanly and correctly written with appropriate comments to help the reader understand what is going on in the code. The formatting and syntax made the program clearly followable. The program also uses a minimal amount of variables necessary to accomplish the intended task.

Compared to the other programs, there were only a few differences that set Eric's apart. His program was very similar to Byron's, who took the same approach suggested by Professor Alcon. The one main difference between the two was that Byron's had a few additional variables, some of which were not needed. Overall though, they both functioned almost identically. Alexander's function was impressive in that it used only one loop with one nested loop. One thing we saw in his was a minor formatting error, the nested loop being indented under an if statement. It did not affect the functioning of the program, but was initially confusing to the reader. One other thing that we saw was that the if statement to determine if an occurrence of an element would be added had two conditions. The conditional statement could have eliminated one of these conditions by initializing the frequency to zero, or by not comparing an array element to itself. Regardless, Alexander's function worked appropriately and utilized a method that our group thought was original and took some ingenuity.

What improvements do you think could be made to that program?

There were a few aspects that were included in some of the other programs that could have benefitted Eric's program. One of the things that our entire group agreed upon as being impressive was that Alexander's program used a single loop with one nested loop to both find the mode's occurrence, and populate the return vector. If Eric's was able to utilize the same method, the program could have functioned faster and been written in fewer lines of code. Another thing that we saw in Byron's and not Eric's was the initialization of all the variables at the beginning of the function. If this had been done, it may have improved the readability and clarity of the program.