

## Assignment 7 – Comparisons

Hailey Wilder

Group 45

1. For each pairwise comparison, where do you think your program is better? Why? Where do you think the other program is better? Why? (be detailed)

My program used less loops and calculations than other codes to get the same result. It was also well-annotated, using formatted comment blocks required for this class and in-line comments that explained the progression of the analysis. This made the logic of my loops and calculations easy to understand. The code also considered line-lengths to assure easy reading.

Michael's code gave the same result as mine with all the sample inputs I ran and provided similar outputs, structurally. However, more loops were used, which did not produce an incorrect result, but with larger test cases or a call within a loop can lead to a slower overall result. There was also an unneeded index variable which would potentially slow down this code more and could just be cleaned out of the code. In small tests, there is no noticeable difference, though if this was used on a large scale or called iteratively, there would be noticeable lag with this code. Thus, I would call this program less efficient than mine.

Andrew's program gave the same results with all the inputs I checked and had great validation checks built into the code which was a nice feature. There were some naming convention and assignment issues with this code that did not fit into the requirements specified. Some aspects of this program went beyond the scope of what was specified though and provided beneficial features. Lastly, while each function had a general comment, the flow of what was happening within the functions was not explained with commenting. The extra functionality built into this program gave me neat ideas, but the varied from the specified goals were significant and the lack of commenting made this code take more time for me to read. I learned the most from this code despite any flaws.

Robert's program had similar structure to mine, but it did not produce the correct mode for all the inputs I gave it, so it still needs a bit of tweaking for it to work correctly. It could be simplified to make it work more efficiently with less loops and calculations and possibly prevent the error that is resulting in the incorrect mode to be given.

2. What have you learned from looking at other people's code, and how can you apply it in future assignments? (be detailed)

It was beneficial for me to think about breaking this assignment into multiple loops, although I probably would not do it that way. The idea could be useful in the future if I need help troubleshooting a difficult problem I can break down parts of my code into separate loops in order to help visualize the part I am struggling with more succinctly without worrying about the parts that I already have figured out.

I also enjoyed the expanded functionality of Andrew's program which provided interaction with the user and let them know what to do/ what was wrong when an input was not right for the program. This may not be required for a functional program, but it is certainly a useful feature that can be an invaluable tool to a developer.