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Assignment 7 (Comparisons)

7a. findMedian.cpp

1. Daniel Church's version

Daniel and I have similar code for findMedian.cpp. I think Daniel's variable names are clearer and more succinct than mine.
One area where I think I did better is that I declared local variables and action items within the if conditional. Daniel declared "double median" in two places which may have been unnecessary.

2. Leah Gustitus' version

Leah's code offers a complete view of the program flow as she included her main function. I think this is very helpful for testing, however it makes the function code look clustered. I like that her comments are simple and to-the-point.
Something that I think I did better is that I followed specs and declared double variables instead of float. Leah used several static casts when they are not needed.

3. Vinny Harris-Riviello's version

Vinny's code is short and simple. She is able to use only variables and function calls absolutely needed to build the program. I personally don't think I did anything better when compared to her code. In fact, I really hope that I will be able to write such clean and efficient code one day. Hers was hands down the best code within the group!

7a Reflection

It is very interesting to see how others break down the logical flow of the program. I was surprised that our codes are very similar yet expressed with individual styles (similar to language). A similarity is that everyone checks for odd versus even amount of numbers with an if-else conditional. A difference is how we return the result of the median; some of us used additional local variables while others preferred simplicity and returned directly from the math expression.

From Leah's code, I've learned how static cast works in the context of a live code (I wasn't too familiar with static casting from the previous readings). From Vinny's code, I learned the beauty of a short and clean code, and how it makes hand tracing code much easier. From Daniel's code, I learned that code can be further simplified without sacrificing correct output.

7b. Person.hpp, Person.cpp, stdDev.cpp

1. **Daniel Church's version**

Daniel again has simple, intuitive variable names which I prefer over mine. His code is actually pretty similar to mine except that in stdDev.cpp he declared local variables at the beginning while I declared them as I need them. It is interesting that we both used two for loops, one for getting the sum of ages and the other to store the value of each person's age subtracting the mean age. One thing Daniel did better is that he remembered to return the standard deviation value whereas I forgot to do that!

2. **Leah Gustitus' version**

Leah's Person.h and Person.cpp are similar to my code as well. I believe I did better with my variable names and adding sufficient comments. Leah also declared local variables at the beginning of her stdDev.cpp code and used two for loops. Overall I feel that hers and Daniel's code are like mine which shows that we were all using the same logic paths to navigate this program.

3. **Vinny Harris-Riviello's version**

I learned a lot from Vinny's code. I see that she used const for her getName() and getAge() public functions in class Person. I still haven't figured out the proper usage of const so this motivated me to study it. Once again I am surprised at how clean her code is. Perhaps I need to do less comment blocks. Her Person.cpp looks much cleaner than mine. I thought it's interesting that we both used similar variable names (ex. personName, personAge).
One thing I noticed that Vinny did very well in is that she saved resources by creating helper function ageMean within stdDev.cpp and called it in the stdDev function. I didn't even think about a nested function and I thought this is a great idea! She also pointed out that my stdDev.cpp didn't return a value which I'm really thankful for.

7b Reflection

       7b was a relatively complicated assignment that took me a lot longer than usual. I wasn't very confident in my code, but I felt reassured when I saw that my teammates approached the project in similar ways. For the simpler portions of the assignment, such as defining Person class and its member functions, our codes are mostly the same. However, the difference in technical knowledge really shows in stdDev.cpp. I learned from my group discussions that each of us apply our own unique knowledge and experience into our code. A few of us are very confident in their solution which resulted in excellent information exchange. I really enjoy working with the team and be able to bounce ideas off of each other. I also find it very helpful to know how to communicate my thoughts to others, and be open to constructive criticism.