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Assignment 3 reflection

Understanding

After my first reading of this assignment, I had very little understanding of how I would accomplish it. Once I completed the reading of the chapter, I deduced that looping would be the correct method to get the program to check through each number individually. At that time, I could not figure out how I would get the program to choose the minimum and maximum amount. However, through discussion with team members, I figured out how to arrange variables to find the amounts.

Testing Plan

The tests went as planned when the program was working correctly. I had to make a few alterations to my program due to failed tests. For example, I had one point received 0 for both min and max. At another point, I had both min and max producing the result of the max integer. Both these problems were due to incorrect equations. The testing plan could have been expanded to include invalid inputs by the user such as symbols or letters. The program itself could have been expanded to include another loop so that if the user's input was invalid, they would be prompted to correct it.

Design

My initial design included a while loop rather than a for loop. It was pointed out by my team members that the for loop would be more efficient, so I changed my program to include it. I also didn't initially understand the necessity of a counter with the only purpose of counting loops. I initially tried to use my number variable to somehow accomplish that task and it did not work.

Implementation

The main problem I had during implementation was making sure that everything was formatted correctly. Small issues like forgetting a semi colon or a bracket in the correct place took some time to recognize and correct. The next issue I had was correctly arranging and ordering my equations and cout/cin statements. For example initially I had put the cout statement to enter the integers inside the braces, which caused a prompt to appear at each loop. I learned that it is important to check the code line by line to make sure it is all correctly formatted because a misplaced character can cause an error message. I mostly used the examples from the book to help me through the assignment although I did briefly search the internet for solutions. Ultimately I found the textbook more helpful than any other source.

Improvement

In future assignments, I will start by making a flow chart and/or pseudo code before attempting to write the code. I found that the pseudo code allowed me to focus on writing correct code line by line rather than attempting to write the code while still organizing the general structure in my head. I also learned

that it's easier to catch errors as I am writing if I write slowly and check 4-5 lines at a time. I find it difficult to find errors later because I am no longer mentally thinking through the process of that group of codes. While working with a group, I discovered the importance of clearly defining variables along with their purpose when writing pseudo code as well as the actual code. I ran into a frustrating situation with one of my team members because I was having difficulty understanding the purpose of his variable "x" because he did not explain it. This resulted in unnecessarily long discussions about the pseudo code. I also learned that in a group environment, it is a good idea to set up collaboration methods in advance. For example, if we had began with a skeleton document in Google drive, we all might have had an easier time contributing to it.