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Reflection Paper
10/11/17

Assignment 3a Reflection

When writing the project plan, I felt I had a good idea of how the program should be structured and run. When thinking of the purpose, input, processing, and output; I knew how the skeletal structure was going to be (more or less). We've been asked to prompt the user for inputs before, so there was no difficulty there. The inputs and outputs just needed to be placed in their appropriate locations to run the assignment properly. The expected challenge of the problem was setting up the loop.

In my project plan, I used a while loop. I initially decided to use a while loop, because the user was deciding the loop. However, once I was writing the program, I realized that a for loop would be better. I came to the conclusion that I could use the counter and the user's input to utilize a conditional for the for loop. Since this would be an exact number of loops (chosen by the user), I determined the for loop would be better.

The next road block I encountered was implementing the conditionals for the minNum and maxNum if statements. For a while I couldn't get the program to properly calculate the proper minimums and maximums. I finally found that using the 'or' operator in the if conditional allowed my code to properly sequence. By setting the conditional to (userInput < minNum || minNum == 0) and (userInput >= maxNum || maxNum == 0), the user's input would properly allocate to minNum and maxNum as it went through each loop and adjust its allocation in the memory for each following input.

When constructing my testing plan, I was fairly confident that my understanding of it was correct. I had broken down what the program was asking us to do easily. The testing plan did not change as I coded the assignment and when testing the exact plan I submitted, the results were just as the plan predicted. Once the difficulty of creating the loops and their conditionals was accomplished, the testing plan function properly and without issue. My test plan could have been more complete if I added more of the same integer. I did this after my code was executing properly and had no issues.

The design's skeleton structure more or less did not change. Writing out what the program was supposed to do in natural language wasn't difficult either. Like I previously stated, the difficulties arose when it came time to coding the loops and setting the conditionals. The nested if-loops did not need to be changed, however I could have gone into more depth in the pseudocode detailing how the conditionals would be arranged. That way when I began code, my mind would have already been fact checking if the conditionals would be appropriate for the assignment type.

I also stated in the second paragraph, that the while loop was changed to a for loop. As I wrote the program and started creating the while loop and thinking about what conditionals I could use, I determined that a for loop was more appropriate for this assignment.

I think my implementation of the assignment is fairly solid. I've tested the code for any errors, but found none. My issues were deciding on the proper loop and setting the proper conditionals. I solved these issues by reading the lecture notes on each loop type and relating them to the assignment. This helped me understand the process of looped programs better

and allowed me to discern the proper loop for the assignment. For the conditionals, I knew how to setup the first half of them. However, the second part took some time. I read parts of the book where there were if conditionals and extrapolated their logic to my code. After some more tweaking my code was executing properly and outputting the correct values.

The best way to strengthen my problem solving process and my project plan would be to write more detailed pseudocode and create flowcharts for the loops so I can properly visualize how they would function. Overall, I felt I learned a lot from this assignment. I felt it gave me a much stronger understanding of loops and helped me structure the coding process in my head in a much more detailed way.