Ashley Chang

504449890

Discussion 1K

Project 2 Report: Water Works

1. One of the obstacles I faced during this project was organizing the code into a correct and easy-to-read format. At first, I wrote the final error/result lines in separate if-else statements; each had to be interpreted separately, and thus I had trouble deciding how to relate them to both each other and the input. However, this problem was mainly due to the fact that I had not yet learned about if-else ladders. Once we were taught the proper format and usage of if-else ladders, I was able to solve the problem. Also, the different numbers involved in the calculations were easy to mix up, but again, this was solved when we learned about naming constant variables. Lastly, though I was able to run the program smoothly in Visual C++ and XCode, I had trouble connecting to the Linux server in the SEASnet labs, and I could not access a g++ compiler.
2. List of test data:

* Final reading less than initial reading (100, 50, Ashley Chang, 1)
* Final reading more than initial reading (100, 200, Ashley Chang, 1)
* Negative initial reading (-100, 100, Ashley Chang, 1)
* Negative final reading (100, -100, Ashley Chang, 1)
* Negative initial and final reading (-50, -100, Ashley Chang, 1)
* Same initial and final reading (100, 100, Ashley Chang, 1)
* 0 for initial and final reading (0, 0, Ashley Chang, 1)
* Empty string for customer name (100, 200, , 1)
* Integer for customer name (100, 200, 5, 1)
  + Customer’s name is reported back as an integer.
  + I considered this correct because of variations in customer names
* Character for customer name (100, 200, A, 1)
  + Customer’s name is reported back as a character.
  + I considered this correct because of variations in customer names
* Negative/zero month number (100, 200, Ashley Chang, -1), (100, 200, Ashley Chang, 0)
* Month number larger than 12 (100, 200, Ashley Chang, 13)
* Double for month number (100, 200, Ashley Chang, 1.5)
  + Program gives bill for month corresponding to the rounded-down double (January for 1.5, March for 3.789, etc.)
  + I considered this correct because the double still corresponds to the integer month that is used to calculate the bill