Project 3 Report

1. The most challenging obstacle I had was when I had to try to figure out an error that didn’t show up during building or running, but only when I put in a value. I figured out that it was because I was trying to take a string and change its value twice in one line, like:

s = c[i] + c[i + 1];

I figured out this was wrong after a lot of trial and error, as I knew it had something to do with a certain area but it took me a while to find. Fixed it to:

s += c[i];

s += c[i + 1];

1. In minutes, I simply check if there is a leading 0 or a colon. If a 0, return -1. If colon, I set the minutes value to 0. For the rest, I simply use while loops to skip over certain types of expected inputs from the string until I get to a valid point. At that point, I take in the digits that are at those points as long as there is a digit after it. If it’s too long, I return -1 for being too big. If it cuts early with a space, I simply check if the appropriate “ m” or “ s/m” are there (if required) and then move on past them after returning the value. I continue like this until the end, where instead of checking if there is a character after heart rate in the string I instead check to see if the last number I take in is the last in the string. If not, I return -1 because in the assignment description you said no ending characters are allowed (I took this to mean spaces as well). It then sends all values to the bool function and if all of them are not -1, then it is a valid string.

Also, if any of the previous functions are -1 I return -1 to the rest of the ones after just to be safe. Not really necessary, just being careful.

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| Valid |  :14    28 s/m     42 m    110    (Test for empty minute)             :14         28 s/m         42 m      110          (test extra spaces)     1:14    28 s/m     42 m    110             (test minute val present)     59:59    999 s/m     42 m    999           (test largest values) |
| Invalid | asdf:14    28 s/m     42 m    110          (test not : or digit for first)  :14    28 s/m     42 m    110 asdf      (test ending chars)  :14     28       s/m    42 m    110 (spaces between val and s/m)  :14     28 s/m    42 m    110 (spaces between val and m)  0:14    028 s/m     042 m   0110 (leading zeros, remove one at a time from the first)  Min/sec val as over 59, all others over 999 or 0 (test limits) |