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CS31

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Project 2 Report

One of the largest challenges I had to overcome was finding a particular bug in my program. I’d manually run through the code many times and write down what my solutions should have been. I had the program print out different values to the console, so I could trace the values as their value changed and the program was run. I spent a lot of time trying to find the error, but it eluded me. At the end, I realized that I had declared rate as an int, instead of as a double, causing any double I put into it to be concatenated, thus throwing off my calculation.

Another challenge for me was not reading the spec carefully. I had written the whole program and thought that I had a complete solution, until I tested the program and still had incorrect numbers. Eventually I realized that I had totally forgot to factor the month into the calculation of the price, and had to add that bit in.

Test Cases:

Test validity of odometer starting value: (-1)

Test validity of odometer ending value: (100, 95)

Test validity of rental days: (10, 20, -1)

Test validity of rental days: (10, 20, 0)

Test validity of name: (10, 20, 4, “”)

Test validity of luxury: (10, 20, 4, “Harsh”, “Y”)

Test validity of luxury: (10, 20, 4, “Harsh”, “hello”)

Test validity of month: (10, 20, 4, “Harsh”, “y”, 0)

Test validity of month: (10, 20, 4, “Harsh”, “y”, 13)

Test <100 miles driven, basic car, non-winter: (10, 20, 4, “Harsh”, “n”, 6)

Test <100 miles driven, luxury car, non-winter: (10, 20, 4, “Harsh”, “y”, 6)

Test <100 miles driven, basic car, winter: (10, 20, 4, “Harsh”, “n”, 1)

Test <100 miles driven, luxury car, winter: (10, 20, 4, “Harsh”, “y”, 1)

Test 100 < miles driven < 401, basic car, non-winter: (10, 310, 4, “Harsh”, “n”, 6)

Test 100 < miles driven < 401, luxury car, non-winter: (10, 310, 4, “Harsh”, “y”, 6)

Test 100 < miles driven < 401, basic car, winter: (10, 310, 4, “Harsh”, “n”, 1)

Test 100 < miles driven < 401, luxury car, winter: (10, 310, 4, “Harsh”, “y”, 1)

Test miles driven > 400, basic car, non-winter: (10, 610, 4, “Harsh”, “n”, 6)

Test miles driven > 400, luxury car, non-winter: (10, 610, 4, “Harsh”, “y”, 6)

Test miles driven > 400, basic car, winter: (10, 610, 4, “Harsh”, “n”, 1)

Test miles driven > 400, luxury car, winter: (10, 610, 4, “Harsh”, “y”, 1)

Test boundaries of mile ranges: (0, 401, 4, “Harsh”, “n”, 1)

Test boundaries of mile ranges: (0, 400, 4, “Harsh”, “n”, 1)

Test boundaries of mile ranges: (0, 101, 4, “Harsh”, “n”, 1)

Test boundaries of mile ranges: (0, 100, 4, “Harsh”, “n”, 1)

Test boundaries of month ranges: (0, 100, 4, “Harsh”, “n”, 1)

Test boundaries of month ranges: (0, 100, 4, “Harsh”, “n”, 12)