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CS 31

Description of Obstacles I Overcame

While working with the program, I found writing the computational aspects of the code to be a little challenging. This is because there are so many ways the rental price can be added up, ranging from different charges for different distances traveled to the month during which the car was rented. I had to spend some time planning how to approach this project and where to use if-statements. In particular, I spent a few minutes figuring out why the rental price was not producing the correct number when I inputted a specific set of information. I had to go through a few sections of the code I wrote and make the program print out the rental price for some steps within its calculations to pinpoint the location of my error. In the end, it was because I forgot to include double equal signs when writing the if-statement for the month the car was rented. Aside from this issue, I was able to complete the program and have it output the correct data.

Data to Test Program

Error message for negative starting odometer reading (-1, 123, 1, Bob, n, 2)

Output:

The starting odometer reading must be nonnegative.

Error message for final odometer reading less than starting odometer reading (10, 6, 1, John, y, 4)

Output:

The final odometer reading must be at least as large as the starting reading.

Rented car but did not drive (100, 100, 3, Cat, y, 5)

Output:

The rental charge for Cat is $183.00

Error message for negative rental days (2000, 2431, -2, Sally, y, 7)

Output:

The number of rental days must be positive.

Error message for zero rental days (2000, 2431, 0, Sally, y, 7)

Output:

The number of rental days must be positive.

Error message for empty string provided (1234, 1532, 3, , n, 11)

Output:

You must enter a customer name.

String that is a space “ “ (321, 432, 2, , y, 3)

Output:

The rental charge for is $151.97

String that is a tab “ “ (321, 432, 2, , y, 3)

Output:

The rental charge for is $151.97

Error message for incorrect input for luxury status (1251, 1934, 3, Ryan, b, 1)

Output:

You must enter y or n.

Error message for month number greater than 12 (251, 683, 3, Joshua, n, 13)

Output:

The month number must be in the range 1 through 12.

Error message for month number less than 1 (251, 683, 3, Joshua, n, 0)

Output:

The month number must be in the range 1 through 12.

Testing the program with valid data (6212, 6724, 4, David, y, 12)

Output:

The rental charge for David is $373.28

100 or less miles driven (100, 159, 3, John, y, 4)

Output:

The rental charge for John is $198.93

Between 100 and 400 miles driven during winter months 12 and 1-3 (100, 365, 2, Joe, n, 1)

Output:

The rental charge for Joe is $137.55

Between 100 and 400 miles driven during months 2-11 (100, 365, 2, Joe, n, 11)

Output:

The rental charge for Joe is $127.65

Over 400 miles driven during months 12 and 1-3 (100, 512, 4, Brian, n, 3)

Output:

The rental charge for Brian is $242.28

Over 400 miles driven during months 2-11 (100, 512, 4, Brian, n, 10)

Output:

The rental charge for Brian is $224.28

100 miles driven during winter months 12 and 1-3 (200, 300, 1, Adam Smith, y, 3)

Output:

The rental charge for Adam Smith is $88.00

100 miles driven during months 2-11 (200, 300, 1, Adam Smith, y, 4)

Output:

The rental charge for Adam Smith is $88.00

400 miles driven during winter months 12 and 1-3 (400, 800, 6, Tony, n, 2)

Output:

The rental charge for Tony is $306.00

400 miles driven during months 2-11 (400, 800, 6, Tony, n, 9)

Output:

The rental charge for Tony is $288.00