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CS 31

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Project 2 Report

1. Description of Notable Obstacles

The largest obstacle I had was being concise with my code. When I first wrote the code, I had winter season tested twice, once for total miles driven within 100 and 500, and total miles driven beyond 500. I later wrote a separate code that tests for winter first, so that when I tested for winter later, all I needed were conditional statements based on that separate code. Additionally, I wanted to be more concise with the equations for calculating the mileage charge. To me, calculating the rental charge for the next 400 miles and beyond 500 miles seemed like increasing the sum of the mileage charge. I used “+=” to implement that idea, but I soon realized that in order to isolate different miles to its own rate of charge, I needed a slightly different equation each time. So as concise as I wanted to be, I could only condense the testing for winter season, but not the equations for calculating the mileage charge.

1. List of Test Data

|  |  |
| --- | --- |
| Traveled 99 miles for 1 rental day in non-luxury car in Jan | (0, 99, 1, Name, n, 1) |
| Traveled 54 miles for 1 rental day in luxury car in Jan | (18, 72, 1, Name, y, 1) |
|  |  |
| Traveled 200 miles for 1 rental day in non-luxury car in Jan | (300, 500, 1, Name, n, 1) |
| Traveled 300 miles for 2 rental days in non-luxury car in April | (100, 400, 2, Name, n, 4) |
| Traveled 200 miles for 1 rental day in luxury car in Jan | (300, 500, 1, Name, y, 1) |
| Traveled 300 miles for 2 rental days in luxury car in April | (100, 400, 2, Name, y, 4) |
|  |  |
| Traveled 510 miles for 3 rental days in non-luxury car in June | (210, 720, 3, Name, n, 6) |
| Traveled 510 miles for 4 rental days in non-luxury car in March | (210, 720, 4, Name, n, 3) |
| Traveled 510 miles for 3 rental days in luxury car in June | (210, 720, 3, Name, y, 6) |
| Traveled 510 miles for 4 rental days in luxury car in March | (210, 720, 4, Name, y, 3) |
|  |  |
| Negative odometer start value | (-10, 200, 1, Name, y, 1) |
| Odometer end value smaller than start value | (30, 10, 1, Name, n, 1) |
| Not positive number of rental days | (30, 40, -7, Name, y, 1) |
| Empty string for customer name; no name | (30, 40, 7, , n, 1) |
| No y/n input for luxury car in question | (30, 40, 7, Name, a, 1) |
| Number for month is not in the range | (30, 40, 7, Name, y, 19) |