Obstacles

One change I had to make early was changing a cin command to getline to allow reading in of spaces. This would allow me to read in the name correctly, as before it would produce a compiler error. Next, I need to add in the cin.ignore function to remove the \n and allow the name to be read in. I also needed to change the formula for calculating rental cost with input miles greater than 400. I forgot to subtract the 400 miles when adding in the additional 19 cent per mile cost, so the outputted rental charge was too high. In addition, I revised my code by changing the luxuryCar variable from a type char to string in order to allow for the if statement checking proper input worked. Finally, I eliminated a major error in my code by changing the if statements regarding the number of miles to be a series of if and else-if. This prevent double counting the cost (ie: the mile count of 50 triggering both miles <= 100 and miles <= 400).

Test cases

startOdometer is negative (-10, program exits)

* This tests the if statement for startOdometer

Miles traveled is negative (10 5, program exits)

* This tests the if statement for endOdometer

Rental days is negative (10, 20, -5, program exits)

* This tests the if statement for rentalDays

Customer name is an empty string (10, 110, 1, “” program exits)

* This tests the if statement for customerName

yes/no (10, 110, 1, “anirudh”, “yes”)

* This tests the if statement for luxuryCar

Month out of range (10, 110, 1, “anirudh”, “y”, 15)

* This tests the if statement for month

Less than 100 miles No luxury car (0, 75, 2, “anirudh”, “n”, 1)

* This tests if the program outputs the correct cost knowing there is no luxury car

Less than 100 miles and Yes luxury car (0, 75, 2, “anirudh”, “y”, 1)

* This tests if the program outputs the correct cost knowing there is a luxury car

Less than 400 miles and Winter months (25, 350, 2, “anirudh”, “y”, 1)

* This tests if the program outputs the correct cost with the variance of winter months

Less than 400 miles Rest of the months (25, 350, 2, “anirudh”, “y”, 6)

* This tests if the program outputs the correct cost for the non spring months

Over 400 miles and winter months (0, 500, 3, “anirudh”, “y”, 2)

* This tests if the program outputs the correct cost for the winter months and mileage count

Over 400 miles and rest of the months (0, 500, 3, “anirudh”, “y”, 7)

* This tests if the program outputs the correct cost for the non-winter months and mileage count