1. One obstacle that I ran into was producing the right syntax for if, else, and else if statements. Originally, I had an if statement followed by multiple else if statements and lastly, an else statement. However, I included a condition for the else statement which incorrectly compiled the program. I figured out that there is no condition necessary for the else section of the statement and that you should just move straight onto the command for the else statement. I solved this by replacing the else statement with another if else statement in order to incorporate the condition into the last portion. Another obstacle that I ran into was using incorrect logical operators for certain situations. When I first attempted to create the program, I was still confused about the difference between “&&” and “||”. Eventually, we went over these two logical operators in class and I was able to discern that “&&” is analogous to the English convention “and” along with the definition of “||” which is analogous to the English convention “or.” After learning the differences between the two logical operators, I was able to successfully incorporate each of them into the logic of my program, allowing me to achieve accurate rental charge calculations.
2. **Data Table**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Reason** | **Start Odometer** | **End Odometer** | **Rental Days** | **Customer Name** | **Luxury?** | **Month** |
| To calculate the rental charge for a non-luxury, non-winter car that drove <100 miles | 10 | 90 | 8 | Jaden | n | 7 |
| To calculate the rental charge for a non-luxury, non-winter car that drove 100 – 500 miles | 100 | 400 | 7 | Janie | n | 5 |
| To calculate the rental charge for a non-luxury, non-winter car that drove >500 miles | 0 | 600 | 11 | Justin | n | 6 |
| To calculate the rental charge for a non-luxury, winter car that drove <100 miles | 50 | 80 | 2 | Mike | n | 2 |
| To calculate the rental charge for a non-luxury, winter car that drove 100 – 500 miles | 250 | 580 | 5 | Sungha | n | 12 |
| To calculate the rental charge for a non-luxury, winter car that drove >500 miles | 100 | 650 | 4 | Angelo | n | 1 |
| To calculate the rental charge for a luxury, non-winter car that drove <100 miles | 10 | 20 | 1 | Gabe | y | 8 |
| To calculate the rental charge for a luxury, non-winter car that drove 100 – 500 miles | 0 | 250 | 14 | Eric | y | 7 |
| To calculate the rental charge for a luxury, non-winter car that drove >500 miles | 200 | 950 | 6 | Daniel | y | 9 |
| To calculate the rental charge for a luxury, winter car that drove <100 miles | 100 | 130 | 3 | Harry | y | 1 |
| To calculate the rental charge for a luxury, winter car that drove 100 – 500 miles | 0 | 450 | 12 | Bryan | y | 2 |
| To calculate the rental charge for a luxury, winter car that drove >500 miles | 150 | 800 | 9 | Nayeon | y | 3 |
| To test if the starting odometer reading is negative | -100 | 300 | 7 | Robin | y | 10 |
| To test is the ending odometer reading is less than the starting reading | 250 | 150 | 4 | Jerry | n | 2 |
| To test if the number of rental days is not positive | 150 | 200 | -9 | Alvin | y | 5 |
| To test if an empty string was provided for the customer’s name | 300 | 500 | 10 |  | n | 12 |
| To test if the month number is not an integer between 1 and 12 inclusive | 150 | 200 | 2 | Lance | y | 15 |