

# Python Project 6: Car Rental

## INSTRUCTIONS:

- Create a Python program. Save As: **CarRental.py**
  - Include the necessary Program Header and use descriptive comments.
1. This programming project will compute and display information for a company which rents vehicles to its customers. For a specified customer, the program will compute and display the amount of money charged for that customer's vehicle rental.
  2. Your program will **prompt the user** for the following four items for a given customer (in the specified order):
    - a. The customer's **classification code** (a character (B - Budget, D - Daily, W - Weekly or Q to STOP)), handle both upper case or lower case)
    - b. The **number of days** the vehicle was rented (an integer)
    - c. The vehicle's **odometer** reading at the **start** of the rental period (an integer)
    - d. The vehicle's **odometer** reading at the **end** of the rental period (an integer)
  3. The program will **compute the amount of money that the customer will be billed**, based on the customer's classification code, number of days in the rental period, and number of miles driven.

### Code "B" (budget)

base charge: \$40.00 for each day  
mileage charge: \$0.25 for each mile driven

### Code "D" (daily)

base charge: \$60.00 for each day  
mileage charge: no charge if the average number of miles driven is 100 miles or less; otherwise, \$0.25 for each mile driven above 100 miles.

## Python Project 6: Car Rental

Code "W" (weekly)

base charge: \$190.00 for each week (or fraction of a week)

mileage charge: no charge if the average number of miles driven is 900 miles or less;  
\$100 if the average number of miles driven exceeds 900 miles but does not exceed 1500 miles;  
otherwise, \$200.00 plus \$0.25 for each mile driven above 1500 miles.

4. Calculate the **number of miles driven** by the customer during the rental period.

NOTE:

The odometer's dial has six digits and records tenths of a mile. For example, if the beginning reading was 100003 and the ending reading was 100135, then the customer drove 13.2 miles during the rental period.

5. Calculate the **amount billed** to the customer which is the sum of the base charge and the mileage charge.
6. For each customer, the program will **OUTPUT** a summary with the following information:
  - a. The customer's classification code
  - b. The number of days the vehicle was rented
  - c. The vehicle's odometer reading at the start of the rental period
  - d. The vehicle's odometer reading at the end of the rental period
  - e. The number of miles driven during the rental period
  - f. The amount of billed to the customer for the rental period
7. **TIP:** Start by calculating for only one set of input. Once that works then write a block of code to Repeat #2 until the user indicates an action to STOP.
8. Run the program and handle any errors.
  - a. If the wrong classification code is entered at the prompt.

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```
Python 3.3.2 Shell
File Edit Shell Debug Options Windows Help
>>> ----- RESTART -----
>>>
At the prompts, please enter the following:

Customer's classification code (a character)
Number of days the vehicle was rented (an integer)
Odometer reading at the start of the rental period (an integer)
Odometer reading at the end of the rental period (an integer)

Customer code: D

Number of days: 1
Odometer reading at the start: 100003
Odometer reading at the end: 100135

Customer summary:
    classification code: D
    rental period (days): 1
    odometer reading at start: 100003
    odometer reading at end: 100135
    number of miles driven: 13.2
    amount due: $ 60.0

Customer code: B

Number of days: 3
Odometer reading at the start: 999997
Odometer reading at the end: 000005

Customer summary:
    classification code: B
    rental period (days): 3
    odometer reading at start: 999997
    odometer reading at end: 5
    number of miles driven: 0.8
    amount due: $ 120.2

Customer code: W

Number of days: 8
Odometer reading at the start: 000100
Odometer reading at the end: 040100

Customer summary:
    classification code: W
    rental period (days): 8
    odometer reading at start: 100
    odometer reading at end: 40100
    number of miles driven: 4000.0
    amount due: $ 1030.0

Customer code: Q
>>>
```