**IF100**

**Practice 4**

**Introduction**

The aim of this example is to practice the conditional if statements. The use of if statement is due to the nature of the problem; that is, you cannot finish this practice assignment without using if statements.   
 **Description**

In this exercise, you will write a Python program that computes and displays the information for a company which rents vehicles to its customers. Specifically, your program will compute and display the amount of money charged for a particular customer, for that customer’s vehicle rental. The bill will be based on the vehicle segment, number of rental days, together with gear and fuel types.

Your program will start with displaying a welcome message that explains what it is about. Then, the user will first input his/her name. After that, four other prompts will be received consecutively, mentioning the name of the user. The first one is the vehicle segment, which can be *Economic*, *Comfort*, *Prestige*, *Premium* or *Luxury*. The second one is the number of days the vehicle is rented, which should be a non-zero positive integer. The other two are the type of the gear, which can either be *Automatic* or *Manual*; and the type of fuel, which can either be *Petrol* or *Diesel*. After the user enters all the inputs, an input check should be performed by your program for each of the vehicle segment, number of rental days, gear and fuel types. If all the inputs are correctly entered, then your program will calculate the amount of money to be billed. This value will be computed via the formula given below, and by using the charge information provided in the below-given table. At the end, your program will display the amount of the money charged to the user, by referring to the name of the user. Whenever an input is determined to be erroneous, your program should display an appropriate error message, not taking into consideration the latter inputs by means of being erroneous or not.

charged money = (number of rental days) ×

(charge of segment + charge of gear type + charge of fuel type)

|  |  |  |
| --- | --- | --- |
| **FEATURE** | | **CHARGE (TL)** |
| Vehicle Segment | Economic | 250 |
| Comfort | 400 |
| Prestige | 600 |
| Premium | 750 |
| Luxury | 1150 |
| Gear Type | Automatic | 150 |
| Manual | 50 |
| Fuel Type | Petrol | 100 |
| Diesel | 200 |

Please see "Sample Runs" section in order to understand the flow of the program, the inputs and outputs in a better way.

**Inputs and Outputs**

The inputs of your program and their order are explained below. Please see "Sample Runs" section for some examples.

There are five inputs to your program, in the order given below:

1. Name of the user (of type string)
2. Segment of the vehicle (of type string)
3. Number of rental days (of type integer)
4. Gear type (of type string)
5. Fuel type (of type string)

Your program should perform input check for its inputs as listed below. Additionally, the string-typed inputs are to be considered as ***case-sensitive***.

* Vehicle segment must be *Economic*, *Comfort*, *Prestige*, *Premium* or *Luxury*.
* Number of rental days must be a non-zero positive integer.
* Gear type must either be *Automatic* or *Manual*.
* Fuel type must either be *Petrol* or *Diesel*.

If the user enters an erroneous input, then your program should display an appropriate error message and it should not take into consideration the latter inputs. If there are more than one input check errors, then your program should follow the input order and ***display only the first invalid input***.

There is only one output of your program, the amount of money charged to the user. This output should be of format:

"*name*, *charged money* TL is charged for your vehicle rental."

**Sample Runs**

Below, we provide some sample runs of the program that you will develop. The *italic* and **bold** phrases are inputs taken from the user. You may not change any of the prompt sentences. Your program should be presented exactly like these sample runs.

Sample runs are not %100 comprehensive. You are required to read the whole documentation and decide on what other cases you might try your program with.

**Sample Run 1 (***All inputs are valid***)**

Please enter your name: ***Duygu***

Duygu, please enter the segment of the vehicle: ***Economic***

Duygu, please enter the number of rental days: ***10***

Duygu, please enter the gear type: ***Automatic***

Duygu, please enter the fuel type: ***Petrol***

Duygu, 5000 TL is charged for your vehicle rental.

**Sample Run 2 (***All inputs are valid***)**

Please enter your name: ***Inanc***

İnanç, please enter the segment of the vehicle: ***Premium***

İnanç, please enter the number of rental days: ***5***

İnanç, please enter the gear type: ***Manual***

İnanç, please enter the fuel type: ***Diesel***

Inanc, 5000 TL is charged for your vehicle rental.

**Sample Run 3 (***All inputs are valid***)**

Please enter your name: ***Husnu***

Hüsnü, please enter the segment of the vehicle: ***Luxury***

Hüsnü, please enter the number of rental days: ***7***

Hüsnü, please enter the gear type: ***Automatic***

Hüsnü, please enter the fuel type: ***Diesel***

Husnu, 10500 TL is charged for your vehicle rental.

**Sample Run 4 (***Invalid vehicle segment***)**

Please enter your name: ***Ali***

Ali, please enter the segment of the vehicle: ***prestige***

Ali, please enter the number of rental days: ***2***

Ali, please enter the gear type: ***Manual***

Ali, please enter the fuel type: ***Petrol***

Incorrect vehicle segment!

**Sample Run 5 (***Invalid vehicle segment***)**

Please enter your name: ***Ayse***

Ayşe, please enter the segment of the vehicle: ***Van***

Ayşe, please enter the number of rental days: ***0***

Ayşe, please enter the gear type: ***Manual***

Ayşe, please enter the fuel type: ***Diesel***

Incorrect vehicle segment!

**Sample Run 6 (***Invalid rental days***)**

Please enter your name: ***Baris***

Barış, please enter the segment of the vehicle: ***Comfort***

Barış, please enter the number of rental days: ***0***

Barış, please enter the gear type: ***Manual***

Barış, please enter the fuel type: ***diesel***

Incorrect number of rental days!

**Sample Run 7 (***Invalid gear type***)**

Please enter your name: ***Ada***

Ada, please enter the segment of the vehicle: ***Premium***

Ada, please enter the number of rental days: ***12***

Ada, please enter the gear type: ***manual***

Ada, please enter the fuel type: ***diesel***

Incorrect gear type!

**Sample Run 8 (***Invalid fuel type***)**

Please enter your name: ***Pascal***

Pascal, please enter the segment of the vehicle: ***Luxury***

Pascal, please enter the number of rental days: ***12***

Pascal, please enter the gear type: ***Automatic***

Pascal, please enter the fuel type: ***Diesell***

Incorrect fuel type!

**Sample Run 9 (***Invalid fuel type***)**

Please enter your name: ***Volkan***

Volkan, please enter the segment of the vehicle: ***Economic***

Volkan, please enter the number of rental days: ***1***

Volkan, please enter the gear type: ***Manual***

Volkan, please enter the fuel type: ***diesel***

Incorrect fuel type!