Program Description

This program calculates car efficiency.
Detail is included in the header of the script

Program Source Code

Welcome | lab2.py | lab1_new.py

lab2.py > ...

```
#-------------------------------------------------
# Program Name: lab2.py
# Program Description:
#     See Below
#
#
#
# @Author: Sheng Lim
# @Date: 6/25/2023
#
#-------------------------------------------------
# INPUT
#-------------------------------------------------
# The program asked the user to enter below:
#
# 1. Car gas tank's capacity in gallons.
# 2. Gas mileage per gallon (MPG)
# 3. Gas price per gallon.
#
#-----------------------------------------
# FORMULAS
#-----------------------------------------
# There are 2 formulas we can use:
#
# 1. Cost of driving 100 miles =100/Mileage x Price
#
# For example, if the car runs 20 miles per gallon, each gallon costs $5.
# That means, $5 can go 20 miles. Then $25 can go 100 miles.
#
# Let's verify with the formula:
# To run 100 miles, the cost is 100/20 x 5 =$25
#
# 2. Distance=Capacity x Gas Mileage
#
# if the tank capacity is 10 gallons.  Each gallon can go 20 miles.
# The distance = 10 x 20 = 200 miles.
#
#-------------------------------------------------
# OUTPUT
#-------------------------------------------------
#The program will print out below:
#
# 1. Cost for driving 100 miles.
# 2. Distance of full tank can go.
# 3. Tell how efficient the car is, based on below conditions:
#    1. MPG less than 30, "Not efficient".
```


Welcome
lab2.py
lab1_new.py
lab2.py > ...
47 # 2. MPG between 30 and 40, “Average”.
48 # 3. MPG between 40 and 50, “Efficient”.
49 # 4. MPG greater than 50, “Very Efficient”.
50 #----------
51 from datetime import datetime
52
53 name="Sheng Lim"
54 lab_name="Lab 2 - Car Mileage"
55 current_time=datetime.now()
56 current_time_in_request_format=current_time.strftime("%b-%d-%Y %a (%I:%M:%S%p)")
57
58
59 print("{:16}".format("Name"),":", "CNET-142", name)
60 print ("{:16}".format("Lab"), ":", lab_name)
61 print("{:16}".format("Current Time"), ":", current_time_in_request_format)
62
63
64 # Obtain User Inputs
65 gas_tank_capacity = float(input("Enter the capacity of the car's gas tank (in gallons):"))
66 mpg= float(input("Enter car's miles per gallon:"))
67 gas_price_per_gallon= float(input("Enter price per gallon:"))
68
69 cost_per_100_miles = round(100/mpg*gas_price_per_gallon,2)
70
71 distance_per_full_tank= round(gas_tank_capacity*mpg, 2)
72
73 # Calculate the car's efficiency
74 if mpg < 30:
75 efficiency = 'It\'s not fuel efficient car.'
76 elif mpg < 40:
77 efficiency = 'It\'s average fuel efficient car.'
78 elif mpg < 50:
79 efficiency = 'It\'s fuel efficient car.'
80 else:
81 efficiency = 'It\'s very fuel efficient car'
82
83
84 # Print the result
85 print("Cost for driving 100 miles is $", cost_per_100_miles)
86 print("Distance on a tank of gas is", distance_per_full_tank)
87 print("Your car MPG is", mpg, efficiency)
88

Test Case #1

Test Case #2

Test Case #3