**Sample Assessment**

**Duration:** 50 minutes

**Submission:** Upload you assignment2.py file to canvas with comment including your name.

**Verify that you have uploaded the correct file.**

**Fuel Economy Application**

This application is used to help a customer decide which type of car to invest in. The program finds out from the user what the typical distance in kms that they travel each year. The program decides based on the kms travelled whether to recommend

* renting a car ,
* buying a petrol car or
* buy electric car

The table below shows when each advice is given.

|  |  |  |
| --- | --- | --- |
| **Km per year** | **Recommendation** | **Fuel cost per km** |
| ***0 – 2,000 inclusive*** | Rent | n/a |
| ***2,001-10,000 inclusive*** | Buy Petrol | 0.16 Euros |
| ***Over 10,000*** | Buy Electric | 0.04 Euros |

The program must allow the user enter

* name
* the number of kms that they drive each year.

The program will then print

* the users name in uppercase
* whether to buy petrol , buy electric or rent

If the user is advised to buy a car then the program will calculate how much they will spend on fuel and this information is also shown.

The user is also asked to guess a special 4 letter code to unlock a special prize of a months free petrol. If the use does not enter 4 letters the user is told that this is not a valid guess. If the guess is correct they are told they can collect their prize. If the first letter and last letter only match the code they are told that they were close. The guess is not sensitive to case. The code is the word “Blue”.

**Sample Run 1**

Enter your name: **Jones**

Enter the number of km per year: **10000**

Enter code: ABCD

Name: JONES

KM per Year: 10,000

Recommendation: Buy Petrol

Annual Fuel Cost: €1600.00

**Sample Run 2**

Enter your name: **Rice**

Enter the number of km per year: **20000**

Enter Code: Blue

Name: RICE

KM per Year: 2,0000

Recommendation: Buy Electric

Annual Fuel Cost: €800.00

You have won a months free petrol.

**Sample Run 3**

Enter your name: **Smith**

Enter the number of km per year: **1000**

Enter Code: Bike

Name: SMITH

KM per Year: 1,000

Recommendation: Rent

You were close but not correct.

# Marking scheme:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Documentation including comments, readability, variable names etc 10%

Inputting data correctly 10%

Processing Data :

if statements 50%

calculations 15%

Display correct output as shown (including formatting ) 15%