COP3035 - Intro to Programming in Python
Lab Guide 5

Instructions

- Follow each step/objective in sequential order.
- Practice the skills from each objective to ensure mastery.
- Don't forget to submit in Canvas your lab work progress to get your attendance after you complete this lab.
- Please reach any of the TAs or the instructor if you have questions.
- Note: Emphasize practicing with for loops, lists, dictionaries, sets, if-then conditionals, files, strings, and more*. Remember, practice makes perfect!*

Objective: Write a program to count the number of Tesla vehicles in a dataset from Washington State.

Step 1: Download the file Electric_Vehicle_Population_Data.csv from
https://catalog.data.gov/dataset/electric-vehicle-population-data

Or
https://data.wa.gov/api/views/f6w7-q2d2/rows.csv?accessType=DOWNLOAD

Step 2: Upload the file to your Jupyter environment.

Step 3: Open the file in read mode (mode='r') and read the header (the first line), then print it.
Tip: Use .readline() to read only one line from the file.

Step 4: Convert the header to a list and print each field along with its index.
Tip: Use a for loop combined with enumerate().

Step 5: Create a dictionary with 'TESLA' as the key and 0 as the value. This dictionary will be used to count Tesla vehicles in the dataset. Read each line from the file, updating the count whenever a Tesla vehicle is found.
Question: How many Teslas did you find in the dataset?
Tip: Determine the index of the 'Make' field to identify Tesla vehicles.

Step 6: Modify the program to also count BMW vehicles.
Question: How many BMWs are in the dataset?

Tip: Refer to the 'Lab 5 Solutions.pdf' document on Canvas for guidance, but try to solve the exercises independently first