CPSC 8700 Assignment 3
Trying out Python

This is a small assignment. This is also an ***individual assignment.*** You are not allowed to talk to other students about the code, receive or give help with the code. You can discuss generic programming concepts only and python programming without it being tied to this assignment.

In this assignment you will write a program in python scripting language using UML class diagram provided below. Do not forget that constructors are often not shown in the UML diagram. For each concrete class, please provide a default constructor and a parameterized constructor. We have looked at the similar code in C++, now you will implement it in python. You will also demonstrate that your program works by instantiating various objects and calling all operations to show they are functional. Program has to work on SoC Linux machines.

Note: Decelerate and accelerate decease and increase speed by 10 mph, correspondingly. Gen is the generation of an electric car and can have values 1, 2, or 3. Range is distance traveled on one change. You can make these values up. The est should be familiar to you.

What to submit:
Tarball without subdirectories containing all your python files.

Grading rubric:
If your program has errors and/or is not running for any reason, you will get a 0.
Tarball without subdirectories - 3
Code structure is correct with respect to the UML diagram – 12
Program demonstrates all methods – 16 (1 point per method)
Members declared correctly – 6 points
Each class has appropriate constructors (default and parameterized) – 10
Code organization and formatting – 3

UML diagram on next page.

Vehicle

print()

Car

- speed: int
- model: string
- color: string
+numCars: int

+ getSpeed(): int
+ getModel(): string
+ getColor(): string
+ setSpeed(): void
+ setModel(): void
+ setColor(): void
+ print(): void
+ decelerate(): float
+ accelerate(): float
+ getNumCars(): int

EV

- range: float
- gen: int

+ getRange(): float
+ getGen(): int
+ setRange(): void
+ setGen(): void
+ print(): void