exercises.md 04/11/2022

OOP Exercises

- 1. Create a Vehicle class without any attribute and methods.
- 2. Extend the Vehicle class to contain attributes for max speed and colour. Instantiate the class and print out the attributes.
- 3. Extend the Vehicle class to contain methods for the below. Instantiate the class and call the two methods to update the attributes. Print the changes out.
 - Change the value of max speed
 - Change the car colour
- 4. Create a child class Bus that will inherit all of the variables and methods of the Vehicle class and nothing else. Instantiate a Bus instance and print out the attributes.
- 5. Use one of the built-in Python functions to print out the underlying object type of the Bus object.
- 6. Use one of the built-in Python functions to print out if the Bus object is an instance of Vehicle.
- 7. Extend the Bus class to also contain an attribute of seating_capacity. Add a method to calculate the price of a ticket. This is calculated as seating_capacity * 0.05, with an extra 10% of the total of seating_capacity * 0.05 on top. Instantiate a Bus instance and print the ticket price.
- 8. Research how to print a Bus object in a printable representation. Hint: Look into the built-in repr() function. It should print something like Max speed: 120, Colour: white, Seating capacity: 40.