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Course: IT FDN 110 A

Assignment 04

GITHUB:

INTRODUCTION

The challenge of this assignment was understand the importance of using Classes and with Inheritance. The second was trying to create a dictionary object to another and it being written and read into a json file.

PARTS

With this assignment I not only reviewed the notes and videos provided for this module. I also used more additional specific videos to the same topics. In this instance I found that the Corey Schafer youtube videos truly helps understand how classes , instances, and inheritance worked together and how to call functions. I am not 100% understanding yet how values are called/defined with the constructors in a function within a class and the relationship with the rest of the script. Because most of the sections for processing and my while loop was working by writing in student data table dictionary into my file , I started to make my first class Person. The thing that was very helpful was the directions within the starter as it helped clarify what need to be done. I also went back to the class recording explanation and that was super helpful in understand what needed to be done.

```
7 class Person:
8     def __init__(self, fname:str = '', lname:str = ''): # Add first_name and last_name properties to the
9         self.first_name: fname
10        self.last_name_: lname
11
12        @property #getter
13        def first_name(self): #Create a getter and setter for the first_name property (Done)
14            return str(self._first_name)
15
16        @first_name.setter
17        def first_name(self,value):
18            if str(value).isnumeric() == False:
19                self._first_name = value
20            else:
21                raise ValueError("Names cannot be numbers")
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24 class Student(Person):
25     pass
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Figure1. Creating my first 'Person' class with a 'getter' and 'setter' what I initially thought had no problems as I did not see any errors.

ERRORS/MISTAKES

While running through the tasks the next error I came across was not correctly using my arguments. Once I fixed this, I still was running into a course name not defined error and realized it was my incorrect indentation of my attribute. After my error cleared and I ran my code to make sure everything else was running okay I continued to add my 'getter' and 'setter' for my course name. It seems I added this correct as I got no errors. My next step was next to convert dictionary objects to student objects which meant I need to change the variable name.

This is where I started to run into trouble within the methods for 'read and write to-data-file'. While trying to write the correct variable names for the dictionary objects to the list student objects I was getting an unexpected argument. I also then realized that perhaps I was appending the object incorrectly. It became really confusing with similar object names and list names. I also got warning for my student and file variable. Before getting these issues my script was able to read and write my input correctly so that also was confusing.

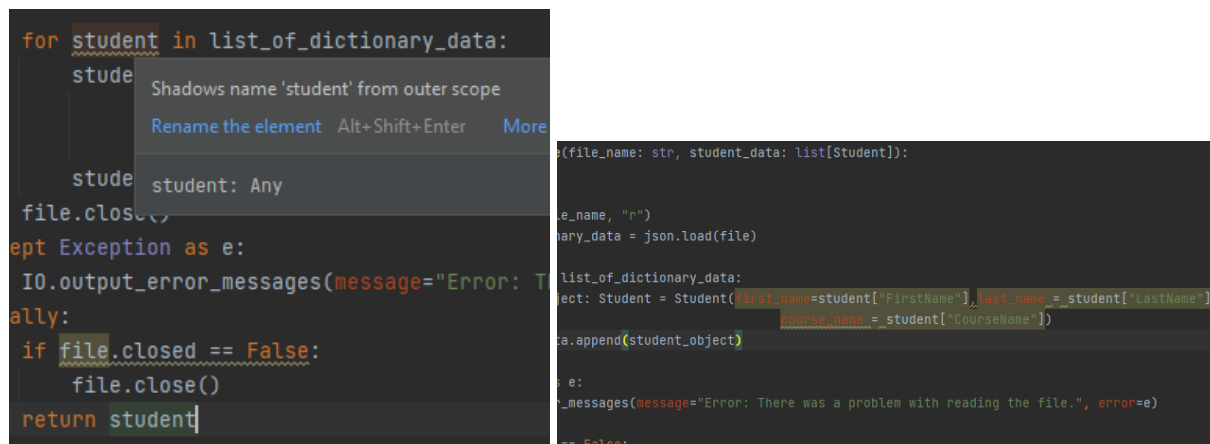


Figure 2. Errors with creating and writing dictionary objects and using them.

I began to go back to my "Person" and "Student" class because I assumed that is why my dictionary was not able to function correctly as indicated by the highlighted error in Figure 2. I noticed that I did not have the double underscores for the attribute names as "private". However I also noticed that my instance name attributes were all not showing as correct which I could not figure out why. Specifically in my "Student" inheritance class my giving an error indicateing the inheritance when I started to add my "course" name I was seeing the same thing within the method module. After doing some small edits I then tried to eliminate my dictionary object arguments. I was then able to "read" the data file but then got an error when entering my data.

```

class Student(Person):

    def __init__(self, first_name: str, last_name: str,
                  course_name: str): # TODO call to the Person constructor and pass it the first
        super().__init__(first_name, last_name)
        self.__course_name = course_name

    @property # getter
    def course_name(self):
        return self.__course_name

    @course_name.setter
    def course_name(self, value):
        if str(value).isnumeric() or value == "":
            self.__course_name = value

```

Signature of method 'Student.__init__' does not match signature of the base method in class 'Person'

Parameter first_name of Student.__init__

SUMMARY

This assignment clarified how to classes can be inherited when wanted to create instances that are global and when wanted to add to them after data has been established. While you can use variables to do the same thing this type of modules are important to understand when you need to work with bigger and multiple sections of data that need to be adjusted all at once. My confusion during this assignment was understand how the instances are linked to the dictionary lists as objects. I could figure out why I getting an error when trying to read my data and since this is the first step when running I could not figure out the rest of the errors in writing in the file. I could not figure out no matter how much of asking for help to understand why my “first_name” parameters across the script were not being incorporated correctly.