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Python 100
Assignment 07

Programming Tools: Objects and Classes

Introduction:

In this module, I learned how to create classes. We created a person class and file processor class to be able to edit data. This is very important. From the previous assignments we have been able to further break down the code and create new ways to script and orginaize our work.

Creating the Program:

I used the script provided and then worked through the functions. It was interesting to see how we use different methods to code similar things. This week's code did not have as many changes, compared to last week. In this module, we wanted to change the third step and allow us to save different information or change information as needed. There was a small hiccup when it came to this change. The figure below shows the error I encountered. This is due to my line was not able to find the FileProcessor class. Figures in section 2 show all the different

Figure 1.1: First Error

```
In [1]: runfile('C:/Users/patel/OneDrive/
Desktop/PythonCourse/untitled0.py',
wdir='C:/Users/patel/OneDrive/Desktop/
PythonCourse')
Traceback (most recent call last):

  File "C:\Users\patel\OneDrive\Desktop
\PythonCourse\untitled0.py", line 288, in
<module>
    students =
FileProcessor.read_data_from_file(file_name=
FILE_NAME, student_data=students)

TypeError: read_data_from_file() got an
unexpected keyword argument 'file_name'
```

The error was caused due to a failure to find the class File.Processor. This was due to a spelling error in the code. Once the line was able to find this class, the error was resolved.

Code Run 1

Figure 2.1.1: Adding a student

```
---- Course Registration Program ----
  Select from the following menu:
    1. Register a Student for a Course.
    2. Show current data.
    3. Save data to a file.
    4. Exit the program.
------------------------------------------



Enter your menu choice number: 1

Enter the student's first name: Sara

Enter the student's last name: Lee

Please enter the name of the course: Py2

You have registered Sara Lee for Py2.
```

Figure 2.1.2: Error for using an integer

```
Enter your menu choice number: 1

Enter the student's first name: 2
One of the values was the correct type of data!

-- Technical Error Message --
The last name should not contain numbers.
Inappropriate argument value (of correct type).
<class 'ValueError'>
```

Above is the console for when the first section of the menu is used. We can see that this is similar to the previous assignment.

Code Run 2
Figure 2.2.1: Presenting the student registration information

```
---- Course Registration Program ----
  Select from the following menu:
    1. Register a Student for a Course.
    2. Show current data.
    3. Save data to a file.
    4. Exit the program.
-------------------------------------------



Enter your menu choice number: 2
-------------------------------------------------
Student Zill Patel is enrolled in py2
Student Sara Lee is enrolled in Py2
-------------------------------------------------
```

Here is the input and output of the second run of the code, this is also similar to the previous assignments. It will present all the information that was previously inputted from menu choice 1.

Code Run 3
Figure 2.3: Menu Option 3

```
---- Course Registration Program ----
  Select from the following menu:
    1. Register a Student for a Course.
    2. Show current data.
    3. Save data to a file.
    4. Exit the program.
-------------------------------------------



Enter your menu choice number: 3
```

This saves the file and the information into a .json file.

Code Run 4
Figure 2.3: End Program

```
---- Course Registration Program ----
  Select from the following menu:
    1. Register a Student for a Course.
    2. Show current data.
    3. Save data to a file.
    4. Exit the program.
----------------------------------------



Enter your menu choice number: 4
Program Ended
```

Here is the input and output of the last run of the code. It will end the script. This is also similar to the previous assignments.

Conclusion:
This module taught me how to transfer information from one function to another. In the Scrpit we create a class person and then transfer that information to another function to then save the information. From the last few assignments we have seen that the work has been the same, but the code has been broken down further to make edits and reading easier. This is very important especially if we want to change the code more forward or if a new person needs to understand the code.