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Foundations of Programming: Python

Assignment 8

Class Product List

**Introduction:** This document will go over the steps I took to complete assignment 8. This assignment involves using the provided code, and to create several classes to create a product list that includes product and price information, stores it in a list, and be able to read and write it to a text file.

**Product List Script**

First steps I took was reading over the code and understand what was being asked to create. After listening to the lecture and the online session recording, I started to understand that we were making a product list, similar to the other lists we have done before and similar to what we’ve done in assignment 6. Therefore, referencing what I already knew I began with entering in code that I was familiar with, which included the static methods. What I did not have was the error handling which I had to reference the online session to understand a bit better.

After inputting the static methods, I went ahead and made the product class. The getter and setters I understand, mostly, but it took me a bit to understand the to\_string() and \_\_str\_\_() methods and what they were doing. After putting them in and rewatching the lecture I understand now they are changing the built in method and giving back a string value that is more of what we expect instead of a random character list. **Figure 1** shows the methods that I changed to accomplish this.

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**Figure 1: String Methods**

Sidenote, I do appreciate that Pycharm has that blue circle with red arrow to show me that I’ve overridden a built in method. Going from there, I wrote the code to complete the main body script statement to call of the functions to work as intended. This is where I start testing the code and ran into my first error. I forgot to create the text file and the error handling came up to tell me that. **Figure 2** shows the file error handling working as intended.

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**Figure 2: File Error Handling Working**

After creating the text file, I ran into another issue. Even with the error handling it took a few minutes to realize what I had done but when I realized it was another moment where my mind lapsed and I didn’t realize what I had auto entered into the script. **Figure 3** displays the error that I received.

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**Figure 3: Type Error**

This one tripped me up at first because I wasn’t expecting this kind of error. After reading it and understanding what it meant, I reviewed my main body script code and found that I had use the IO.printMenu() function in a place where it shouldn’t be using as shown in **Figure 4.**

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**Figure 4: Wrong use of IO.printMenu()**

I put in my function IO.printCurrentList() instead and passed in the same input argument, that fixed the problem there. Then I moved onto the next issue which was an attribute error. In this case I had use a different variable name to better understand the code and that caused this issue when referencing the online recording. **Figure 5** shows the error and the issue.

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**Figure 5: Attribute Error**

In this case I had tried using product\_name in my code when I created my class to be Product and Price to better understand how the code function. However I missed this when creating the printCurrentList function as shown in **Figure 6.** Right above the highlighted line, the print functions attempts to use row.product\_name where instead it needs to be row.Product and row.Price as I created in my class.

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**Figure 6: Misuse of Class Attributes**

Replacing product\_name and product\_price with the correct attributes allowed me to test my code further. In fact after that it worked well and I didn’t have any issues afterwards. **Figure 7** shows an example of my code with items already added into the list.

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**Figure 7: Product List Example**

After that I went ahead and worked in the code in the command prompt. **Figure 8** shows the command prompt working with the text file showing the new products added.

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**Figure 8.1: Command Prompt 1**

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**Figure 8.2: Command Prompt 2**

**Summary**

This assignment was definitely a challenge as not only was it complex but additionally it was tricky to understand the concepts of what each statement was doing. But after getting into I understand now how the classes work, with constructors, attributes, properties, and methods. Additionally I learned that python has built in functions that are already there but can be overridden to create something more useful such as the \_\_str\_\_() method. Finally I also learned that error handling is very useful as it made it much easier to track down and find errors in the code. That is something I will definitely take with me into my current role.