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IT FDN 110 A  
Assignment 05

**ToDoList (Python)**

**Introduction**

This week’s module 5 covered how to store lists, a collection of objects, and load lists from a file. The Lists are created and stored on computer memory until the application is closed, so we learned how to write the list back to a file. We practiced loading the data to the application and displaying it to users, as well as saving new data to the list from memory back to a file. In our labs we declared variables and continued to learn way to process data using loops and conditions. We were also introduced to dictionaries, which act like rows or data that can be added to a list and behave like columns in a spreadsheet. We also touched on ways to format scripts so they appear more professional, data, processing and presentation as examples, and save a template file to PyCharm. Although, no instructions for how to save a template in the new PyCharm version. Lastly, we were introduced to GitHub, a cloud-based code storage and sharing solution that is great for team editing and revision tracking.

**Writing the Code**Assignment 5 was to complete an existing code so that reads and writes to a file using existing variables and constants. The script had a display menu already created but no conditions to process data and we were asked to use the directory variables to collect data. I started by reviewing existing variable and there purpose so I was clear how to use them later. Step one was to display data stored to the file, not memory, back to the user. To do this, I opened the file in read, set formatting of the rows and dictionary with headers, then closed the file.

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Figure 1.0 | Step 1 Display Stored Data

Step two through seven involved processing the data based on user input from a menu of options. Step two was to display a menu, which was already created using a while(True) loop and did not need any revising. Step 3 was to show current items in the data table, so I used a for in expression to print the rows of data with a new line for each row for easy reading.

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Figure 2.0 | Step 3 Display Data in Rows

Step four was to collect user input data, which was similar to assignment 4 but I needed to reference module 5 review video to understand how to append the table, otherwise I was having trouble getting my user data to save and at one point in my coding the memory input data collected would over-ride existing data. So, this was a struggle for me.

A computer screen shot of a program code

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Figure 3.0 | Step 4 Add New Item to List/Table

Step five requirement was new to me and not covered in the lecture or materials, so I had to watch the Q&A session to understand how to remove data from memory and the stored file. The .remove function fetches the first occurrence of the value, but what if I want to remove all occurrences? I think my code can be greatly improved but is outside of my ability level at the moment.

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Figure 4.0 | Step 5 Add New Item to List/Table

The final two steps, six and seven, requiring the data memory to be saved to the hard-drive file and to exit the program were familiar to me and were easiest to complete. I opened the file in write, referenced the variable table, formatted the string to identify the column ‘Task’ and ‘Priority’ and closed the file.

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Figure 6.0 | Step 6,7 Save Data from Memory and Exit Program

I validated my script by running the program in PyCharm to ensure the program was writing to the txt file and no other issues were found. Next, I opened Python in the Windows command shell and entered my directory script location. Once I got a clean pass-through without any errors, I saved the script to my Assignment03 subfolder in the \_PythonClass folder on my C: drive. I also added my file to GitHub and posted for the class on the discussion board.

**Summary**

This assignment has a combination of tasks that we had learned and practiced in prior homework and labs, and introduced new concepts such as dictionaries and removing data from memory and stored data. The module Q&A and review were a great way to help me understand what needed to be done and what code was actually being told to do. The use of lists and dictionaries will play a growing role as we continue to incorporate more complicated functionality to our scripts.