

Hayford Teye

Date: 02/13/23

Course: Foundation of Programming (Python)

Assignment 5

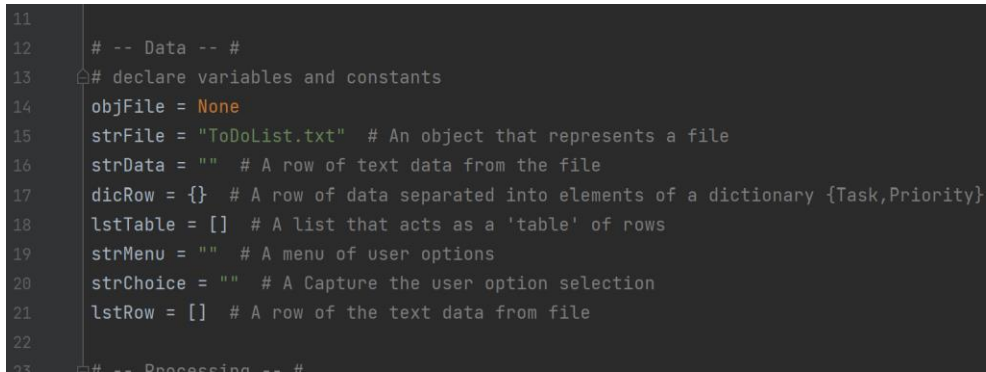
ToDoList Script

Introduction

In this assignment I will explain the steps to create a python script that ask the user to their Task and Priority to add on to do list or removed them , and then used the **write and read** statement to **write()** to data to the file and **read()** function reads data previously written to a file and store data into ToDoList, where each Task and Priority are stored in rows and columns

Creating my Scripts

I began modifying the script in the PyCharm editor tool, I create a folder in a location I can find my file easily and added **Assignment05_Startter.py** within the folder. I declare my variables in the following form:

A screenshot of a code editor showing variable declarations for a Python script. The code is as follows:

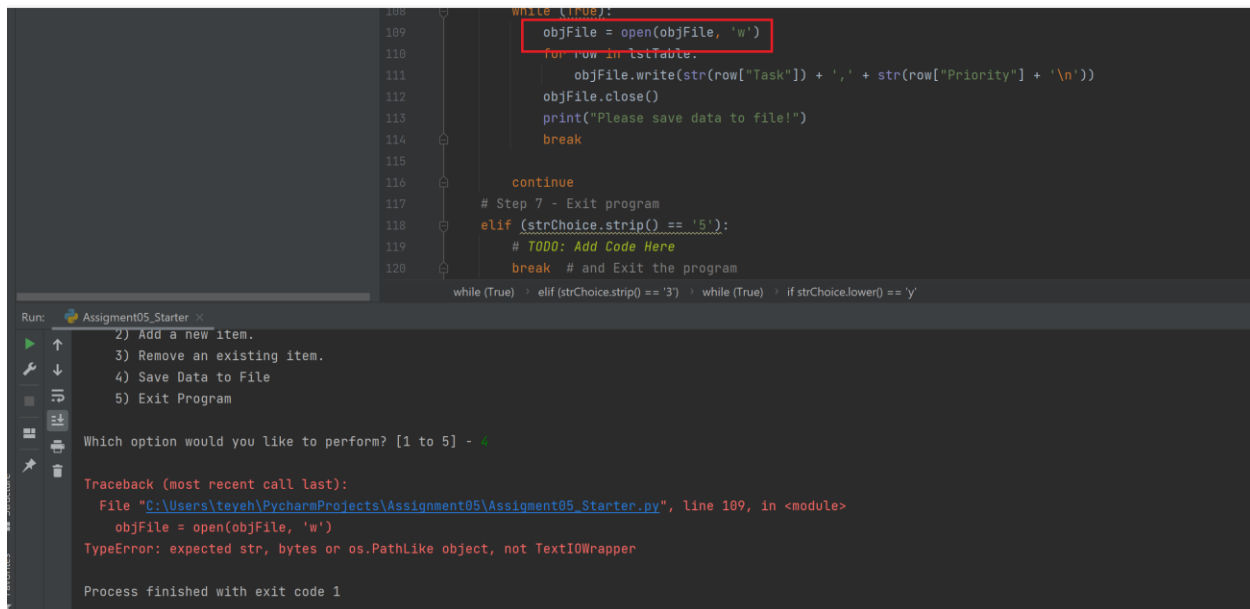
```
11
12     # -- Data -- #
13     # declare variables and constants
14     objFile = None
15     strFile = "ToDoList.txt" # An object that represents a file
16     strData = "" # A row of text data from the file
17     dicRow = {} # A row of data separated into elements of a dictionary {Task,Priority}
18     lstTable = [] # A list that acts as a 'table' of rows
19     strMenu = "" # A menu of user options
20     strChoice = "" # A Capture the user option selection
21     lstRow = [] # A row of the text data from file
22
23     # -- Processing -- #
```

Figure 1: A screenshot of variable declaration from my script.

I used the **input()** function to ask the user to enter more data until they are asked to exit the program. I used the **“While loop”** statement to execute my statement if the condition the user is inputting is true. **“for loop”** I used the for loop statement to automatically extract the row of data. The **break** statement was used to immediately terminates the while loop entirely. I used the **open** statements to open a text file with the **“w”** statement to write the text file anytime the user enters a new data and **“r”** statement to reads data written previously to the file, **close()** method was also used to close an open file after it has been written or reads and the **print()** function was used to display message to guide the user through the process.

Performing and testing the Script

I tested out my script to process the data into file and displaying the message to the user. The **input()** function was working perfectly to get the data, I had an **error** when I tested the write statement on **STEP 4** to process the written text file and saved the current text data for the user. My ToDoList text file was not declare as a **string**. I declare it and re-tested my script both in PyCharm and the command prompt to make sure it's working properly on my computer after fixing the problem.



```
108 while (True):
109     objFile = open(objFile, 'w')
110     for row in lstTable:
111         objFile.write(str(row["Task"]) + ',' + str(row["Priority"]) + '\n')
112     objFile.close()
113     print("Please save data to file!")
114     break
115
116     continue
117 # Step 7 - Exit program
118 elif (strChoice.strip() == '5'):
119     # TODO: Add Code Here
120     break # and Exit the program
```

Run: Assignment05_Starter

2) Add a new item.
3) Remove an existing item.
4) Save Data to File
5) Exit Program

Which option would you like to perform? [1 to 5] -

Traceback (most recent call last):
File "C:\Users\teyeh\PycharmProjects\Assignment05\Assignment05_Starter.py", line 109, in <module>
objFile = open(objFile, 'w')
TypeError: expected str, bytes or os.PathLike object, not TextIOWrapper

Process finished with exit code 1

Figure 2: A screenshots of my error indication line 109.

Final Basic Home Inventory Script

The script was modify in the PyCharm editing tool, and after my code was completely running to my satisfaction, I updated the changelog and add notes to the script explaining each action performing in every line in my code and verify the text file is working. Below is a screenshot of my final script running in PyCharm and verifying that the file has data.

```
Menu of Options
1) Show current data
2) Add a new item.
3) Remove an existing item.
4) Save Data to File
5) Exit Program

Which option would you like to perform? [1 to 5] - 2

Task: Car
Priority: High
Exit? ('y/n'): n
Task: Shoes
Priority: Medium
Exit? ('y/n'): y

Menu of Options
1) Show current data
2) Add a new item.
3) Remove an existing item.
4) Save Data to File
5) Exit Program

Which option would you like to perform? [1 to 5] - 3

Task to Remove: Car
row removed
Exit? ('y/n'): y

Menu of Options
1) Show current data
2) Add a new item.
3) Remove an existing item.
4) Save Data to File
5) Exit Program

Which option would you like to perform? [1 to 5] - 4

Please save data to file!

Menu of Options
1) Show current data
2) Add a new item.
3) Remove an existing item.
4) Save Data to File
5) Exit Program

Which option would you like to perform? [1 to 5] - 5

Press Enter to Exit
exit

Process finished with exit code 0
```

Figure 3: A screenshot of the script running in PyCharm.

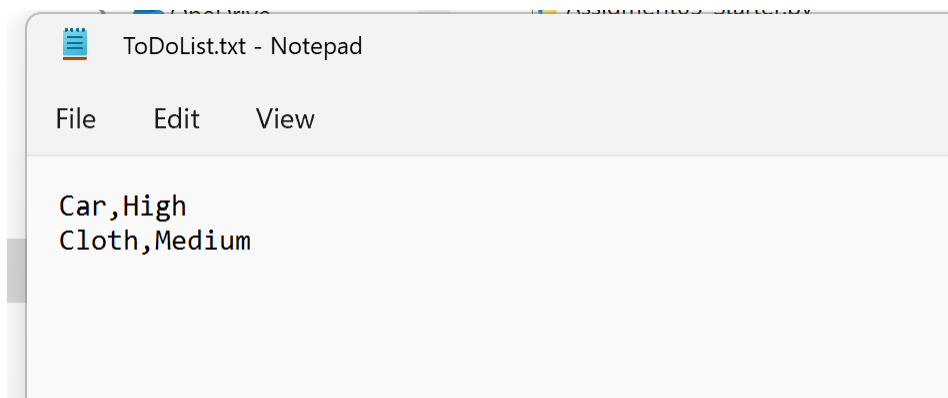


Figure 4: Verifying the file has data.

Running the Script in Command Prompt

I right click on the script file Data_Manu.py in my Assignment04 folder in the PyCharm IDE and navigate to find the path copy it and open it in command shell to run the script and follow the command prompt to enter user data. Below is screenshot of script running in a command window.

```
Command Prompt
Microsoft Windows [Version 10.0.22621.1105]
(c) Microsoft Corporation. All rights reserved.

C:\Users\teyeh>C:\Users\teyeh\PycharmProjects\Assignment05\Assignment05_Starter.py
Write or Read file Data, then type 'Exit' to quit!
Choose to [W]rite or [R]ead data: w
Write or Read file Data, then type 'Exit' to quit!
Choose to [W]rite or [R]ead data: exit

    Menu of Options
    1) Show current data
    2) Add a new item.
    3) Remove an existing item.
    4) Save Data to File
    5) Exit Program

Which option would you like to perform? [1 to 5] - 1

    Menu of Options
    1) Show current data
    2) Add a new item.
    3) Remove an existing item.
    4) Save Data to File
    5) Exit Program

Which option would you like to perform? [1 to 5] - 2

Task: Car
Priority: High
Exit? ('y/n'): y

    Menu of Options
    1) Show current data
    2) Add a new item.
    3) Remove an existing item.
    4) Save Data to File
    5) Exit Program

Which option would you like to perform? [1 to 5] - 3

Task to Remove: Car
row removed
Exit? ('y/n'): y

    Menu of Options
    1) Show current data
    2) Add a new item.
    3) Remove an existing item.
    4) Save Data to File
    5) Exit Program

Which option would you like to perform? [1 to 5] - 4

Please save data to file!

    Menu of Options
    1) Show current data
    2) Add a new item.
    3) Remove an existing item.
    4) Save Data to File
    5) Exit Program

Which option would you like to perform? [1 to 5] - 5

Press Enter to Exit
exit

C:\Users\teyeh>
```

Figure 5: A screenshot of the script running in command window.

Summary

After reading through the notes, videos, and reviewing the website I gain better understanding to execute my work successfully and demonstrate my knowledge by performing assignment 4.