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8/15/2023

IT FDN 110

Assignment #5

Python Coding Assignment #6

Introduction

This sixth assignment includes watching a module video on Canvas, reading a chapter from the textbook, reviewing some web pages and videos, applying our knowledge of what we learned in practice, and then documenting our knowledge to prove that we understood the assignment and its readings. Similar to the fifth assignment, if not nearly identical, the sixth assignment relies on using functions to mimic the output of the fifth assignment and its menu's various choices.

Assignment05_Starter.py

We were made to create a script with a menu that allowed one to do one of the four following things: option one would allow for the user to add a task and its priority level, option two would allow for the user to remove an existing task, option three would allow for the user to save their tasks to a text file, while option four would allow for the user to exit the application. In completing this assignment, much like the last one, I found that I had trouble in getting the code to completely work. For instance, the first couple of functions caused my code to output a duplicate of the prompt that asks the user for a task and priority input. For the most part, it seems to work just fine though, so I assume that my code was completed correctly with its output in mind.

```
1 usage
2
3 @staticmethod
4 def write_data_to_file(file_name, list_of_rows):
5     # Code taken from the Assignment05_Answer.py file.
6     """ Writes data from a list of dictionary rows to a File
7
8     :param file_name: (string) with name of file:
9     :param list_of_rows: (list) you want filled with file data:
10    :return: (list) of dictionary rows
11    """
12
13    # Show the current items in the table
14    print("***** The current items ToDo are: *****")
15    for row in table_lst:
16        print(row["Task"] + "(" + row["Priority"] + ")")
17    print("*****")
18
19    # Ask if they want save that data
20    if "y" == str(input("Save this data to file? (y/n) - ")).strip().lower():
21        objFile = open(file_name_str, "w")
22        for dicRow in table_lst:
23            objFile.write(dicRow["Task"] + "," + dicRow["Priority"] + "\n")
24        objFile.close()
25        input("Data saved to file! Press the [Enter] key to return to menu.")
26    else:
27        input("New data was NOT Saved, but previous data still exists! Press the [Enter] key to return to menu.")
28    return list_of_rows
```

```

1 usage
@staticmethod
def output_menu_tasks():
    """ Display a menu of choices to the user

    :return: nothing
    """
    print('''
    Menu of Options
    1) Add a new Task
    2) Remove an existing Task
    3) Save Data to File
    4) Exit Program
    ''')
    print() # Add an extra line for looks

1 usage
@staticmethod
def input_menu_choice():
    """ Gets the menu choice from a user

    :return: string
    """
    choice = str(input("Which option would you like to perform? [1 to 4] - ")).strip()
    print() # Add an extra line for looks
    return choice

```

```

1 usage
@staticmethod
def output_current_tasks_in_list(list_of_rows):
    """ Shows the current Tasks in the list of dictionaries rows

    :param list_of_rows: (list) of rows you want to display
    :return: nothing
    """
    print("***** The current tasks ToDo are: *****")
    for row in list_of_rows:
        print(row["Task"] + " (" + row["Priority"] + ")")
    print("*****")
    print() # Add an extra line for looks

1 usage
@staticmethod
def input_new_task_and_priority():
    """ Gets task and priority values to be added to the list

    :return: (string, string) with task and priority
    """
    # Code taken from the Assignment05_Answer.py file.
    strTask = str(input("What is the task? - ")).strip()
    strPriority = str(input("What is the priority? [high|low] - ")).strip()
    dicRow = {"Task": strTask, "Priority": strPriority}
    table_lst.append(dicRow)
    return (strTask, strPriority)

```

```

1 usage
@staticmethod
def input_task_to_remove():
    """ Gets the task name to be removed from the list

    :return: (string) with task
    """

    # Code taken from the Assignment05_Answer.py file.
    strKeyToRemove = input("Which TASK would you like removed? - ")
    blnItemRemoved = False # Use this to verify that the data was found and removed
    for row in table_lst:
        task, priority = dict(row).values()
        if task == strKeyToRemove:
            table_lst.remove(row)
            blnItemRemoved = True
    return task

```

Figure 1: Assignment06_Starter.py Script in PyCharm

```

***** The current tasks ToDo are: *****
*****

Menu of Options
1) Add a new Task
2) Remove an existing Task
3) Save Data to File
4) Exit Program

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

What is the task? - Task One
What is the priority? [high|low] - High
***** The current tasks ToDo are: *****
Task One (High)
*****

```

```

*****

Menu of Options
1) Add a new Task
2) Remove an existing Task
3) Save Data to File
4) Exit Program

Which option would you like to perform? [1 to 4] - 3

***** The current items ToDo are: *****
Task One(High)
*****
Save this data to file? (y/n) - y
Data saved to file! Press the [Enter] key to return to menu.
Data Saved!
***** The current tasks ToDo are: *****
Task One (High)
*****

```

```

*****

Menu of Options
1) Add a new Task
2) Remove an existing Task
3) Save Data to File
4) Exit Program

Which option would you like to perform? [1 to 4] - 2

Which TASK would you like removed? - Task One
***** The current tasks ToDo are: *****
*****

```

Figure 2: Assignment06_Starter.py Output in PyCharm

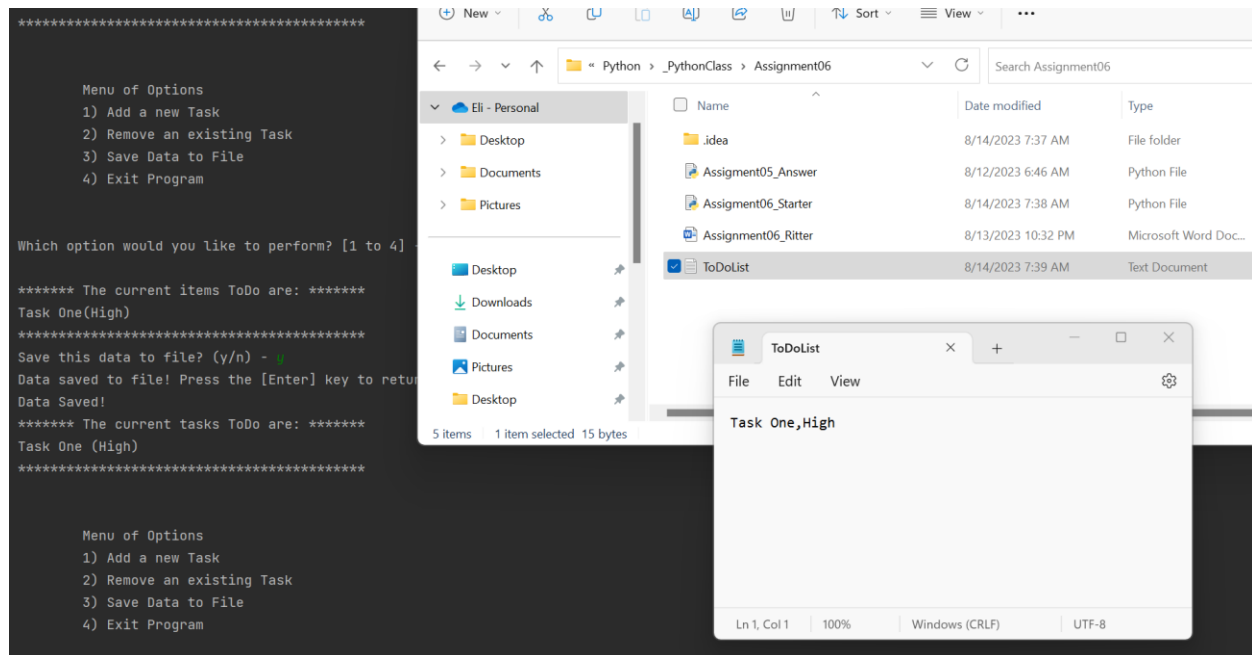


Figure 3: Assignment06_Starter.py ToDoList.txt Output in PyCharm

Summary

In short, this assignment can be seen as something that branches from both the fourth and fifth assignments. Though I was unable to get the program running in a command window, the PyCharm version seemed to work just fine. Made to build off of an existing code template, this assignment aims to introduce us to functions; while I had difficulty with the assignment, I think that (by using the answer key from assignment five) I was able to create something that worked.