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Foundations of Programming: Python
Assignment 05

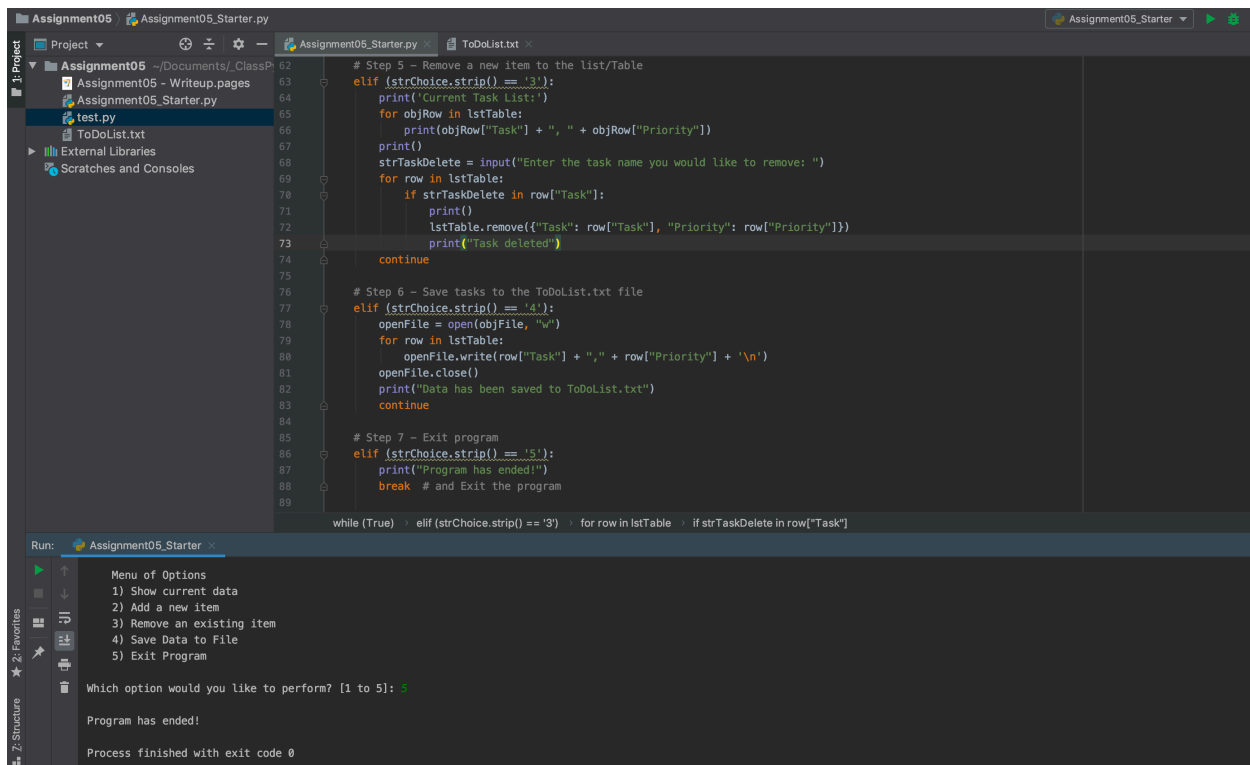
Lists and Dictionaries

Introduction

In week 5, we covered the topics of creating scripts using lists and dictionaries, error handling, functions, script templates, and Github. This week for homework, we had to take a script already written and make updates to the code to capture user data as a To Do list and be able to save the data in a text file. We have also taken on learning a new tool for managing version control for the code we have written.

Creating and Running My To Do List Script

After reviewing the given videos/course materials provided in Module 5, our fifth assignment was to create a script where the user is presented a menu of options to capture, edit, show or save the data collected. In comparison to Assignment 4, in this assignment we are taking an existing list and loading it into a dictionary, whereas in the last assignment we first collected the data and saved to a file. Another difference is that we needed to figure out a way to remove a Task in the To Do list. Finally, we needed to setup a GitHub account and save the work for this assignment in our repository.



```
Assignment05 Assignment05_Starter.py
Project
  Assignment05
    Assignment05 - Writeup.pages
    Assignment05_Starter.py
    test.py
    ToDoList.txt
  External Libraries
  Scratches and Consoles

# Step 5 - Remove a new item to the List/Table
elif (strChoice.strip() == '3'):
    print('Current Task List:')
    for objRow in lstTable:
        print(objRow["Task"] + ", " + objRow["Priority"])
    print()
    strTaskDelete = input("Enter the task name you would like to remove: ")
    for row in lstTable:
        if strTaskDelete in row["Task"]:
            print()
            lstTable.remove({"Task": row["Task"], "Priority": row["Priority"]})
            print("Task deleted")
            continue

# Step 6 - Save tasks to the ToDoList.txt file
elif (strChoice.strip() == '4'):
    openFile = open(objFile, "w")
    for row in lstTable:
        openFile.write(row["Task"] + ", " + row["Priority"] + '\n')
    openFile.close()
    print("Data has been saved to ToDoList.txt")
    continue

# Step 7 - Exit program
elif (strChoice.strip() == '5'):
    print("Program has ended!")
    break # and Exit the program

while (True):
    elif (strChoice.strip() == '3'):
        for row in lstTable:
            if strTaskDelete in row["Task"]:
```

Run: Assignment05_Starter

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]:

Program has ended!

Process finished with exit code 0

Figure 1. Code in PyCharm

```
brianlee — -bash — 88x28
5) Exit Program

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

Homework, High

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

Data has been saved to ToDoList.txt

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

Program has ended!
Brians-MacBook-Pro:~ brianlee$
```

Figure 2. Running the Python Script in Terminal

```
ToDoList.txt
Homework, High
```

Figure 3. Output file from the Assignment5_Starter.py Script

Summary

Overall this assignment was a bit of a challenge - I will need to spend more time practicing this type of script for a different use case. To me the biggest challenge from this assignment was the part of removing the Task from this list. I believe the code I've written will work but there could be cases of false positives, however, I will need to test if this would actually be the case.