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IT FDN 100 A Au 19: Foundations Of Programming: Python

Module 05

Assignment 05

Due: November 6th by 11:59pm

Step 1

Watched Intro To Python Mod05 Video and played along with Labs practicing the elements of python as described by Randal.

Step 2

Read book sections from Chapter 5

Step 3

Reviewed web pages and performed the exercises.

Step 4

Watched the videos....

Step 5

Do the assignment using the starter file... add code to make it work!

Step 6 - Document

I pasted the starter file script into a new python file called Assignment 05 in a folder called PythonClass, sub folder Assignment 05.

Using many of the techniques discussed in this week's module video, I was able to piece together the steps as outlined in the starter file.

The first step was creating a .txt file with tasks and priorities. I wrestled with how best to deal with the 2 items. I ended up not using a comma as it delivered multiple commas in the secondary file delivered at the end.... Would like to know how to get around this.

Once the .txt file was opened, the rows in the file were split into list(s) and then converted to dictionary items.

The next step involved displaying the items in the .txt file to the user as a "table." Asking the user to add additional rows to the list (step 2) was pretty straightforward. Step 3 was quite a bit more challenging figuring out how to remove an item from the dictionary. I started by displaying just the "task" items and then asking the user to pick one to delete. That input

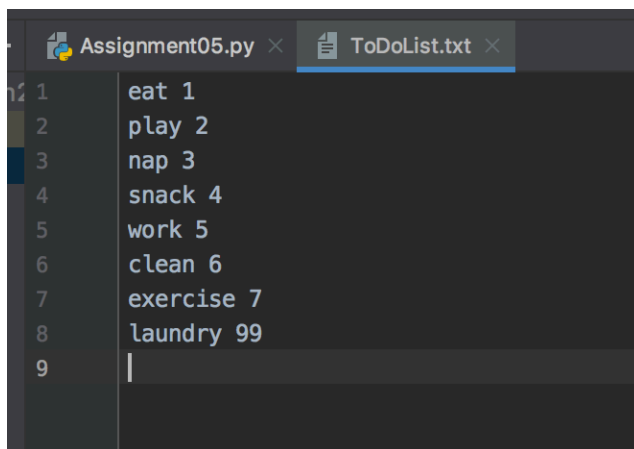
variable then became the item to use the .remove function to delete it from the dictionary. I then suggested the user choose menu item 1 to view the new contents of the dictionary.

Step 4 and 5 were pretty straightforward in saving the new items to the .txt file and then closing the program when the user types exit.

All in all, there was a lot of trial and error to make this work, and still lots of holes in terms of functionality.

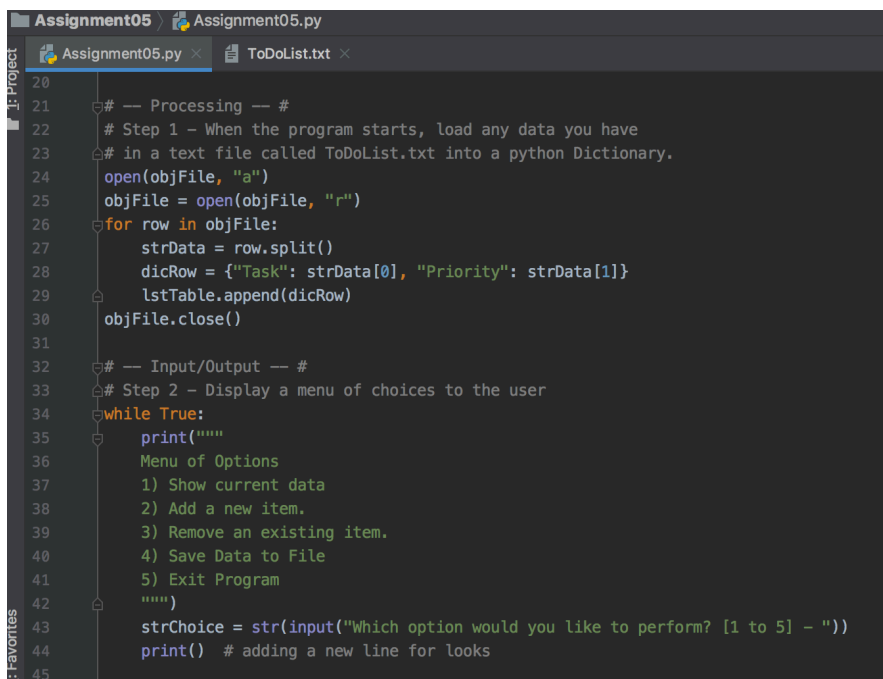
Screen shots of code in action below.

FIGURE 1



```
1 eat 1
2 play 2
3 nap 3
4 snack 4
5 work 5
6 clean 6
7 exercise 7
8 laundry 99
9 |
```

FIGURE 2



```
20
21 # -- Processing -- #
22 # Step 1 - When the program starts, load any data you have
23 # in a text file called ToDoList.txt into a python Dictionary.
24 open(objFile, "a")
25 objFile = open(objFile, "r")
26 for row in objFile:
27     strData = row.split()
28     dicRow = {"Task": strData[0], "Priority": strData[1]}
29     lstTable.append(dicRow)
30 objFile.close()
31
32 # -- Input/Output -- #
33 # Step 2 - Display a menu of choices to the user
34 while True:
35     print("""
36     Menu of Options
37     1) Show current data
38     2) Add a new item.
39     3) Remove an existing item.
40     4) Save Data to File
41     5) Exit Program
42     """)
43     strChoice = str(input("Which option would you like to perform? [1 to 5] - "))
44     print() # adding a new line for looks
45
```

```
Assignment05 > Assignment05.py
Assignment05.py x ToDoList.txt x
46 # Step 3 - Show the current items in the table
47 if strChoice.strip() == '1':
48     if not lstTable: # checks if lstTable has data
49         print("There is no data in your list.")
50     else:
51         for row in lstTable:
52             print(row["Task"] + ", " + row["Priority"])
53         continue
54
55 # Step 4 - Add a new item to the list/Table
56 elif strChoice.strip() == '2':
57     strTask = str(input("Enter a new Task: "))
58     strPriority = str(input("How does " + strTask + " rank in priority?: "))
59     dicRow = {"Task": strTask, "Priority": strPriority}
60     lstTable.append(dicRow)
61     # print(lstTable)
62     continue
63
64 # Step 5 - Remove a new item to the list/Table
65 elif strChoice.strip() == '3':
66     print("These are your current Tasks:\n") # display current tasks
67     for row in lstTable:
68         print(row["Task"])
```

```
Assignment05 > Assignment05.py
Assignment05.py x ToDoList.txt x
63
64 # Step 5 - Remove a new item to the list/Table
65 elif strChoice.strip() == '3':
66     print("These are your current Tasks:\n") # display current tasks
67     for row in lstTable:
68         print(row["Task"])
69
70     strRemoveTask = input("\nWhich task would you like to remove from the list above? ")
71     for row in lstTable:
72         if strRemoveTask in row["Task"]:
73             print()
74             lstTable.remove({"Task": row["Task"], "Priority": row[
75                 "Priority"]})
76             print("If you entered a Task from above, it has been deleted.\n"
77                 "\n (You can check by entering '1' below.)")
78             continue
79
80 # Step 6 - Save tasks to the ToDoList.txt file
81 elif strChoice.strip() == '4':
82     objFile = open("ToDoList.txt", "w")
83     for row in lstTable:
84         objFile.write(row["Task"] + " " + row["Priority"] + '\n')
85     objFile.close()
86     print("Data was saved!")
87     continue
88
89 # Step 7 - Exit program
90 elif strChoice.strip() == '5':
91     print("Thanks for playing!")
92     break
```