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Course: IT FDN 110 A
GitHub: https://github.com/ct-allen/IntroToProg-Python.git

Assignment 05 – List and Dictionaries

Intro

This week we had the addition of dictionaries. Learning and trying to understand how your functions will interact with a dictionary and dictionary list was an intricate part of the module. Add that in with having to use someone else's starter code made for a challenging coding assignment.

Text File Input

First we were to look for a text file and take the data from into memory. My early code had a print command for this step so that I could verify that it was seeing the text file and getting the data from it. If there wasn't a text file for our program to read the user would be presented with a message indicating it didn't find a text file.

```
25
26  try:
27      objFile = open('ToDoList.txt', 'r')
28      for row in objFile:
29          lstrow = row.split(',')
30          dicRow = {"Task": lstrow[0], "Priority": lstrow[1].strip()}
31          print(dicRow['Task'] + '|' + dicRow['Priority'].strip())
32          lstTable.append(dicRow)
33          #print(lstTable)
34      objFile.close()
35  except:
36      print('File not found, will make a new file when you save')
37
38
```

Figure 1: Opening and reading from a text file.

Show and Add Data

Now that we have data from a text file into our variables, we want the user to be able to see what tasks are on their list and to add additional tasks to the list. Shown in Figure 2 you'll se that a for loop is used to print out rows in our 'lstTable'.

Although line 53-55 present our list of tasks and priorities, I will say that I'm not a fan of the format of how this display's. It was the simplest way to show the list. Anytime I tried to change the format I didn't get what I wanted and I attribute this is to not understanding dictionaries quite that well.

```
50      strChoice = str(input("Which option would you like to perform? [1 to 5] - "))
51      print()  # adding a new line for looks
52      # Step 3 - Show the current items in the table
53      if (strChoice.strip() == '1'):
54          for objRow in lstTable:
55              print(objRow)
56
57      # Step 4 - Add a new item to the list/Table
58      elif (strChoice.strip() == '2'):
59          useritem = input('Enter an Item:')
60          uservalue = input('Enter a Value:')
61          dicRow = {'Task': useritem, 'Priority': uservalue}
62          lstTable.append(dicRow)
63          continue
```

Figure 2: Code for Showing and Adding data options.

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

{'Task': 'Mow Lawn', 'Priority': 'high'}
{'Task': 'Homework', 'Priority': 'Med'}
{'Task': 'Dishes', 'Priority': 'Low'}
```

Figure 3: The output of lines 53-55 in Figure 2.

Save to File

I had some difficulties saving my dictionary list to a file. Since dictionaries are new to me, I wasn't sure how the 'write' function needed the dictionary list taken apart. I was getting the error shown in Figure 4. After some research and re-watching of Professor Roots videos I was able to see that you can call out a variable within a list to parse out the items to save to a text file.

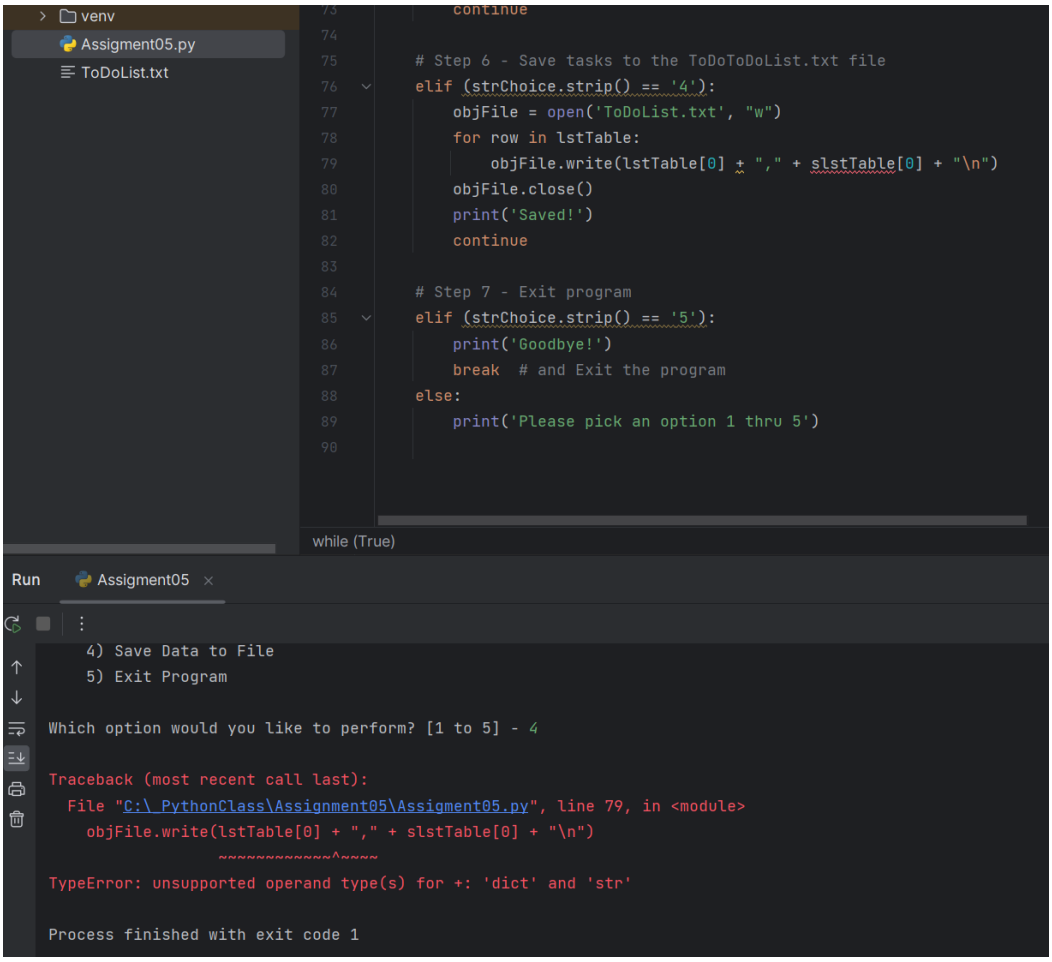

Figure 3: Error I was receiving when I wasn't using the 'write' function and my dictionary list correctly.

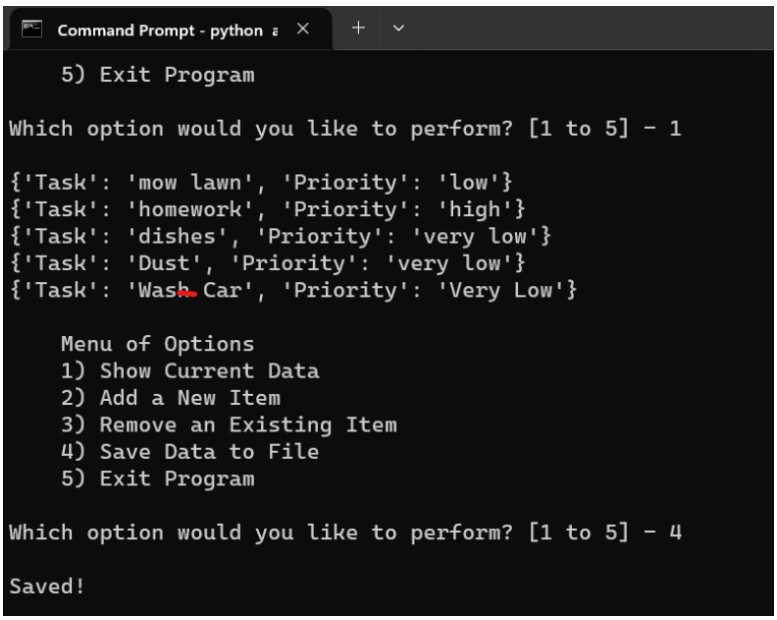

Figure 4: Verifying in Command Line

Summary

This assignment took a lot of research and re-running of my script to verify functionality. Module 5 made me figure out some of the abilities of PyCharm in order to debug my code. Being able to hover over a variable and see what type of element the computer has it saved as is invaluable. Over the rest of this course, I'm sure it will be a necessity to become experts with the capabilities of PyCharm.