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Course: Python Fundamentals

Assignment 04

**Strings, Tuples, and Lists, with Tables**

**Introduction**

This is the fourth assignment for the Python Fundamentals course. The overall course is looking well, and I am excited to get started and learn more about Python and practice my coding and build upon my limited skills in Python. I continued to be excited about this one as we were writing to a text file as well as displaying inputted data as requested by a user.

**Pseudo-Code**

I was determined to use pseudo-code this assignment, and I did write some out. See my pseudo-code document for what I did. I know I need more refinement, perhaps less detail too, though I was trying to show myself, and others, where I was thinking of going and why.

**Collections and Strings**

This was a review of previous knowledge I had of these two topics, with the looping a great refresher. One thing I was struggling with is printing to one line, such as in Lab 4-1. Randal helped out with that looping, which was great and grew my knowledge of how to do it. Course I need more practice, but it is a great start again for me.

**Tuples**

Tuples I have always loved since the data is immutable. Of course, it means I can only add to the tuple and have to convert if I ever want to change it, but, to me, it feels so secure. Something I was not truly aware of was how to unpack tuples easily, such as assigning each piece of the tuple to a variable to either display or write somewhere. This sounds perfect in how to iterate through a series of tuples. Equating it to a table was good, too, as that is something that, while I instinctively may have understood, never thought about when it came to the data in lists and tuples, perhaps dictionaries too.

**Lists**

Another refresher, though a good one since I could not imagine how to start accomplishing this coding assignment using a list without first creating a nested list. The idea to use two lists never even occurred to me since I was expecting to have to write to the first list[0] index, then code a way to iterate and write to the nested list. I believe I sometimes think of way too complicated ways to accomplish a task when there are much simpler ways to. I have to start imagining those ways better I feel.

**Watching the video**

Randal’s video was again informative and helpful to me. I still enjoy how detailed the video gets without being boring or going off track. Many times, watching other videos, I find myself falling asleep. I used Visual Studio Code again to follow along on the examples, which let me get some reps in. I like how VSC works, as well as PyCharm, and how VSC has so many modules for other languages to import and use that I want to continue using it and practicing.

**Script Assignment**

The assignment was to build off of the assignment from Module 03 and writing household items to a text file, with the addition of a menu of options for the user to choose from. One option also displays the data the user has currently entered while the program is running, a neat feature to check your work. Of course, we can’t change the data in case a mistake was made, but I have a sneaking suspicion that is coming soon.

Overall, I was thinking about two lists, nested, to solve this problem, but Randal’s class on Wednesday helped alleviate my fears and frustrations since his was so simple and easy. I coded it basically off what he wrote, line for line, and made sure it worked. I then went in and created a ‘while’ loop for Option 1 (Entering the data), with the word ‘main’ to be the exit back to the main menu. I did this believing the user would have a better experience using the program, and I also wanted to challenge myself a bit. Had a little bit of trouble with the checks since I was trying to do a check for the ‘quit’ command on one line. When that didn’t work, I ended up making the check two different ‘if’ statements and the loop worked correctly. See Figure 1.1 for an example.

Text

Description automatically generated

Figure 1.1 “While” Loop Option

For the rest of the code, the testing worked fine, as did the rest of the program, no issues. I like the idea of building more on previous work, perhaps using dictionaries next to store household items, with a number or something else as the key. Bottom line, building upon previous work seems more interesting to me as it builds my confidence in what we are learning and helps me think of ideas I already know to solve the problem I am faced with, with future tinkering then making the code work better. To me, this is the essence of meeting a deadline for a business goal. See Figure 1.2 for my code in the command line.

Text

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Figure 1.2 Household Items Command line

**Conclusion**

I enjoyed this fourth assignment even more after I listened to Randal’s solution during class Wednesday. I also am proud to be continuing the changelog piece of my coding as well as starting my pseudo-code writing in earnest. I will continue to hone these skills as I know each will serve me well in the end. For sure, I need to work on simple solutions, too, to the problems we are given. I do like how Randal basically walks us through the answers, which helps build confidence. I do want the challenge as well, and I am betting we will get it.