Assignment 05

# GitHub Link

<https://github.com/holmesak95/Assignment_05>

# Introduction

This document describes my process through Assignment 05 for the Foundations of Programming (Python) course. The assignment updates the menu for the CD inventory list we created last assignment; this time, I used a list of dictionaries instead of a list of lists, and I added functionality to delete a specified CD and to load CDs from a file.

# Assignment 05 Process

In Spyder, I copied the script that Dirk created containing the script header, pseudocode, and logic. I updated the code to use a list of dictionaries by changing the list to a dictionary. The logic for adding a CD and displaying the current data set is pretty similar to the previous assignment involving lists, so not much changed. For the deleting portion, I prompted the user to enter the ID, Title, and Artist because the data set could contain different CD’s with the same ID. This prevents the user from deleting multiple CD’s accidentally. I also inform them if the CD was found or not.

Since the assignment asks to load data, I updated the ‘save’ portion of the program so it checks to see if data in the list of dictionaries is already in the file. This involved opening the file to read all data first and check if it’s in the memory data set, which skipped the CD if it is. If no CD was found, the CD got added to a different list, which then got looped through and appended to the file. The load portion had similar logic but was simpler. I read the file, formatted each row into a dictionary, and compared the file dictionary to the in-memory dictionary to see whether it should be added.

# Assignment 05 Results

Below are screenshots of the results when running the script through both Spyder and the terminal.Text

Description automatically generated

Figure 1: Results of the script when run through Spyder

# Text Description automatically generated

Figure : Results of the script when run through the terminal.

# Summary

In this assignment, I learned about various concepts like writing/reading data to files, learning about the difference between lists and dictionaries, reading/updating someone else’s code, and good programming standards. The assignment went well and it was a great assignment, although I believe the directions for the assignment could be more specific. I know the course syllabus mentions that the assignments are detailed in a purposeful way, but I would push back on this assignment and ask for clarification. Examples of what I believe could be added to the directions are if duplicate entries are allowed, what happens if the entry has the same ‘ID’ column value, but a different ‘Title’ and ‘Artist’ value (should the Title/Artist be updated for the same ID, or is another entry okay?), do I want the user to delete all entries with a specific ID number, or only one entry (example: if two CD’s have the ID value ‘3’, do I delete those two CD’s, or prompt the user to decide).

At this point in the class, we as students can program many of the clarifications above (and others not specified) but we just need to know whether we should spend the time trying to make this fool proof or not. The direction in the assignment saying “Test all options in your script…” may be a little vague in that we can test all options, but we are not sure what the expected outcomes are. Along with this, many of us have full time jobs, family, medical health problems, etc. Having more of the details in the assignment itself could cut down on the number of questions and time spent. Overall, the assignment was a great exercise and the possible opportunities for how this assignment can go makes it a great learning tool.

**Note:** formatting of Python code throughout this document is done using [saravjishut](https://saravjishut.org/syntax) syntax highlighter [external reference]