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Foundations of Programming, Python

Assignment 05

CD Inventory Python Script-2

# Introduction

In module 05, we kept learning how to process data collection and load it from file. Besides the four types (string, range, tuple, and list) of sequence, we learned a new mapping type, dictionaries. In this assignment, we are continued working on previous CD Inventory script (provided by class) and modify the list sequence data type to dictionaries mapping data.

# Create an CD Inventory Program

1. Modify log information of **CDInventory\_Start.py** and save it to a new script, **CDInventory.py**, in folder **Assignment04.**

Text

Description automatically generated

Figure 1 – Information and log of CDInventory.py

1. Check the pseudocode (from **CDInventory\_Start.py**). Three TODO.
2. First, declare the variables, use the dictionaries to save the data

Text

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Figure 2 – Variables of CDInventory.py

1. Add functionality of loading existing data from CDInventory.txt. Here I load the data as dictionaried type. I also print the data to show it with user.

Text

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Figure 3 –Loading function of CDInventory.py

1. Add functionality of deleting an entry data.

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Figure 4 – Deleting function of CDInventory.py

1. Slightly change the saving of deleting an entry data. Here I choose open file with “w” instead of “a”. If I loaded the old inventory, the “a” function will append duplicate data after the original data. In case to delete the existed data. I add an important notice at first main menu.

Text

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Figure 5 – Save File of CDInventory.py

Text

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Figure 6 – Loading Notice of CDInventory.py

1. Save the script.

# Program Test

I run the code in both Spyder and terminal. I test all scenarios. The following figures only show the Spyder result. However, the Terminal shows the same thing.

1. Ran the code, test invalid option

Graphical user interface, text

Description automatically generated with medium confidence

Figure 7-1 – Test result 1 (Spyder) of CDInventory.py

1. Ran the code, option l, load the exist CD Inventory

Text

Description automatically generated

Figure 7-2 – Test result 2 (Spyder) of CDInventory.py

1. Option A, add new data.

Text

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Figure 7-3 – Test result 3 (Spyder) of CDInventory.py

1. Option I, display current inventory

Text

Description automatically generated

Figure 7-4 – Test result 4 (Spyder) of CDInventory.py

1. Option D, delete temporary data. Use option I, display to check it

Graphical user interface, text

Description automatically generated

Figure 7-5 – Test result 5 (Spyder) of CDInventory.py

1. Repeat step 2-4 before check Option S, Saved the text file. And use Option I to check it.

Text

Description automatically generated

Figure 7-5 – Test result 6 (Spyder) of CDInventory.py

Text

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Figure 8 –CDInventory.txt

1. Option x, exist the program.

# GitHub

I created my own GitHub account and create a new repository “Assignment\_05”. Upload my knowledge document (Assignment\_05.docx) and python script(CDInventory.py). Commit the change (upload file).

# My GitHub page link is <https://github.com/guangsil/Assignment_05>

Graphical user interface, text, application, email

Description automatically generated

Figure 9 –GitHub Page

# Summary

In assignment 05, I use Spyder to modify the existed code CDInventory.py. Modify other people’s code should check the nomination and logic before adding the code. Then find the problem to be solved and solve it. I add the request variable and functionality and test the code. The new input data and exist CD inventory file is both deployed in text file. Document and script are uploaded to GitHub for further use.