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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

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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.

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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.

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Figure 5 – Save File of CDInventory.py

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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

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

1. Option A, add new data.

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

1. Option I, display current inventory

Text

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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

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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.

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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

# Summary

In assignment 04, I use Spyder code CDInventory.py. I combined (1) While and for loop, (2)if/elif/else conditional statement, and list sequence to create a menu and data input system. User can choice different option and the program automatically distinguishes that the input is correct or not. The file result is deployed in text file.