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Foundations of Programming, Python

Assignment 06

CD Inventory Python Script-2

# Introduction

In module 06, we kept learning the concepts of function, parameters(arguments), returns values and local/global environments. Here, we need to modify the script of last week with class and function.

# Modify the CD Inventory Program

1. Modify log information of **CDInventory\_Start.py** and save it to a new script, **CDInventory.py**, in folder **Assignment06.**

Text

Description automatically generated

Figure 1 – Information and log of CDInventory.py

1. Declare the variables that used in this script.

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Figure 2 – Variables of CDInventory.py

1. Check the pseudocode (from **CDInventory\_Start.py**). There are 7 #TODO in total.
   1. add functions for processing here (adding a function under Data processor class)
   2. add code here (adding code for the write file function)
   3. add I/O functions as needed (adding code for the userinput function)
   4. move IO code into function (moving the user input/output into a function)
   5. move processing code into function (move the “add CD” processing code into a function)
   6. move processing code into function (move the “delete CD” processing code into a function)
   7. move processing code into function (move the “save CD” processing code into a function)
2. The 1) TODO including 5), 6), 7) TODOs. I create three functions: add\_inventory, delete\_inventory, save\_inventory. I put these functions under the DataProcessor class, move the 5) , 6) and half 7) code under these function. I also set the paremeter to table for 5), 6), 7) TODOs.

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Figure 3 – DataProcessor class function of CDInventory.py

1. To solve the 2)TODO, I create the write file function under FileProcessor class, and moved the other half 7) TODO code to here.

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Figure 4 – FileProcessor class function of CDInventory.py

1. For 3)TODO, I create userinput function under the IO class. And move the code of 4) TODO to here.

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Figure 5 – IO class function of CDInventory.py

1. Modified the main code, add the previous function into each if/elif/else under while loop menu.

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Figure 6 – main code of CDInventory.py

1. Save the script.

# Spyder Test

1. Ran the code, test invalid option

Text

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

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

Text

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

1. Option A, add new data. I input Three 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

Text

Description automatically generated

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

1. Option S, save and not to save the text file

Text

Description automatically generated

Text

Description automatically generated

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

Text

Description automatically generated

Figure 7-7 –CDInventory.txt

1. Option x, exist the program.

# Terminal Test

1. Ran the code, test invalid option

Graphical user interface, text, application

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Figure 8-1 – Test result 1 (Terminal) of CDInventory.py

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

Text, letter

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Figure 8-2 – Test result 2 (Terminal) of CDInventory.py

1. Option A, add new data.

Text

Description automatically generated

Figure 8-3 – Test result 3 (Terminal) of CDInventory.py

1. Option I, display current inventory

Text

Description automatically generated

Figure 8-4 – Test result 4 (Terminal) of CDInventory.py

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

Text

Description automatically generated

Figure 8-5 – Test result 5 (Terminal) of CDInventory.py

1. Option S, Saved the text file, and not save option

Text

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Figure 8-6 – Test result 6 (Spyder) of CDInventory.py

Text

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Figure 8-7 –CDInventory.txt

# GitHub

I created a new repository “Assignment\_06”. Upload my knowledge document (Assignment\_06.docx) ,python script(CDInventory.py) and the inventory txt file (CDInventory.txt).

# My GitHub page link is <https://github.com/guangsil/Assignment_06>

**Graphical user interface, text, application, email

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Figure 9 –GitHub Page

# Summary

In assignment 06, we are able to use the class and function to shorten the main code. The code becomes a lot more readable.