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IT FDN 110 B Winter 2022: Foundations of Programming

Assignment09 Knowledge Document

Lesson learned in finishing assignment09

Introduction

Brief overview of some lessons learned through some experience I earned through finishing assignment09.

Experience gained 1:

In this project I created multiple classes in separated python file (module) to better organize the code. When I need the classes created in other python files, I need to import the module at the beginning of the python file to claim the module. I can also set an alias for the module I imported and use the alias to represent the module for the rest of the code.

Experience gained 2:

Created multiple classes in separated python file is also good for cooperation. Say in the company, many people may need to contribute to the same project, people can divide the ownership and create multiple python file for different classes so that they can parallel working on their own code. Finally, they can create a “main” module that import all the module needed and realize what they plan to do.

Experience gained 3:

This project also provides a python file for testing code. Creating tests is a good habit, because every time we change code in the future, we can run the test file to make sure all the test passed and confirmed changed code does not unexpectedly impact other functions.

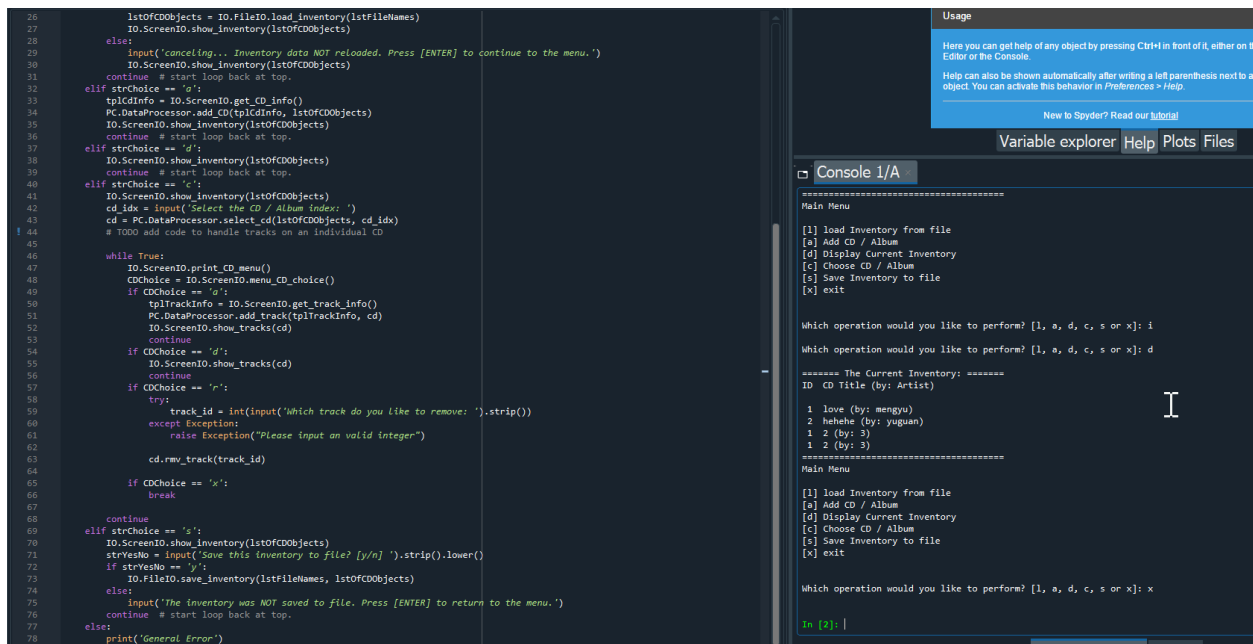
GitHub link:

[yuguangp/assignment09 \(github.com\)](https://github.com/yuguangp/assignment09)

Summary

This project is more complicated than the projects before. I need to read each of the python file and understand the expected functions and realize the function one by one. I also need to understand the relationship between track and CD so that I can load and save multiple files accordingly. This project is more like a project in real life instead of a simple program homework.

Appendix



```
26         lstOfCDobjects = IO.FileIO.load_inventory(lstFileNames)
27         IO.ScreenIO.show_inventory(lstOfCDobjects)
28     else:
29         input('canceling... Inventory data NOT reloaded. Press [ENTER] to continue to the menu.')
30         IO.ScreenIO.show_inventory(lstOfCDobjects)
31         continue # start loop back at top.
32     elif strChoice == 'g':
33         tplCdInfo = IO.ScreenIO.get_CD_info()
34         PC.DataProcessor.add_CD(tplCdInfo, lstOfCDobjects)
35         IO.ScreenIO.show_inventory(lstOfCDobjects)
36         continue # start loop back at top.
37     elif strChoice == 'd':
38         IO.ScreenIO.show_inventory(lstOfCDobjects)
39         continue # start loop back at top.
40     elif strChoice == 'c':
41         IO.ScreenIO.show_inventory(lstOfCDobjects)
42         cd_idx = input('Select the CD / Album index: ')
43         cd = PC.DataProcessor.select_cd(lstOfCDobjects, cd_idx)
44         # TODO add code to handle tracks on an individual CD
45
46     while True:
47         IO.ScreenIO.print_CD_menu()
48         CDChoice = IO.ScreenIO.menu_CD_choice()
49         if CDChoice == 'g':
50             tplTrackInfo = IO.ScreenIO.get_track_info()
51             PC.DataProcessor.add_track(tplTrackInfo, cd)
52             IO.ScreenIO.show_tracks(cd)
53             continue
54         if CDChoice == 'd':
55             IO.ScreenIO.show_tracks(cd)
56             continue
57         if CDChoice == 'r':
58             try:
59                 track_id = int(input('Which track do you like to remove: ').strip())
60             except Exception:
61                 raise Exception("Please input an valid integer")
62             cd.rm_track(track_id)
63
64         if CDChoice == 'x':
65             break
66
67     continue
68 elif strChoice == 's':
69     IO.ScreenIO.show_inventory(lstOfCDobjects)
70     strYesNo = input('Save this inventory to file? [y/n] ').strip().lower()
71     if strYesNo == 'y':
72         IO.FileIO.save_inventory(lstFileNames, lstOfCDobjects)
73     else:
74         input('The inventory was NOT saved to file. Press [ENTER] to return to the menu.')
75         continue # start loop back at top.
76 else:
77     print('General Error')
78
```

Usage

Here you can get help of any object by pressing Ctrl+H in front of it, either on the Editor or the Console.

Help can also be shown automatically after writing a left parenthesis next to an object. You can activate this behavior in Preferences > Help.

New to Spyder? Read our Tutorial

Variable explorer Help Plots Files

Console 1/A

```
=====
Main Menu
[1] load Inventory from file
[a] Add CD / Album
[d] Display Current Inventory
[c] Choose CD / Album
[s] Save Inventory to file
[x] exit

Which operation would you like to perform? [1, a, d, c, s or x]: d

Which operation would you like to perform? [1, a, d, c, s or x]: d

===== The Current Inventory: =====
ID  CD Title (by: Artist)
1  love (by: mengyu)
2  hehehe (by: yuguang)
1  2 (by: 3)
1  2 (by: 3)
=====
Main Menu
[1] load Inventory from file
[a] Add CD / Album
[d] Display Current Inventory
[c] Choose CD / Album
[s] Save Inventory to file
[x] exit

Which operation would you like to perform? [1, a, d, c, s or x]: x

In [2]: |
```

Fig.1 Screenshot of script successfully running in Spyder

```

Which operation would you like to perform? [l, a, d, c, s or x]: i
Which operation would you like to perform? [l, a, d, c, s or x]: a

Enter ID: 1
What is the CD's title? 2
What is the Artist's name? 3
===== The Current Inventory: =====
ID      CD Title (by: Artist)
-----
1       love (by: mengyu)
2       hehehe (by: yuguan)
1       2 (by: 3)
=====

Main Menu

[l] load Inventory from file
[a] Add CD / Album
[d] Display Current Inventory
[c] Choose CD / Album
[s] Save Inventory to file
[x] exit

Which operation would you like to perform? [l, a, d, c, s or x]: s

===== The Current Inventory: =====
ID      CD Title (by: Artist)
-----
1       love (by: mengyu)
2       hehehe (by: yuguan)
1       2 (by: 3)
=====

Save this inventory to file? [y/n] y
Main Menu

[l] load Inventory from file
[a] Add CD / Album
[d] Display Current Inventory
[c] Choose CD / Album
[s] Save Inventory to file
[x] exit

Which operation would you like to perform? [l, a, d, c, s or x]: l

WARNING: If you continue, all unsaved data will be lost and the Inventory re-loaded from file.
Type 'yes' to continue and reload from file. otherwise reload will be canceled.
yes
reloading...
===== The Current Inventory: =====
ID      CD Title (by: Artist)
-----
1       love (by: mengyu)
2       hehehe (by: yuguan)
1       2 (by: 3)
=====

Main Menu

[l] load Inventory from file
[a] Add CD / Album
[d] Display Current Inventory
[c] Choose CD / Album
[s] Save Inventory to file
[x] exit

Which operation would you like to perform? [l, a, d, c, s or x]: x

```

Fig.2 Screenshot of script successfully running in terminal window