Katelin Swanson

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Foundations of Programming (Python)

Assignment 6

Adapting Someone Else's Code

Introduction

This week we focused on adapting and editing the code that someone else originally created. Rather than writing the script, most of my time this week was spent trying to figure out what the assignment required, as the Assignment06.pdf was vague. This exercise presents another method of creating a user interface to collect CD titles and artists, similar to homework 4 and 5.

Topic 1: Update DataProcessor and FileProcessor

I began by reading the code in entirety. It made the most sense to me to adapt the lower TODOs into the DataProcessor and FileProcessor methods. I defined Add_CD(…), Delete_CD(…), and write_file(…) based on code used later in the script. I added additional notation to describe the purpose and aruguments of each function.

Topic 2: Using newly created functionalities

Next, my task was to replace the past functionality with script to implement the newly defined DataProcessor() and FileProcessor(). This process was straightforward, as it required building upon the definitions I had created. The first involved asking a user for a new ID, CD title, and artist under the "a" choice. Secondly, these needed to be available to add to the two-dimension data structure. Below the delete choice, I needed to adjust the past code to rely on the Delete_CD() functionality created above. Finally, I needed to adapt the past code to write a file based on the Write_File() defintion from above. To make this smoother, I defined three functions to separate out the ID, title, and artist of a CD for use later, while the user uses one of the functionalities.

Figures 1 shows the Spyder console running the program, with figure 2 representing the saved file.

```
[a] Add CD
[i] Display Current Inventory
[d] delete CD from Inventory
[s] Save Inventory to file
[x] exit

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

====== The Current Inventory: ======
ID  CD Title (by: Artist)

1    From Under a Cork Tree (by:Fall Out Boy)
=====================================
Menu

[l] load Inventory from file
[a] Add CD
[i] Display Current Inventory
[d] delete CD from Inventory
[s] Save Inventory to file
[x] exit

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

====== The Current Inventory: ======
ID  CD Title (by: Artist)

1    From Under a Cork Tree (by:Fall Out Boy)
=====================================
Save this inventory to file? [y/n] y
Menu

[l] load Inventory from file
[a] Add CD
[i] Display Current Inventory
[d] delete CD from Inventory
[s] Save Inventory to file
[x] exit

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

====== The Current Inventory: ======
ID  CD Title (by: Artist)

1    From Under a Cork Tree (by:Fall Out Boy)
=====================================
Which ID would you like to delete? 1
The CD was removed
====== The Current Inventory: ======
ID  CD Title (by: Artist)

=====================================
Menu

[l] load Inventory from file
[a] Add CD
[i] Display Current Inventory
[d] delete CD from Inventory
[s] Save Inventory to file
[x] exit

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

====== The Current Inventory: ======
ID  CD Title (by: Artist)

=====================================
Menu

[l] load Inventory from file
[a] Add CD
[i] Display Current Inventory
[d] delete CD from Inventory
[s] Save Inventory to file
[x] exit

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

Figure 1: Spyder console example, added CD, saved to file, deleted, and viewed.

CDInventory.txt

```
1,From Under a Cork Tree,Fall Out Boy
```

Figure 2: Saved file from Spyder run of script.

Similarly for the terminal, figure 3 shows the running window and 4 is the corresponding file.


```
Last login: Tue Aug 16 14:55:10 on ttys000

The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
(base) wless-user-172023091001:~ katelinswanson$ cd ~/Library/Mobile\ Documents/com-apple-CloudDocs/Documents/University\ of\ Washington/Intro\ to\ Python/Mod_06/Assignment06
(base) wless-user-172023091001:Assignment06 katelinswanson$ python Assignment06_KSwanson.py
Menu

[l] load Inventory from file
[a] Add CD
[i] Display Current Inventory
[d] delete CD from Inventory
[s] Save Inventory to file
[x] exit

Which operation would you like to perform? [l, a, i, d, 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 cancelledyes
reloading...
======= The Current Inventory: =======
ID      CD Title (by: Artist)


=======================================
Menu

[l] load Inventory from file
[a] Add CD
[i] Display Current Inventory
[d] delete CD from Inventory
[s] Save Inventory to file
[x] exit

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

Enter ID: 5
Enter CD Title: Take the Sadness Out of Sunday
Enter CD Artist: Bleachers
======= The Current Inventory: =======
ID      CD Title (by: Artist)

5       Take the Sadness Out of Sunday (by:Bleachers)
=======================================
Menu

[l] load Inventory from file
[a] Add CD
[i] Display Current Inventory
[d] delete CD from Inventory
[s] Save Inventory to file
[x] exit

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

======= The Current Inventory: =======
ID      CD Title (by: Artist)

5       Take the Sadness Out of Sunday (by:Bleachers)
=======================================
Save this inventory to file? [y/n] y
Menu

[l] load Inventory from file
[a] Add CD
[i] Display Current Inventory
[d] delete CD from Inventory
[s] Save Inventory to file
[x] exit

Which operation would you like to perform? [l, a, i, d, s or x]: l
```
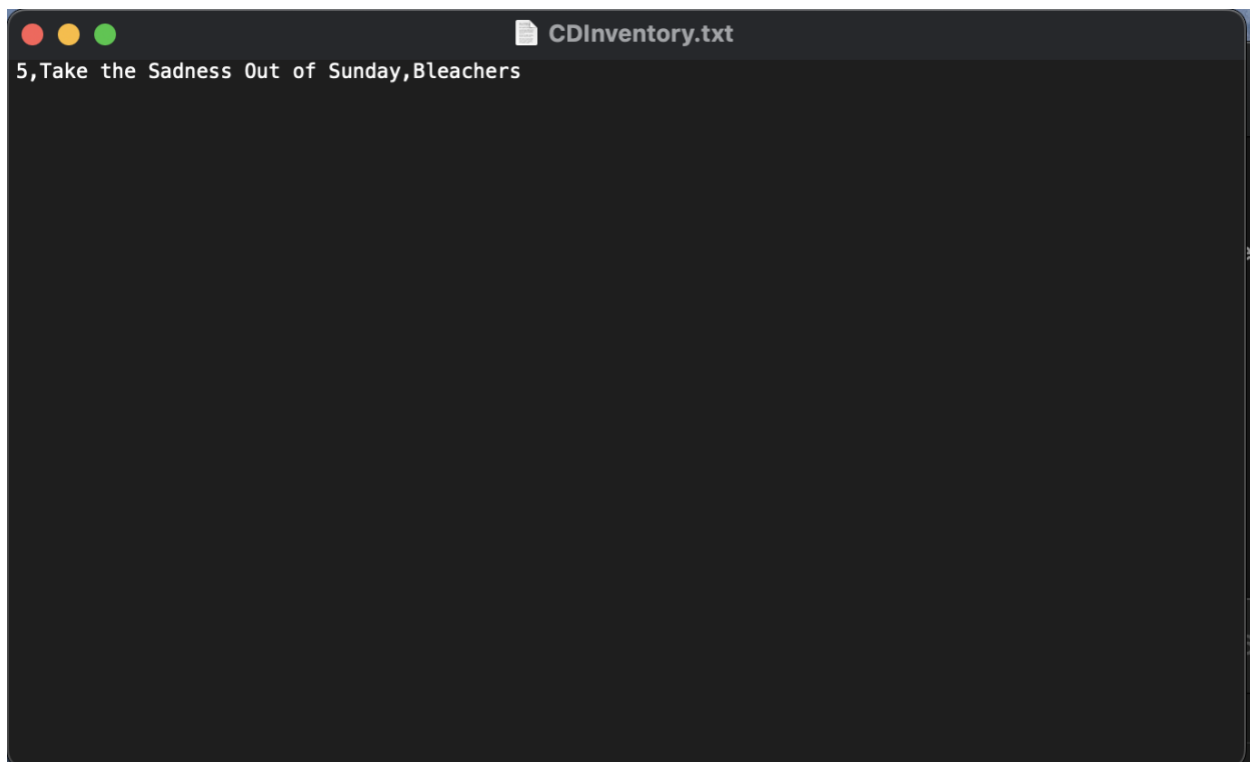
Figure 3: Terminal running script


```
CDInventory.txt

5,Take the Sadness Out of Sunday,Bleachers
```

Figure 4: Corresponding saved file to the terminal script.

Summary

In summary, this exercise primarily consisted of digesting the script, and adapting it to what I think was the intention. The file and .py script can be found in my GitHub repository at https://github.com/kswanson2014/Assignment06.