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November 14, 2021

IT FDN 110

Assignment 05

CD Inventory Using Dictionaries

# Introduction

For this week’s module, we investigated dictionaries and how they can be used as a data set. We started with last weeks assignment where we created a 2D table using a list of lists to show a CD Inventory, and we edited this previous data by making it a list of dictionaries. We also added certain commands like ‘delete’ and ‘load’.

This week we also created a GitHub account and will be uploading this assignment to GitHub.

# Topic 1

First, I looked at the CDInventory\_Started.py and changed the lists to dictionaries, by modifying the syntax. Then, I had to fix my save command to let my load command to work. I fixed the save command by rewriting the file CDInventory.txt with my current inventory every time, this was done by using ‘w+’. This allowed for my load command to work because it is only pulling from one 2D list.

When I initially pulled the data from the text file, I had issues with transforming the list into a dictionary, so what I did was define lstKey in the beginning which gave me the keys in my list (ID, CD title, Artist), and then I used the list pulled from the text file to represent the values. Then I used a command to combine the two to make a dictionary for each row and combined those dictionaries in a list.

The next ‘To do’ for this module was to delete a desired entry, this was done by first defining the user input (I did usinp) and connecting it to the ID number in my dictionary rows. At first, I struggled with this because my user input was reading as a string, but when I defined ID it wasn’t recognized as a string variable so I had to change the syntax then my loop worked.

I also had some initial issues with my inventory where it was only printing the key portion of the dictionary (ID, CD Title, Artist). I fixed this by adding ‘.value’ to ‘\*row’ and the issue was fixed. I also had an issue with a comma following the end each row in my text files, and I fixed this by making the placement -2, so it wouldn’t tag that on to the end of row.

Here is a screen capture of my code showing the load function and addition function:

Text

Description automatically generated

Figure 1 Script showing the load function

Here is my script using the delete function:

Text

Description automatically generated

Figure 2 Script showing the delete function

Here is my script running in a shell:

Text

Description automatically generated

Figure 3 Script running in a shell

The text file that saves:

Graphical user interface, text, application

Description automatically generated

Figure 4 Saved text file

# Topic 2

For the second part of this assignment, I created a GitHub account and, and uploaded this assignment to it. Github so far seems easy to use, and I am excited to explore more into its future uses.

# Summary

With this assignment it was interesting to see how we can use a data set like dictionaries and combine that with a list to create a mutable set of data that we can change and add to, I’m excited to see how we can further improve this CD inventory.

# Appendix

Retrieved from [Syntax Highlighter](https://ajblk.github.io/SyntaxHighlightGenerator-v3.0/OnlineGenerator.html).[[1]](#footnote-1)

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| --- | --- |
| 01  02  03  04  05  06  07  08  09  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48  49  50  51  52  53  54  55  56  57  58  59  60  61  62  63  64  65  66  67  68  69  70  71  72  73  74  75  76  77  78  79 | #------------------------------------------#  # Title: CDInventory.py  # Desc: Starter Script for Assignment 05  # Change Log: (Who, When, What)  # DBiesinger, 2030-Jan-01, Created File  # AWillie, 2021-Nov-14, Added to File  #------------------------------------------#    # Declare variables    strChoice **=** '' # User input  lstTbl **=** []  # list of lists to hold data  # replaced list of lists with list of dicts  dicRow **=** {}  # dictionary of data row  strFileName **=** 'CDInventory.txt'  # data storage file  objFile **=** None  # file object  lstKey **=** ['ID', 'CD Title', 'Artist'] # Dictionary defintion  # Get user Input  print('The Magic CD Inventory\n')  **while** True:      # 1. Display menu allowing the user to choose:      print('[l] load Inventory from file\n[a] Add CD\n[i] Display Current Inventory')      print('[d] delete CD from Inventory\n[s] Save Inventory to file\n[x] exit')      strChoice **=** input('l, a, i, d, s or x: ').lower()  # convert choice to lower case at time of input      print()  **if** strChoice **==** 'x':          # 5. Exit the program if the user chooses so  **Break**  **if** strChoice **==** 'l':          # Added the functionality of loading existing data          lstTbl.clear()          objFile **=** open(strFileName, 'r')  **for** row **in** objFile:              lstRow **=** row.strip().split(',')              dicRow **=** dict(zip(lstKey,lstRow))              lstTbl.append(dicRow)  **pass**  **elif** strChoice **==** 'a':  # no elif necessary, as this code is only reached if strChoice is not 'exit'          # 2. Add data to the table (2d-list) each time the user wants to add data          strID **=** input('Enter an ID: ')          strTitle **=** input('Enter the CD\'s Title: ')          strArtist **=** input('Enter the Artist\'s Name: ')          intID **=** int(strID)          dicRow **=** {'ID': intID, 'CD Title': strTitle, 'Artist': strArtist}          lstTbl.append(dicRow)  **elif** strChoice **==** 'i':          # 3. Display the current data to the user each time the user wants to display the data          print('ID, CD Title, Artist')  **for** row **in** lstTbl:              print(**\***row.values(), sep **=** ',')  **elif** strChoice **==** 'd':          # Added functionality of deleting an entry          usinp **=** input('Select the ID # you would like to delete: ')          i **=** 0          found **=** False  **for** row **in** lstTbl:              ID **=** row['ID']  **if** usinp **==** str(ID):  **del** lstTbl[i]                  found **=** True  **break**  **else**:                  i **+=** 1  **if** **not** found:              print('ID not found')  **pass**  **elif** strChoice **==** 's':          # 4. Save the data to a text file CDInventory.txt if the user chooses so          # Trying to open a clear new file so my load fucntion works, and doesn't pull up more saved info          objFile **=** open(strFileName, 'w+')  **for** row **in** lstTbl:              strRow **=** ''  **for** item **in** row:                  strRow **+=** str(row[item]) **+** ', '              strRow **=** strRow[:**-**2] **+** '\n'              objFile.write(strRow)          objFile.close()  **else**:          print('Please choose either l, a, i, d, s or x!') |

1. Reviewed November 14, 2021. [↑](#footnote-ref-1)