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Foundations of Programming: Python

Assignment 5: Continue to work on CD Inventory assignment and add options for deleting an entry, listing the contents of file and showing current inventory

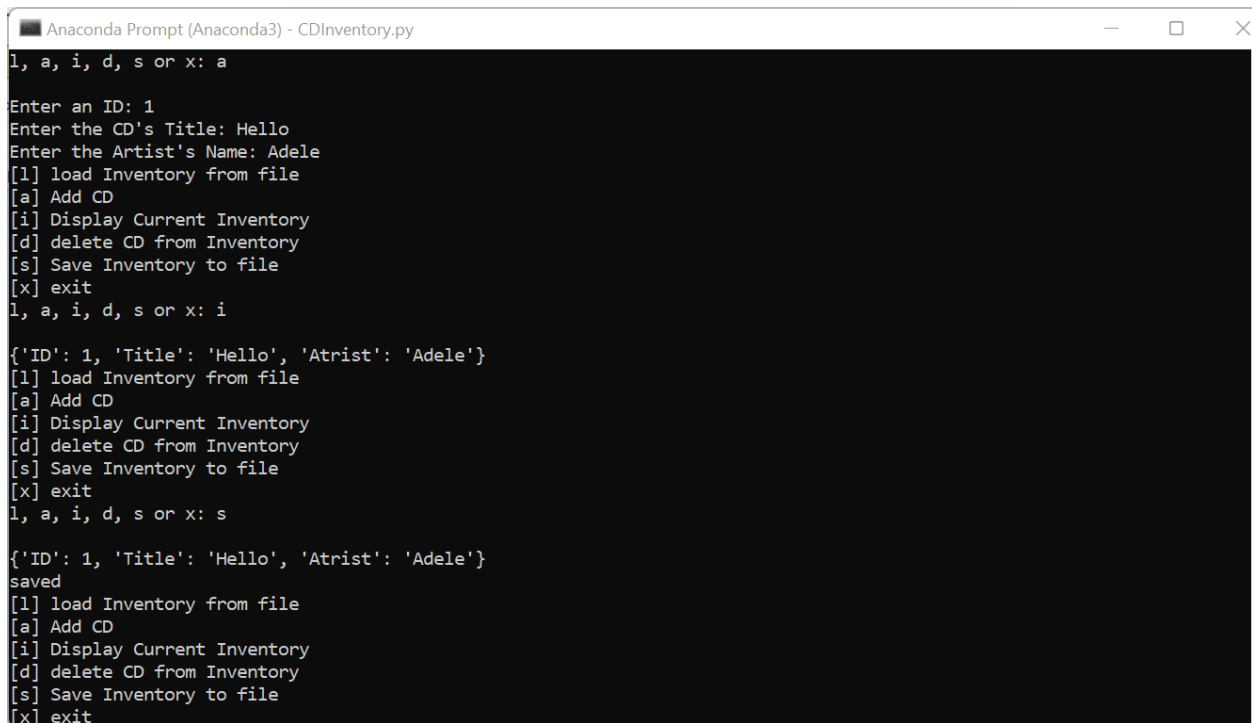
Dictionary:

Learnt about Dictionaries – which are a collection of key/value pairs. While Strings are mutable, keys in dictionary cannot be changed. Learning about different methods for key value pairs in dictionary. Also converted list from previous assignment into Dictionary for storing and retrieving values.

Reading/writing data to a file:

Continued to use read and write modes for writing data to files.

Assignment screenshots:



```
Anaconda Prompt (Anaconda3) - CDInventory.py
l, a, i, d, s or x: a
Enter an ID: 1
Enter the CD's Title: Hello
Enter the Artist's Name: Adele
[l] load Inventory from file
[a] Add CD
[i] Display Current Inventory
[d] delete CD from Inventory
[s] Save Inventory to file
[x] exit
l, a, i, d, s or x: i
{'ID': 1, 'Title': 'Hello', 'Artist': 'Adele'}
[l] load Inventory from file
[a] Add CD
[i] Display Current Inventory
[d] delete CD from Inventory
[s] Save Inventory to file
[x] exit
l, a, i, d, s or x: s
{'ID': 1, 'Title': 'Hello', 'Artist': 'Adele'}
saved
[l] load Inventory from file
[a] Add CD
[i] Display Current Inventory
[d] delete CD from Inventory
[s] Save Inventory to file
[x] exit
```

The screenshot shows the Spyder Python IDE interface. The main editor displays a Python script for a CD inventory system. The script includes functionality for loading existing data, adding new entries, displaying the current inventory, saving data to a file, and deleting entries. The console window on the right shows the execution of the script, including a menu-driven interface for the user to interact with the inventory. The script is as follows:

```
37 if strChoice == 'l':
38     # TODO Add the functionality of loading existing data
39     objFile = open(strFileName, 'r')
40     for row in objFile:
41         print(row)
42     objFile.close()
43     pass
44 elif strChoice == 'a': # no elif necessary, as this code is only reached if strChoice
45     # 2. Add data to the table (2d-list) each time the user wants to add data
46     strID = input('Enter an ID: ')
47     strTitle = input('Enter the CD's Title: ')
48     strArtist = input('Enter the Artist's Name: ')
49     intID = int(strID)
50     dicRow = {'ID':intID, 'Title':strTitle, 'Artist':strArtist}
51     # print(dicRow)
52     lstTbl.append(dicRow)
53     pass
54 elif strChoice == 'i':
55     # 3. Display the current data to the user each time the user wants to display the
56     for row in lstTbl:
57         print(row)
58     pass
59 elif strChoice == 's':
60     # 4. Save the data to a text file CDInventory.txt if the user chooses so
61     for row in lstTbl:
62         print(row)
63         strRow = str(row) + ', '
64         strRow = strRow[:-1] + '\n'
65         objFile = open(strFileName, 'w')
66         objFile.write(strRow)
67         objFile.close()
68         print('saved')
69     pass
70 elif strChoice == 'd':
71     # TODO Add functionality of deleting an entry
72     intDel = input('enter the ID you want to delete')
73     objFile = open(strFileName, 'r')
74     for row in objFile:
75         dicRow = row
76         for key, val in dicRow.items():
77             if val == intDel:
78                 del(dicRow[key])
79                 break
80     break
81 objFile.close()
82 pass
83 else:
84     print('Please choose either l, a, i, d, s or x')
85
86
87
```

The console window shows the following output:

```
[X] exit
1, a, i, d, s or x: s
{'ID': 2, 'Title': 'Title 2', 'Artist': 'Artist 2'}
saved
[1] load Inventory from file
[a] Add CD
[i] Display Current Inventory
[d] delete CD from Inventory
[s] Save Inventory to file
[X] exit
1, a, i, d, s or x: l
{'ID': 2, 'Title': 'Title 2', 'Artist': 'Artist 2'}
[1] load Inventory from file
[a] Add CD
[i] Display Current Inventory
[d] delete CD from Inventory
[s] Save Inventory to file
[X] exit
1, a, i, d, s or x: d
enter the ID you want to delete: 2
{'ID': 2, 'Title': 'Title 2', 'Artist': 'Artist 2'}
Traceback (most recent call last):
  File "C:\Users\vogtla\Python3\Assignment05\CDInventory.py", line 79, in <module>
    print(dicRow.keys())
AttributeError: 'str' object has no attribute 'keys'
In [98]:
```

Summary:

This was a tough assignment even though the starter file was provided. I could not figure out how to delete the files. I tried to get the key value pair from the list and match the data for deletion but could not figure out the issue with error. Also, somewhere in the code between s and l options, duplicates are

being written into the code and I could not figure out the issue with that either. Overall, the list conversion to Dictionary seemed to be simple, but there definitely were curve balls.

Appendix: