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< IT FDN 100 >

< Assignment 05 >

# Document my knowledge

## Introduction

For the 5th assignment, the task is to modify the CD Inventory program to use dictionary to hold 2-d data. We need to add functionality to load data from txt file and delete record as the user inputs ID.

This week I attempted to learn:

- The difference between a Dictionary and a List.
- The difference between an index and a key
- Read data from a file into a list and dictionary
- Understanding programming pattern “Separation of Concerns”
- Try to use Github

## Steps to Complete the Assignment

To complete the assignment, I watched the recommended YouTube videos and read the book. Then I followed all the steps in the assignment document.

I first added dicRow= {} to hold the dictionary data. I then used what I learned from the module to write out the loading part of the data. By iterating through the rows and use them as keys in the dicRow variable, I was able to append data from the txt file into memory.

Then I started to work on the deleting part, which is a little bit trickier. Without adding deleteID = None before my for loop, my code breaks when there's more than 1 record in the memory.

Later I encountered a problem where my code wasn't able to delete an ID that's not the first entry because my “break” wasn't indented correctly. When I was testing the “delete” function, I was only deleting the first item in the list, which works. But only the first item of the list is going to be checked, then the break is reached. Break needs to be called only if a match is found, so I made the break inside the loop.

```
Your current inventory is...
ID, Title, Artist Name
2, dad, asdas
1, das, dasd
```

```
Enter an ID to delete: 1
Your current inventory is now
ID, Title, Artist Name
2, dad, asdas
[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: d
```

```
Your current inventory is...
ID, Title, Artist Name
2, dad, asdas
```

```
Enter an ID to delete: 2
Your current inventory is now
ID, Title, Artist Name
[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: |
```

---

*Figure 1Spider Screenshot showing deletion works*

```
"I:\Portfolio Management\Advisor
The Magic CD Inventory

[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: l

[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: l

ID, Title, Artist
1, dasd, asdsa
2, dasdas, dsas
[l] Load Inventory from file
[a] Add CD
[i] Display Current Inventory
[d] Delete CD from Inventory
[s] Save Inventory to file
[x] exit
```

Figure 2Spide screenshot showing loading function works

```
[s] Save Inventory to file
[x] exit
l, a, i, d, s or x: a

Enter an ID: 1
Enter the CD's Title: song
Enter the Artist's Name: singer
[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: a

Enter an ID: 2
Enter the CD's Title: Pop
Enter the Artist's Name: singer2
[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: d

Your current inventory is...
ID, Title, Artist Name
1, song, singer
2, Pop, singer2
Enter an ID to delete: 1
Your current inventory is now
ID, Title, Artist Name
2, Pop, singer2
[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: d

Your current inventory is...
ID, Title, Artist Name
2, Pop, singer2
Enter an ID to delete: 2
Your current inventory is now
ID, Title, Artist Name
[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:
```

*Figure 3 Works in terminal*

## Summary

In this assignment/module, I learned the following:

1. Dictionary keys can be any type that can't be changed
2. Loading data from a txt file
3. Deleting data using "del"
4. Understanding Github.
5. How to use dictionary to hold 2 dimensional data.
6. Adding, removing, appending, sorting data in a dictionary.

## References

<https://youtu.be/uaHH-o83OvQ>

<https://www.geeksforgeeks.org/file-handling-python/>

## Appendix

Github link: [https://github.com/tianxie812/Assignment\\_05](https://github.com/tianxie812/Assignment_05)

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