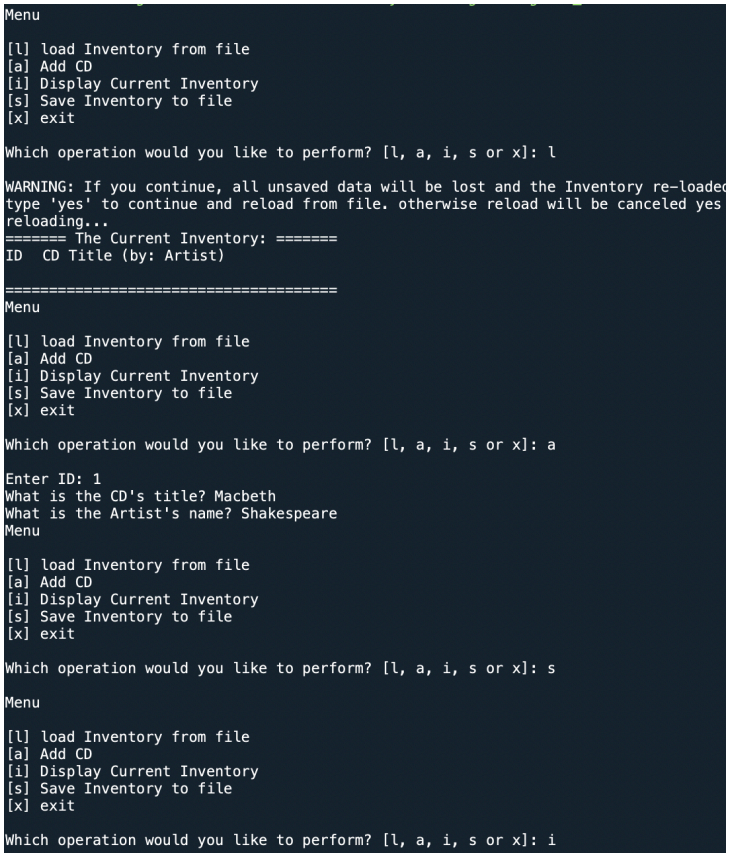
Name - Harshita Singh
Date - 1st Dec'22
Course name - IT FDN 110 B Au 22: Foundations Of Programming: Python
Assignment 08

Introduction

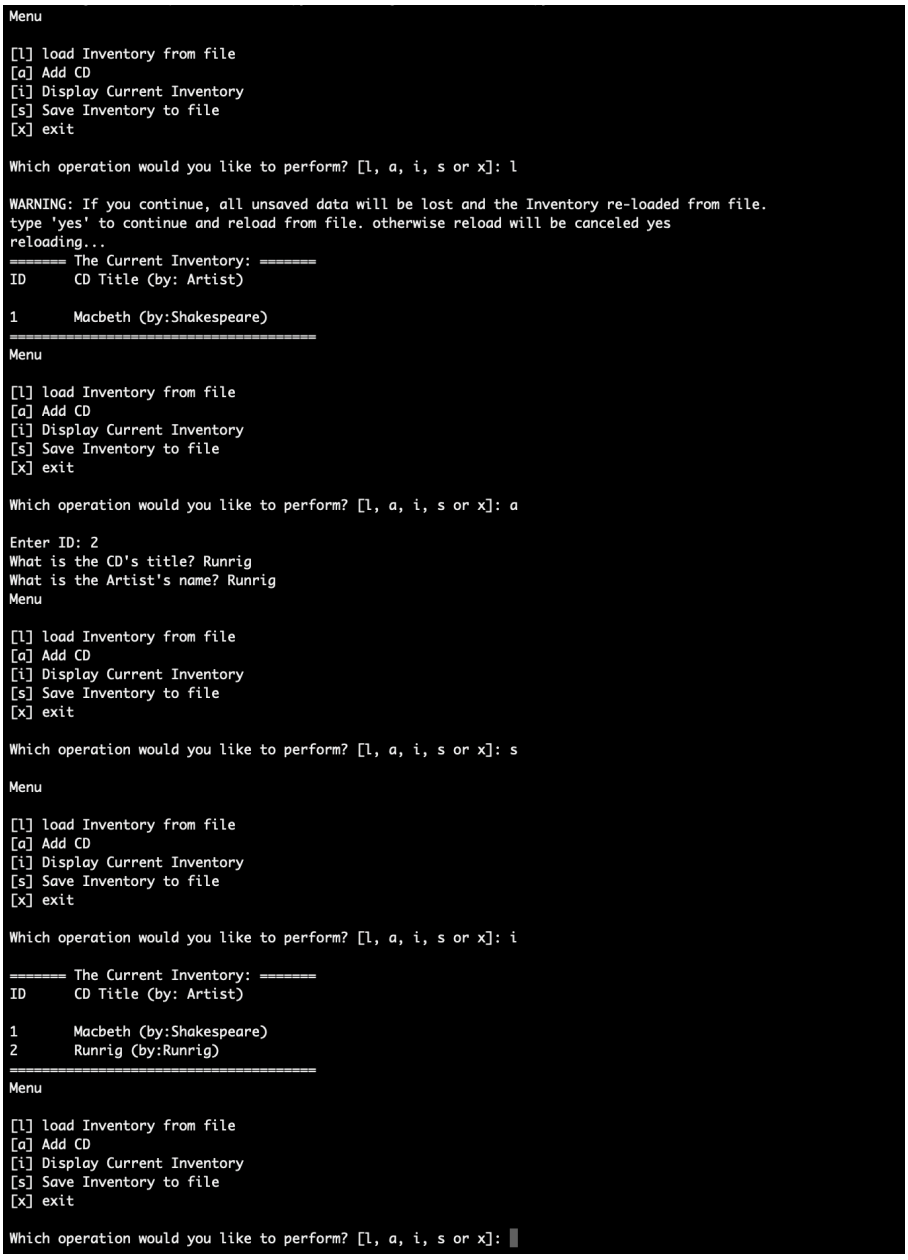
This module is about introduction to the concept of OOP. It explains us about how to create classes and attributes/methods. We will be learning about how to define constructors, how to initialize the class attributes, destructors. We will be covering the important concepts of property and method. How can we make a variable as private vs public and accessing/setting these properties via getters and setters. Afterwards, we will be covering the static methods and decorators in this module.

Assignment 08

Spyder



Terminal



In this exercise we are working with a user menu that includes 4 options as described in the screenshot above. I have defined three classes here:

CD class that store the atrributes/properties(cd_id, cd_title and cd_artist). Then I have defined a constructor to initialize these properties. I have created a __str__ function to display the data in the rewired format.

FileIO class to work with the file and the list of lists. It contains the functions to save the data from file to the list and vice-versa to maintain the current file inventory and load the current inventory from file into the list of lists.

IO class for the Presentation to ask for user_input, give menu options to user etc.

If the user enters ‘l’, we load the existing data from file into the list of lists. We are basically initializing our list of lists from the inventory data in the file.
If the user enters ‘a’, the user is asked to enter values for ID, CD Title and Artist Name. Then we append these values first by storing as a tuple in a list and then to the list of lists.

If the user enters ‘i’, we display the current data from the inventory file to the user.
If the user enters ’s’, this means we are saving the data/inventory to the file.
If the user enters ‘x’, this means he is exiting from the program and comes out of the loop.

Summary

In this module I learnt about the classes, how to define the properties and the corresponding methods/functions to work with these attributes. I learnt about how to work with private and public variables, accessing the different types of variables from outside the class, using objects.

```
Choose from the following options in the Menu:
1 = Add CD
2 = Display Current Inventory
3 = Save Inventory to file
4 = Exit
Enter an input: 1
Enter an id: 3
Enter the CD Title: Bad
Enter the Artist Name: Michael Jackson
===========================
Choose from the following options in the Menu:
1 = Add CD
2 = Display Current Inventory
3 = Save Inventory to file
4 = Exit
Enter an input: 2
 ID  | CD Title           | Artist Name        |

 1   | The Big Wheel      | Runrig             |

 3   | Bad                | Michael Jackson    |
===========================
Choose from the following options in the Menu:
1 = Add CD
2 = Display Current Inventory
3 = Save Inventory to file
4 = Exit
Enter an input: 3
Writing contents to the file
===========================
Choose from the following options in the Menu:
1 = Add CD
2 = Display Current Inventory
3 = Save Inventory to file
4 = Exit
Enter an input: 4
```