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Foundations of Programming (Python)

Assignment 08

CD Inventory: OOP

Introduction

This week’s module formally introduced us to Object Oriented Programming (OOP). Using this new way of structing, I modified last weeks CD Inventory to include classes, fields, methods, structured error handling, etc.

Concepts and Tools Used

Object Oriented Programming provides structure within programs. It is centered around the concept of an object that has a basic blueprint, called classes, that contains data and functionality of the object. The data created in these classes are called fields and are defined the same way as variables. After these fields are defined, constructors are added. The constructor, a type of method, used in this program is the “\_\_init\_\_” method that contains arguments, the first being ‘self.’ Further, attributes can be added as variables that hold specific data that can be controlled by ‘getter’ and ‘setter.’ I understood the basic idea of objects and their purpose, but the details were a bit confusing for me and took awhile to input into this week’s CD Inventory. I hope that using this kind of structuring becomes easier as I use OOP more.

Final Code: CD\_Inventory

For this program, I added a new class, class CD, that incorporated OOP by having fields, constructors, and methods. Then, I modified last week’s functions (from the FIleProcessor class that was renamed FileIO for this week), and included the code that let the user add, save, view, and load CD Inventory.

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***Figure 2: CD\_Inventory script lines 52-83***

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***Figure 3: CD\_Inventory script lines 85-122***

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Description automatically generated***Figure 4: CD\_Inventory script lines 124-177***

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***Figure 6: CD\_Inventory script lines 230-276***

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***Figure 7: CD\_Inventory run in Spyder displaying saving and loading***