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Foundations of Programming, Python

Assignment 07

CD Inventory Python Script-3

# Introduction

Module 07 focused on working with file, including write, read (readlines function) and append mode. Then, we learned the structured error handling, ways to read / write text files as well as binary files. In this assignment, we also started using the concept of pickling and unpickling. Pickling is a tool used for serializing a de-serializing a python object structure such as a list, Boolean, integers, floating points, tuples, dictionaries. When pickling a python object is converted into a byte stream to store it in a file. Database, maintain program state across sessions, or transport data over the network.

Here, we modified the last week’s assignment, add the structured error heading in user interaction parts, and store data in binary form.

# Modify the CD Inventory Program

1. Modify log information of **CDInventory.py** (in Assignment 06) and save it to a new script, **CDInventory.py**, in folder **Assignment07.**

Text

Description automatically generated

Figure 1 – Information and log of CDInventory.py

1. Declare the variables that used in this script and import the pickle module.

Text

Description automatically generated

Figure 2 – Variables of CDInventory.py

1. On this assignment, the purpose of the assignment was to implement handling exceptions to manage the possibility of errors and add more clarification to the code specially when interacting with user.
   1. Heading error of delete\_inventory, check the ID number.

Text

Description automatically generated

Figure 3 – Heading error of delete\_inventory function of CDInventory.py

* 1. Check the value error of save\_inventory function

Text

Description automatically generated

Figure 4 – ValueError of CDInventory.py

* 1. Check the FileNotFoundError of read\_file function. Here, I also change the data saving form as binary instead of txt.

Text

Description automatically generated

Figure 5 – Heading FileNotFoundError of CDInventory.py

* 1. Heading exception for valid or invalid choices in menu\_choices function.

Text

Description automatically generated

Figure 6 –ValueError of CDInventory.py

* 1. Check the Id of userinput function is a positive integer number or not.

Text

Description automatically generated

Figure 7 –ValueError of CDInventory.py

1. Save the script.

# Spyder Test

1. Ran the code, test invalid option

Text

Description automatically generated

Figure 8-1 – Test result 1 (Spyder) of CDInventory.py

1. Ran the code, option l, test No file found.

Text

Description automatically generated

Figure 8-2 – Test result 2 (Spyder) of CDInventory.py

1. Option A, add new data with invalid ID.

Text

Description automatically generated

Figure 8-3 – Test result 3 (Spyder) of CDInventory.py

1. Option D, delete temporary data, use the invalid ID.

Graphical user interface, text

Description automatically generated

Figure 8-4 – Test result 4 (Spyder) of CDInventory.py

1. Option S, save and not to save the file as binary data

Text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Figure 8-5 – Test result 5 (Spyder) of CDInventory.py

1. Option x, exist the program.

# Terminal Test

1. Ran the code, test invalid option

Text

Description automatically generated with medium confidence

Figure 9-1 – Test result 1 (Terminal) of CDInventory.py

1. Ran the code, option l, test No file found.

Text

Description automatically generated

Figure 9-2 – Test result 2 (Terminal) of CDInventory.py

1. Option A, add new data with invalid ID.

Text

Description automatically generated

Figure 9-3 – Test result 3 (Terminal) of CDInventory.py

1. Option I, display current inventory

Text

Description automatically generated

Figure 9-4 – Test result 4 (Terminal) of CDInventory.py

1. Option D, delete temporary data, use the invalid ID.

Text, letter

Description automatically generated

Figure 9-5 – Test result 5 (Terminal) of CDInventory.py

1. Option S, Saved the text file, and not save option, invalid option

Text

Description automatically generated

Text, letter

Description automatically generated

Text, letter

Description automatically generated

Figure 9-6 – Test result 6 (Spyder) of CDInventory.py

1. Option x, exist the program.

# GitHub

I created a new repository “Assignment\_07”. Upload my knowledge document (Assignment\_07.docx) ,python script(CDInventory.py).

# My GitHub page link is <https://github.com/guangsil/Assignment_07>

Graphical user interface, text, application, email

Description automatically generated

Figure 10 –GitHub Page

# Summary

Assignment 07 was definitely more challenging. Learning pickling and unpickling to write and read files proven to be very useful. Learning tries except really opened a ton of opportunity to explore and really dive into UI development