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IT FDN 110 A

Assignment 09

<github link>

Modules and Main Program

# Introduction

This document will discuss how to recursively display an option menu for the user to navigate. The user will be able to repeatedly show the current data, add new data, and save data to a text file. The programming example in this document introduces a new concept of creating our own class objects. This concept is fundamental to python programming and will allow the programmer to vastly expand their capabilities.

# Problem Statement

The goal of this program is to load data, work with data, and save the data to a file. The data to handle will be class objects. The program must first read in data from the text file ‘products.txt’. Then the program must recursively print a menu of options to the user. From the displayed menu, the user selects an option then the program performs the selected operation. The user can select from the following three options. One, show the current data. Two, add product and price data as objects. Three, save the data to a file which also exits the program. The menu system is recursively printed to the screen after each menu option execution. Only when option three is selected will the program stop executing.

# Data

# Processing

## Read Data

## Save Data

## Add Data

# Input/Output

## Print Menu

## Input Menu Choice

## Input Yes No Choice

## Print Current Data

# Main Body of Script

## Load and Display Menu

## Menu Option 1 – Show Current Data

## Menu Option 2 – Add Product and Price

## Menu Option 3 – Save Data to File and Exit

## Invalid Option

# Code Testing

The code was tested both in the PyCharm environment and the Command Window (CMD). See the respective sections for example of code execution.

## PyCharm

The PyCharm execution of ‘Assignment08.py’ is shown in Figure 15. The text file ‘products.txt’ before and after code execution are shown in Figure 16. Note the data read into and out of the program are saved in products.txt, I renamed the files products\_before.txt and products\_afterPyCharm.txt for comparison purposes only.

## Command Window

The Command Window execution of ‘Assignment08.py’ is shown in Figure 17. The text file ‘products.txt’ before and after code execution are shown in Figure 18. Note the data read into and out of the program are saved in products.txt, I renamed the files products\_before.txt and products\_afterCMD.txt for comparison purposes only.

# Summary

In this document an example of how to recursively display an option menu for the user to navigate was discussed. First the problem statement of the example was discussed. The remainder of the document explained each of the concerns addressed. The creation of a class and two objects were introduced in this example as well. Finally code execution examples within PyCharm and the Windows OS command window were given. With the addition of the skills gained from this exercise a newer python programmer can gain greater control over their code flow and make more complex programs.