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IT FDN 110A

Assignment 8

<https://github.com/Timhitc/IntroToProg-Python-Mod08>

# Documenting Assignment Eight

## Introduction

Object oriented programing is a way to program using blocks, called objects. Using classes as a starting point to begin working with objects is the goal of assignment eight. Object oriented programming allows for better scaling and easier modification.

## Classes and Objects

I created a program to manage a list of products and their prices using classes. I started with the class “Product”. I defined the initialization of the object with 2 properties, name and price. I chose to make these private values and created setters for both name and price. I included some basic checks to make sure that name does not start with a number and that price is a number.

Once the data is defined I started on the File Processor class. Defining the reading and writing of the test file. I did some research and decided to rely on a list of objects as well as the Product objects themselves. I identified globals() from <https://www.delftstack.com/howto/python/python-dynamic-variable-name/> . I am able to read in the data and create a Product object for each item, and I create a list of the product names for indexing purposes. Writing the objects to file requires stepping through the list and referencing using each name to reference the objects to be written.

I composed some basic IO methods for displaying the menu, displaying the products, and getting user input. The more advanced IO was for adding a product and removing a product. I use the same structure as in assignment07, but created a new product with the product name and added the product name to the list. Deleting the product identifies if the product name is in the list and then removes it from the list and deletes the object. This created the most difficulty until I realized I could use the row value rather then trying to make the user input match the casing in the object name.

The main code was to call the functions I had defined, and to provide the logic for the menu navigation.

## Summary

Classes provide a way to organize your programing so that the flow is easy to see and understand. Objects provide you with flexibility and scalability. As you use them together programs stay simple enough to understand.