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Foundations of Programming: Python
Assignment 06
https://github.com/rlbergh/IntroToProg-Python-Mod06

Assignment 06

Introduction

I can certainly see how functions can be useful in larger programs. If I relate it to using Tableau, it's almost like nesting calculated fields in other calculated fields. It makes repeat usage easier and the code more organized. But, for someone new to Python, they are tricky and I imagine if I encountered someone's code with a lot of functions in it, it would be challenging at first to decipher what it was doing.

File organization

Assignment06.py

```
import json

# Define the Data Constants
MENU: str = '''...'''
FILE_NAME: str = "Enrollments.json"
EXIT_MSG: str = '''...'''
# Define the variables
menu_choice: str = ''
students: list = []


2 usages
class FileProcessor:...


10 usages
class IO:...


# MAIN CONTENT
# read data from file
FileProcessor.read_data_from_file(FILE_NAME, students)

# Present and Process the data
while (True):
    IO.output_menu(MENU)
    menu_choice = IO.input_menu_choice('Make a menu selection: ')

    # Input user data
    if menu_choice == "1":  # This will not work if it is an integer!
        IO.input_student_data(students)
        continue
    # Present the current data
    elif menu_choice == "2":
        IO.output_student_courses(students)
        continue
    # Save the data to a file
    elif menu_choice == "3":
        FileProcessor.write_data_to_file(FILE_NAME, students)
        continue
    # Stop the loop
    elif menu_choice == "4":
        print(EXIT_MSG)
```

Figure 1: PyCharm lets you collapse sections of code.

One of the things I really like about PyCharm is the ability to collapse certain sections of code. That came in handy this week as we added functions and classes to our programs. Collapsing those sections (Figure 1) helped keep the code nice and tidy and easy to follow.

Some trial, little error

As I was creating my code this week, and nesting sections of the starter file into functions, I didn't really test it as I went, unlike previous weeks. It paid off, too. I had very few issues once I felt my code was finished and only needed to go back to fix one or two things in one of the functions. It was nice to run my program for the first time without any issues. The fixes only came with I was testing the error handling.

I realized when I created a "while" loop in my "input_student_data" function (to be able to continuously ask for the first name and last name if there was a specific error), the part of the code that asked for the input again was "unreachable." After shuffling some things around and taking out the "raise" line, I was able to accomplish what I wanted.

Summary

This week I learned quite a bit about function syntax and how to properly call functions using parameters. I think I need to dig deeper into standards or guidelines on naming those parameters so that I don't confuse those with variables.