Keily Gleason-Chapell

March 3, 2025

IT FDN 110 A Wi 25: Foundations Of Programming: Python

Assignment06

Functions

Introduction

In this Module, we learned how to create functions in a script. This is pretty much the same assignment as the previous one, but instead of writing the code that executes the steps in the while loop, the code that executes the steps is written into functions before the while loop and the called out in the while loop.

Variables

There are both global and local variables in this script, and we start off with the following line in order to import the json library.

```
import json
```

Global Variables

The global variables in this script are :

```
MENU: str = ('---- Course Registration Program ----'
             'Select from the following menu:)  '
             '1. Register a Student for a Course'
             '2. Show current data  '
             '3. Save data to a file'
             '4. Exit the program'
             '-------------------------------------')
FILE_NAME: str = 'Enrollments.json'
students: list = []
menu_choice: str
```

These are variables that exist outside of the functions but can be called by and modified in the functions.

Processing the .json File

The first two functions are to read from and write to the .json file. Both functions have two local variables that should be a string of the file name and a list of the student data in the

.json file. There are also two error-handling for if there is no text in the .json file and that there is a .json file.

Class IO functions

There are five functions written in this section. The output_error_message function generates a custom error message for the user. The output_menu function displays the menu options, while the input_menu_choice processes the menu choice from the user. The output_student_courses displays the current student enrollment data. The input_student_data function takes in the student enrollment data with some error handling incase the user inputs a number in the student name.

The If-Else Statements

The if-else statements are the portion of the code where the user inputs the student names and course names in, one at a time, checks the input, adds the input to a .json file, and then shuts down the program.

First Choice

In this If-statement, the code uses both the input_student_data and the output_student_courses to register a student for a course.

Second Choice

In this if-else statement, the code uses the output_student_courses function to display the current student data.

Third Choice

In this if-else statement, the code uses the write_data_to_file function to save the data to the file.

Fourth Choice

This else-if statement ends the program.

Summary

In this module, we learned how to write functions that could be used in a while loop and if-else statements in the code.