**Assignment 5 – Python Registration Script**

**Introduction**

This week, I learned how to create a program that utilizes lists and files to register students, display the information in a two-dimensional table, and save the data to a CSV file. The information below breaks down the steps of how I was able to create this program.

**Creating the Program**

Setting Constant Variables

There are many ways to use Python to create this project. These are the steps that I followed to achieve my result.

My first goal was to set constant variables in Python. The list of constant variables was already provided in the assignment, which made the process easier. Like last time, I declared constants that contained characters to a string and the “students” variable to a list. However, I declared student\_data to a dictionary and added “{}” brackets as the directions instructed **(Figure 1.1)**.

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**Figure 1.1**: Setting constant functions and allocating them to either a string, list, or dict type.

Displaying the Menu

Similarly to the last assignment, I created the MENU, set it as a string, printed it, and then used an input function to ask the user which choice they’d like to select from the menu **(Figure 1.2)**.

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**Figure 1.2**: Added a menu to display choices and used an input function to help the user make a selection.

Creating the Two-Dimensional Table

The easiest way to create this table was to utilize the print function. I decided to define the print\_student function. Similar to what I did last time, I created code that would print “No students registered yet” if the user had not entered any students. Otherwise, it would display a table with the students’ names that were inputted. I was able to do so with the print function and using \t to add tab spacing between the columns. Lastly, I used the f function to print each data point with tuples signifying which data point to use (first, last, or course name) **(Figure 1.3).**

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**Figure 1.3:** Using the print, f, and \t functions to create a two-dimensional table.

Changing the Menu

There were no changes made to the menu options aside from Menu 2. This menu was intended to display a two-dimensional table with all the students’ first, last, and course names. I decided to add the print function we had defined before and it was as easy as that **(Figure 1.4).**

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**Figure 1.4**: Using the print\_students function from earlier to display the two-dimensional table.

**Summary**

In this project, I successfully created a Python registration script that allowed a user to enter an unlimited amount of students’ first, last, and course names; display them in the program in a two-dimensional table; and save them in a CSV file. I employed key programming elements such as the print, f, and \t functions to achieve this outcome. I, then, tested my program in both the terminal and PyCharm to ensure that it works **(Figure 1.5, Figure 1.6).**

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**Figure 1.6:** An image of the Python Registration Script in PyCharm.

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**Figure 1.7:** The code successfully working in Terminal.