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IT FDN 110 A Wi 24: Foundations Of Programming: Python

Assignment 05

https://github.com/kaliecmiller/IntroToProg-Python-Mod05.git

Module 5: Advanced Collections and Error Handling

Introduction

In this module, I updated the code to collect the data from the user and dump it into a json file when saving. I also added in error handling for a few of the functions.

Topic 1

Below shows the figure for the code I wrote for this week's assignment, where i added in the error handing:


```python
# Input user data
if menu_choice == "1":  # This will not work if it is an integer!
    try:
        student_first_name = input("Enter the student's first name: ")
        if not student_first_name.isalpha():
            raise ValueError("Error! Please check that there are no numbers written in the first name.")
    except ValueError as e:
        print(e)
    try:
        student_last_name = input("Enter the student's last name: ")
        if not student_last_name.isalpha():
            raise ValueError("Error! Please check that there are no numbers written in the last name.")
    except ValueError as e:
        print(e)
    course_name = input("Please enter the name of the course: ")
        # student_data = ['student_first_name', 'student_last_name', 'course_name']
    row = {"First Name": student_first_name, "Last Name": student_last_name, "Course Name": course_name}
    table.append(row)
    print(f"You have registered {student_first_name} {student_last_name} for {course_name}.")
    continue

    # Save the data to a file
    elif menu_choice == "3":
        try:
            file = open(FILE_NAME, "w")
        except FileNotFoundError as e:
            if file.closed == False:
                file.close ()
            print("File must exist before running the file.")
        except Exception as e:
            if file.closed == False:
                file.close()
            print("There was a non-specific error.")
        json.dump(table, file)
        file.close()
    elif menu_choice == "4":
        break  # out of the loop
    else:
        print("Please only choose option 1, 2, or 3")
print("Program Ended")
```

Figure 1 Error Handling Screenshots

Figure 2 shows the code being run in the Terminal. It also shows the code giving the error when numbers are written in a person's first or last name. The code worked in PyCharm as well.

```
[kaliemiller@Kalies-MacBook-Air Assignment % python3 Assignment05_Miller_Kalie.py

---- 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.
------------------------------------------

What would you like to do: 1
Enter the student's first name: Teddy
Enter the student's last name: Miller
Please enter the name of the course: Course
You have registered Teddy Miller for Course.

---- 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.
------------------------------------------

What would you like to do: 2
{'First Name': 'Kalie', 'Last Name': 'Miller', 'Course Name': 'Python 100'}
Kalie Miller Python 100
{'First Name': 'Teddy', 'Last Name': 'Miller', 'Course Name': 'Course'}
Teddy Miller Course

---- 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.
------------------------------------------

What would you like to do: 1
Enter the student's first name: Tedd5
Error! Please check that there are no numbers written in the first name.
Enter the student's last name: 6
Error! Please check that there are no numbers written in the last name.
Please enter the name of the course: course
```

Figure 2 Mac Terminal Code

Summary

This week I learned a lot about dictionaries and json files, as well as error handling. The error handling seems to be something that will come in handy for most programs being built and is important to always include in the code.