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Course: IT FDN 110A Foundation of Programming (Python)

Assignment: Module06

## Functions and Classes

**Introduction:** based on the previous assignment to practice the usage of function and classes in the Python programming and it's significantly improve the readability and organize the code in clean manner.

**Step1:** define all the global Constants and Variables. Since we use Class and function, much less variables needs to define globally.

**Step2:** two classes are generated in this assignment, File processor is for opening the json file and either read or write. Another is IO processor, to handle all the input, output, print out and the error message from File processor.

**Step3:** Once using the classes, the main body of program would be much much cleaner, only 10lines of code would complete the task.

**Task Result:** attached a figure to show my code runs successfully both on Spyder (the IDE I used).

```

In [163]: runfile('C:/Users/radio/Documents/Python/PythonCourse/
Module06/Assignment06.py', wdir='C:/Users/radio/Documents/Python/
PythonCourse/Module06')

---- 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.
-----
Please Select:1
1
Please Enter Student's First Name: 12
Please Enter Student's Last Name: Vu
User Entered invalid information!
Please Enter Student's First Name: Mark
Please Enter Student's Last Name: 12
User Entered invalid information!
Please Enter Student's First Name: Ethan
Please Enter Student's Last Name: H
Please Enter Course Name: Python101

---- 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.
-----
Please Select:5
5
Please enter between 1~4

---- 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.
-----
Please Select:a
Please enter between 1~4

---- 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.
-----
Please Select:2
Bob Smith is registered for course Python101
Sue Jones is registered for course Python101
Vu Vic is registered for course Python201
Charlie M is registered for course Python301
Ryan B is registered for course Python101
Ethan H is registered for course Python101
Press "Enter" to continue...

---- 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.
-----
Please Select:3
Your Info is registered in the system

---- 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.
-----
Please Select:4
4

```

*Figure1: running my code under Spyder*

**Summary:** My sharing of completing this assignment is thinking of when and where that we would need the function and classes in our code. For instant, we wrote the input function to constrain user has to choose 1~4 from our menu. If we would like to keep the same structure but apply different menu (and that menu may have 5 or more options), then we can consider that scenario and give a variable assign to the function then the function could react differently according to that variable. Which I think it's the better structure of generating these functions and classes.

**GitHub Link:**

<https://github.com/ShandyML/Intro2Prog-Python-Mod06>