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GitHub: <https://github.com/tuzik1/IntroToProg-Python-Mod07>

Assignment 7 – Classes

Introduction

The purpose of this article is to cover the steps that were taken in developing Assignment07.py, which demonstrates the ability to collect data from files, use dictionaries and lists, save data to files, and implement advanced error handling techniques. This assignment also implemented extensive use of functions and assigned them as methods to classes as part of an overarching effort to maintain what is considered standard code formatting techniques. Lastly, this assignment builds on assignment 06 by introducing the concept of sub classes and class inheritance.

Creating the Program

The assignment provided as a starter file with some code for us to work from, but with the incorporation of functions (methods) and classes, this starter file was largely reorganized and modified.

The first step was to outline the contents of the file – where are the constants defined, where are the variables defined, where are the classes and functions listed, and where is the main body of the program.

Using the guide in the assignment document, modifications were made to the starter code to incorporate a class hierarchy.

Adding Code to the Outline

The focus of the assignment was the addition of the 'Student' class as a subclass to the 'Person' class. This involved writing methods which call the super class, added getters and setters for the data being passed to the 'Student' class, and adding overrides for the methods. Additional modifications had to be made throughout the code to account for these changes, such as adjustments to how the 'FileProcessor' methods wrote and read data to and from the JSON file. To clean up the code, error handling messages were added and document strings were included for all methods to describe the tasks.

Summary

In this assignment we applied a hierarchy to our class structure by adding the concept of super and sub classes to our program. While it didn't make the current code much cleaner, it allows for the possibility of adding other sub classes in the future (for example, a person who is not a student).