

Aaron Acklen

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Foundations of Programming, Python

Assignment 07

<https://github.com/SeattleAaron/IntroToProg-Python-Mod06>

## Repeating Labs Examples

### Introduction

For this week's module assignment, I expanded last week's program by incorporating examples of class inheritance, utilizing getters and setters, and storing data as a list of objects. While working through this week's lab, it wasn't easy to grasp what the new code was doing when it was added to the existing code base. However, after reviewing external sources and working through the labs a second time to complete the assessment, the concepts this week started to make more sense.

### Inheritance

There are two examples of inheritance in this week's assignment. The first is the `Student()` class, inheriting `first_name` and `last_name` from the `Person()` class. This `Person` is made the superclass of `Student` by passing the name of the class to `Student`, `Student(Person)`, and using the `super` function to call the constructor of the superclass, `super.first_name` and `super.last_name`. The second example was overriding the `__str__`, magic method. The default string output is the object's memory address, and we can change it by overriding the inherited method.

### Getters & Setters

I spent a while debugging the setter I applied to the `course_name`. I had limited the `course_name` to < 12 characters, but when I tested it, I was able to exceed the limit. I eventually determined that I had not created the instance correctly in the `input_student_data()` method in the `IO()` class. After reviewing Lab 2, I was able to resolve the problem.

### List of Objects

I also had to go back to Lab 1 to review how to convert JSON data into a list of objects and then reverse the process to save the data back to JSON. We achieved it by using a temporary list of dictionaries to store the data before using the list to create objects.

### Summary

Overall, this week, I gained a better understanding of the behavior of my classes. Additionally, I played with Django and found it a little easier to understand compared to the last time I tried to use the framework.