**Assignment 7 – Python Registration Script**

**Introduction**

This week, I learned how to create a program that utilizes classes and functions to register students, display the information, and save the data to a JSON file. The information below breaks down the steps of how I was able to create this program.

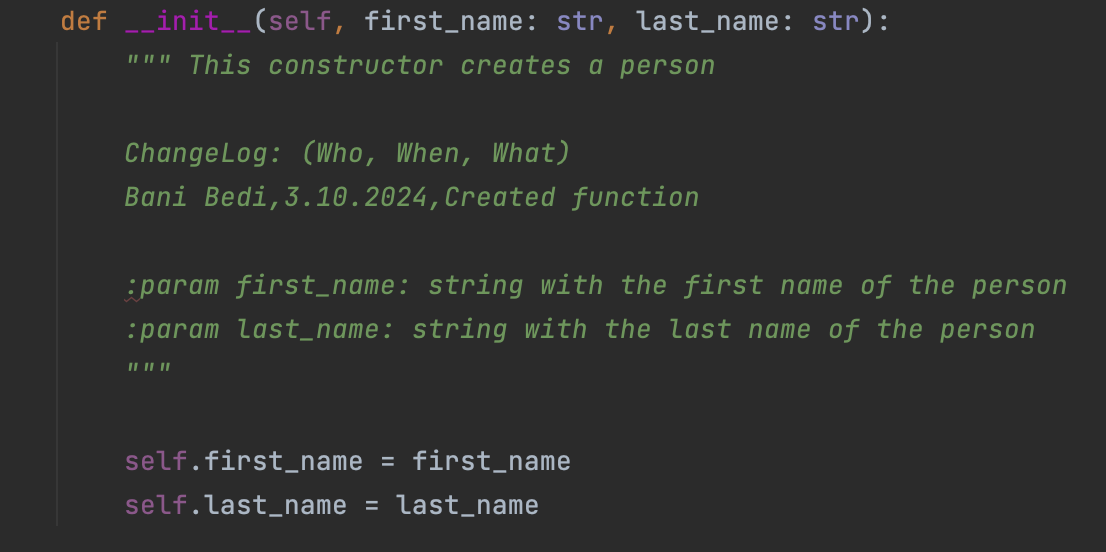
**Creating the Program**

Creating classes

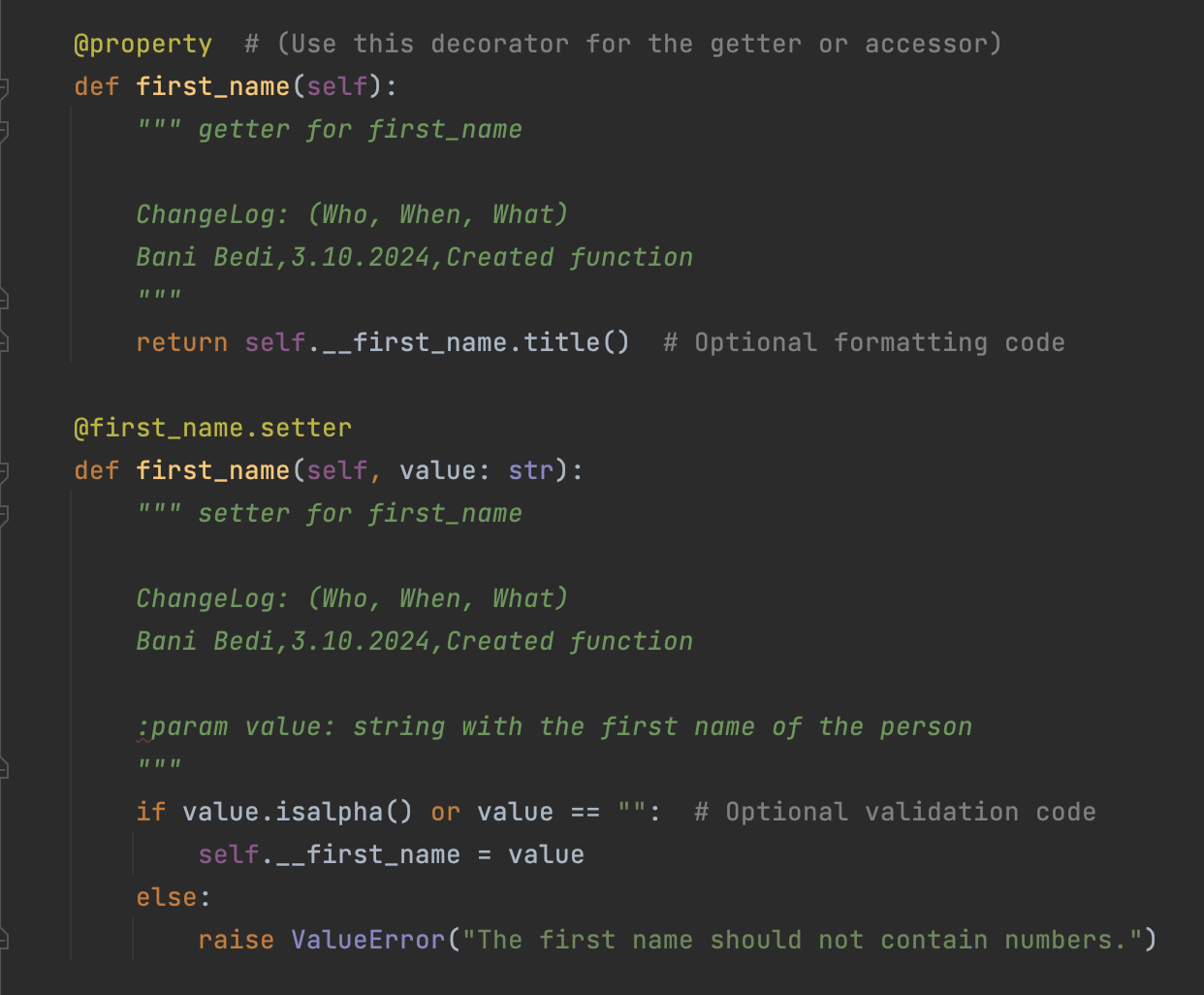
This assignment was taking my existing program and adding two new classes the Person class and the Student class.

Person Class

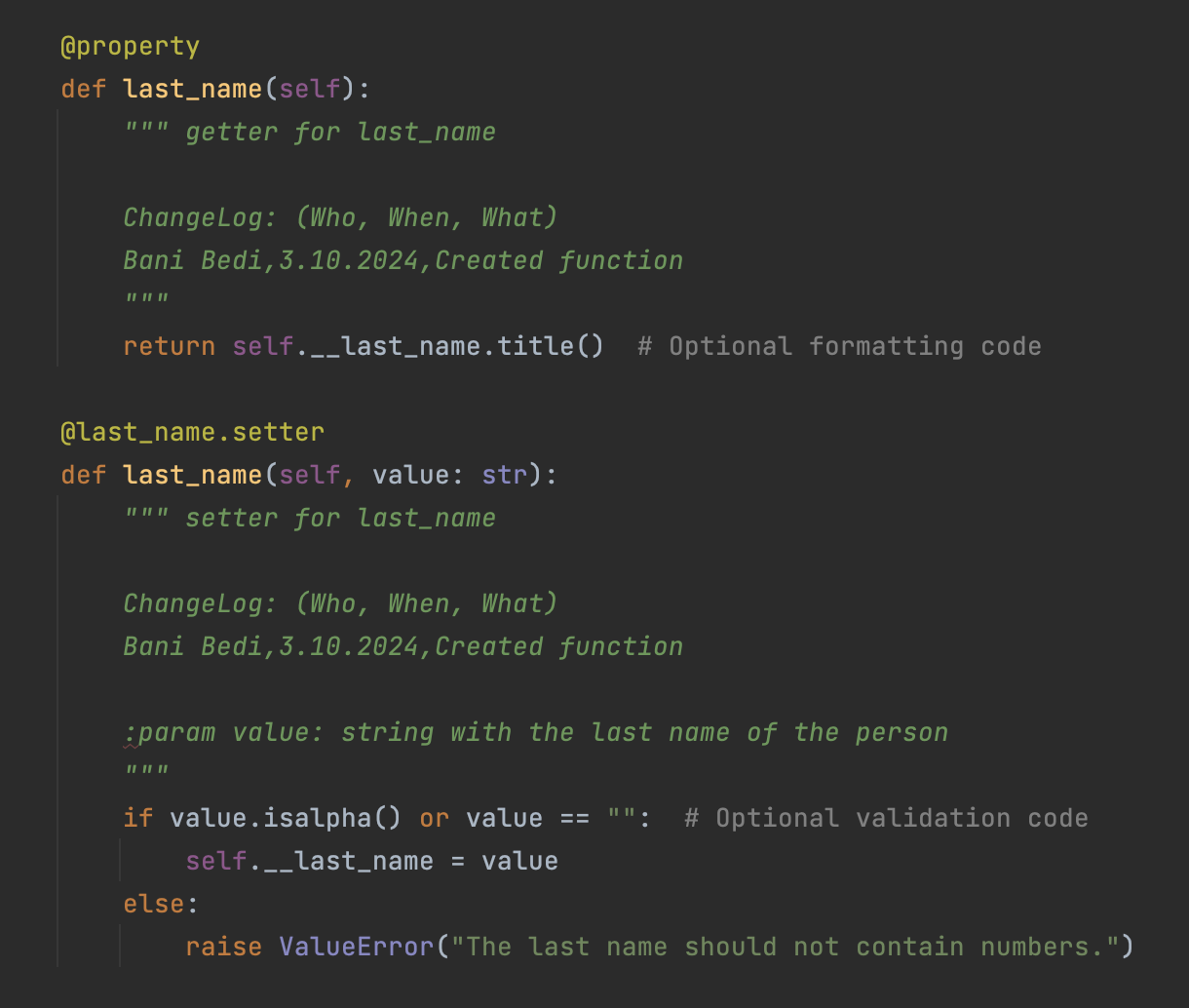
The first goal was to create the Person class that is responsible for representing a person who has a first\_name and a last\_name. These includes the following functions: constructor, first\_name getter and setter, last\_name getter and setter, and a \_\_str\_\_ override function **(Figure 1.1, 1.2, 1.3, 1.4)**.



**Figure 1.1**: Added Person constructor.



**Figure 1.2**: Added first\_name getter / setter.



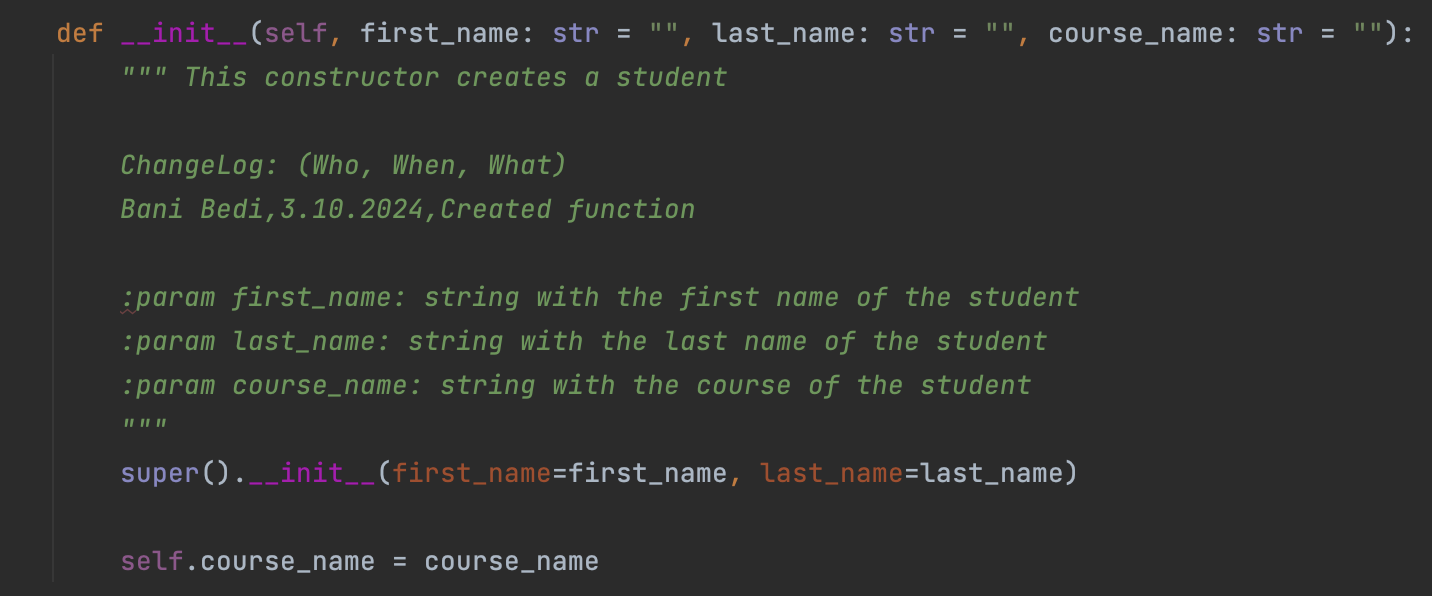
**Figure 1.3**: Added last\_name getter / setter.



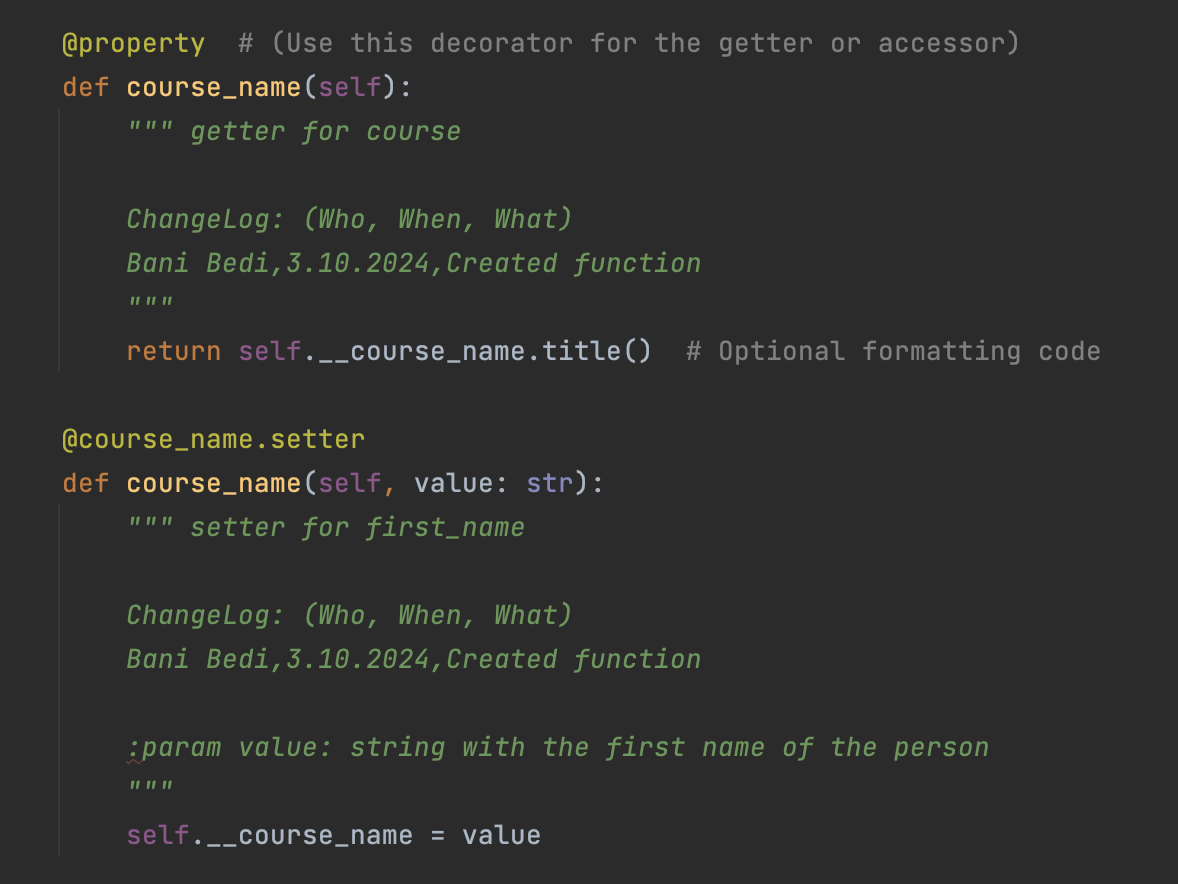
**Figure 1.4**: Added \_\_str\_\_ override.

Student Class

The second goal was to create the Student class that inherited from Person was for representing a student including course\_name. These includes the following functions constructor, course\_name getter / setter and \_\_str\_\_ override **(Figures 1.5, 1.6, 1.7)**. I also had to update the read\_data\_from\_file, write\_data\_to\_file and input\_student\_data functions to deal with Student objects (**Figures 1.8, 1.9, 1.10**).

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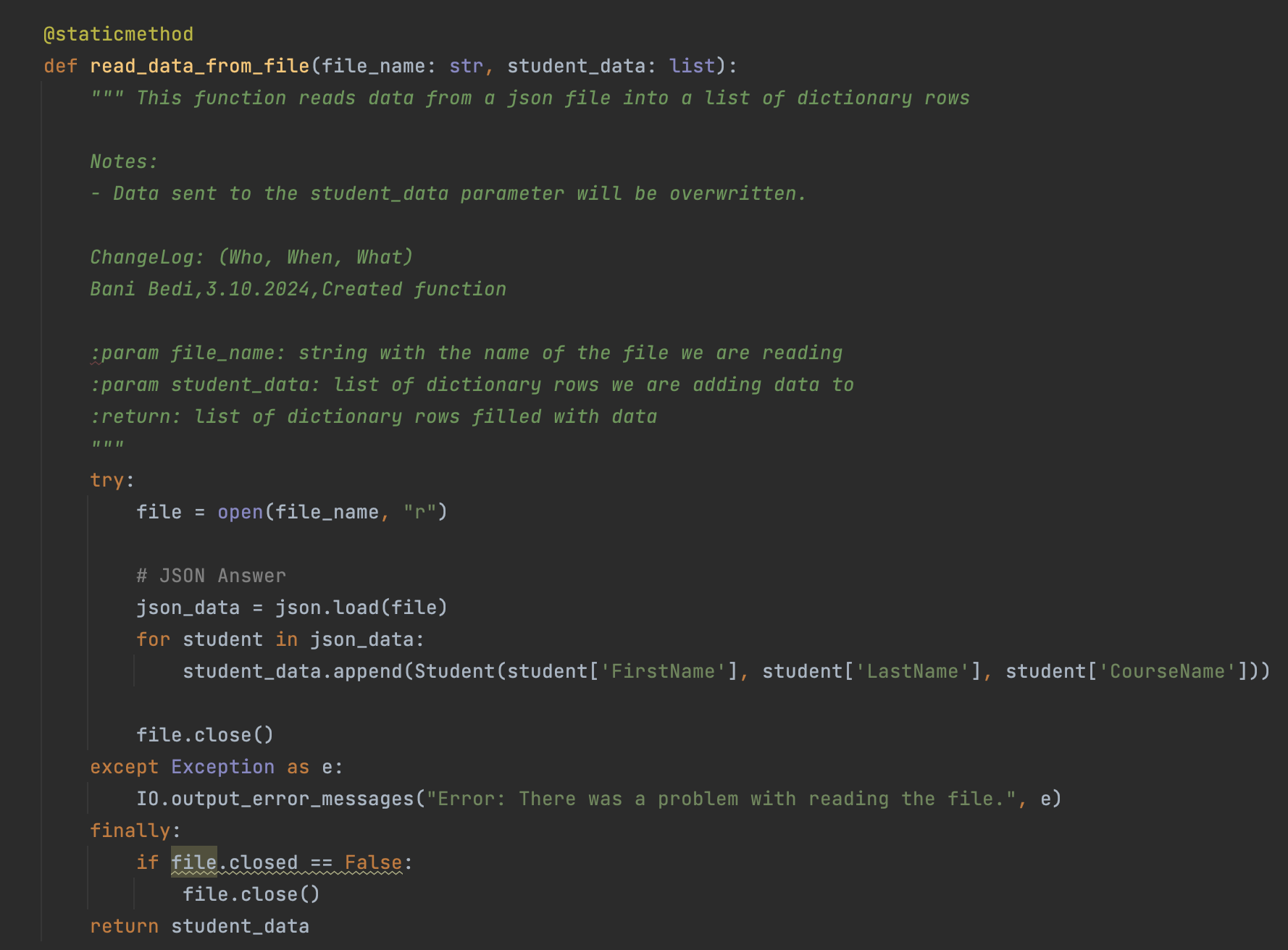
**Figure 1.5**: Added Student constructor.



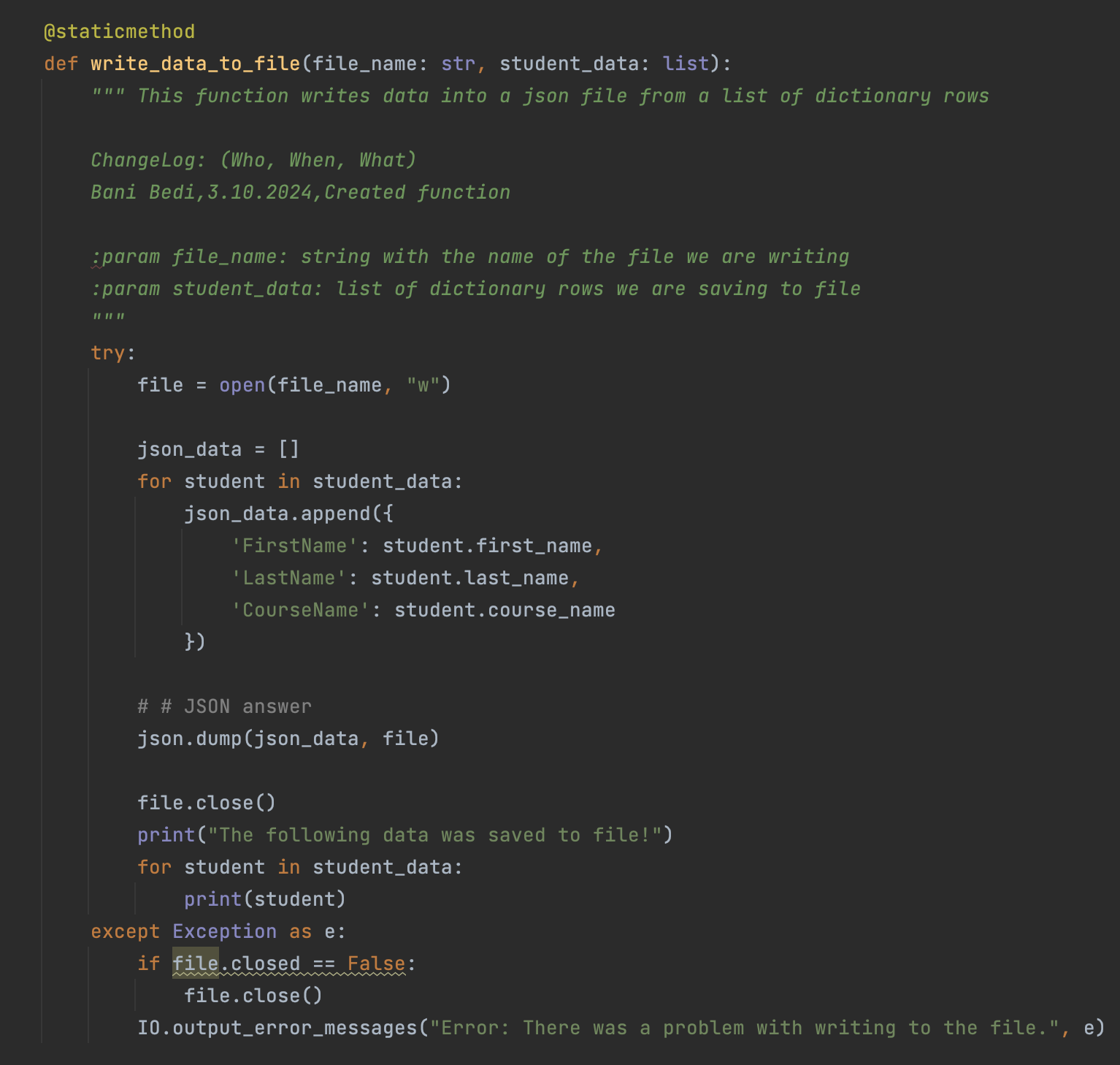
**Figure 1.6**: Added Student course\_name getter / setter.



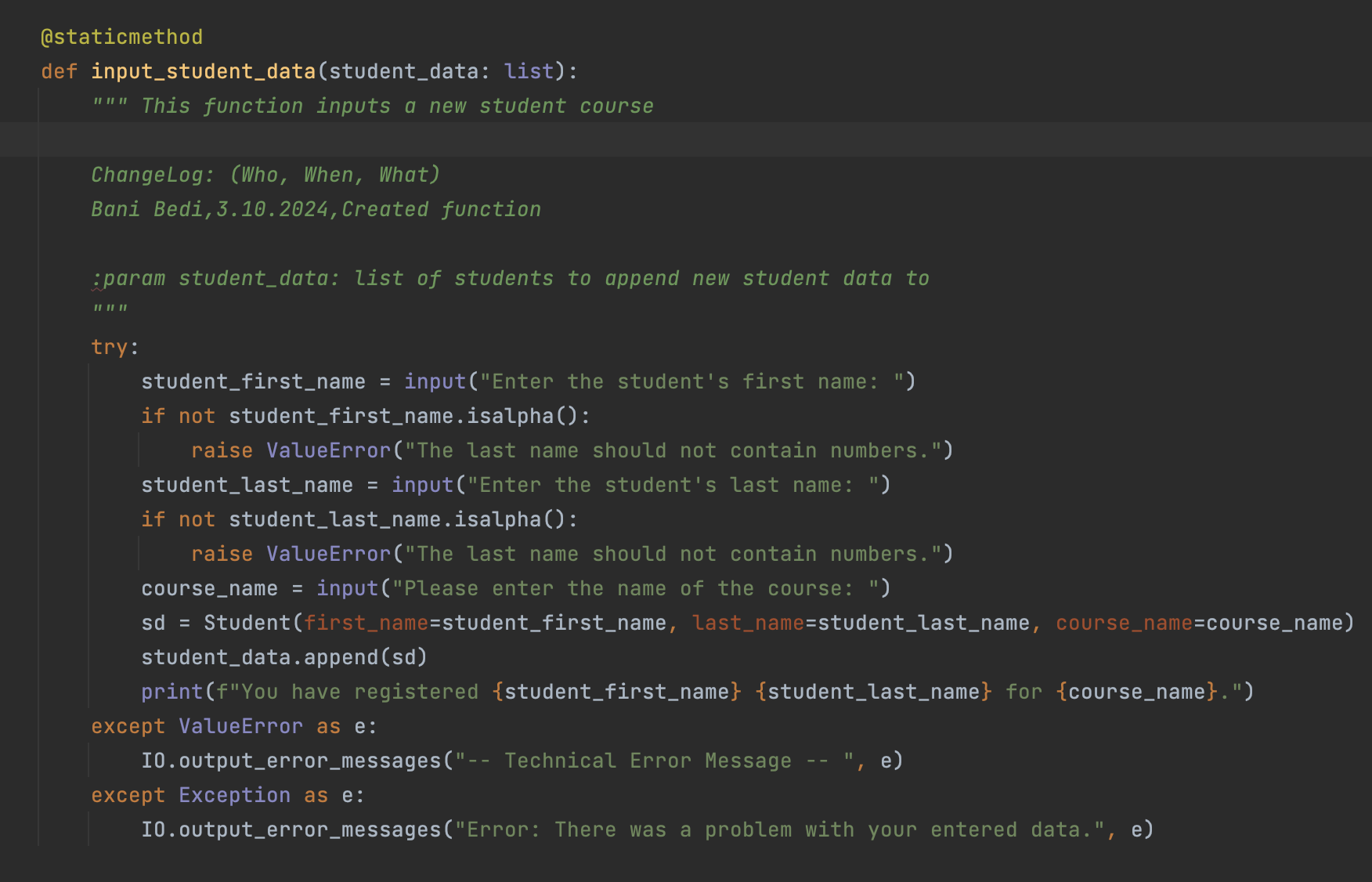
**Figure 1.7**: Added \_\_str\_\_ override function to Student Class



**Figure 1.8**: Updated read\_data\_from\_file function to use Student Class



**Figure 1.9**: Updated write\_data\_to\_file function to use Student Class



**Figure 1.10**: Updated input\_student\_data function to use Student Class

**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; and save them in a JSON file. I employed key programming elements such as classes and functions to achieve this outcome. I, then, tested my program in both the terminal and PyCharm to ensure that it works **(Figure 1.11, Figure 1.12).**

A computer screen shot of a program

Description automatically generated A screenshot of a computer program

Description automatically generated

**Figure 1.11:** An image of the Python Registration Script in PyCharm.

A computer screen shot of a computer program

Description automatically generated A screen shot of a computer program

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**Figure 1.12:** The code successfully working in Terminal.