

Team Members

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Initial Decisions

We decided to use Python and are using Visual Studio Code as our environment.

Notes on selected internal structure:

- We decided to use an array to store our data for each student and teacher.
- We created a Student class in which each line of data in the list.txt file is stored in an organized Student object and a Teacher class in which each line of teacher.txt is stored.
- We used an array to hold the students with each element containing a unique student object and applied a similar technique to each teacher.

Task Log

- 0.5 hours (Both): Review the previous lab and brainstorm methods for solving the problem posed by this assignment.
- 3 hours (Amanda): Create the teacher object and manipulate/create helper functions to accommodate both the teacher class and the student class.
- 1 hour (Daniel): Write-up and formatting.
- 2 hours (Daniel): Begin implementing test cases and finding bugs. Finish test suite and cover all test cases. We found minor errors with quick solutions.

Total time: 6.5 hours

Testing Notes

Since we were able to reuse test cases from our last lab, we only had to tackle requirements NR1-NR5, so the test cases did not take long to create. Additionally, we did not run into any major problems when integrated our program from Part I to Part II, so our test cases did not cause too much trouble. The main issues rose with the relationship analytics, ensuring we had a useful command to show the relationship between a threshold GPA and desired student characteristics.

Final Notes

Overall, this assignment went over smoothly and we were able to deliver a solid program to accomplish all of the requirements. One note is that our argument parsing ignores the “optional” portion of the command, and only looks for the first letter to be significant. Based on how the specifications are laid out, we found this implementation to be most practical. We had to take certain attributes from the Student class and mix it with the Teacher class, each taking from the different input text files. Similarly, the helper functions that accessed different information now requires access from either the teacher or the student class or both. We decided that for our analytic functionality of our program, we would allow the user to use the “Relationship” command to see the relationship between students below a threshold GPA and see each student’s grade, teacher, or bus route to find common characteristics between struggling students.