<u>Team Members</u>
Nicholas Lu

<u>Initial Decisions</u>
Developed the program using Python with Visual Studio Code (VS Code) as the development environment.

<u>Notes</u>
I used a list of dictionaries to store student data and keys like StLastName, StFirstName, Grade, Classroom, Bus, GPA, TLastName, and TFirstName to organize each student's information in a way that made it easy to search, filter, and display relevant data for the different commands in the program. I also used lists to store filtered results, such as identifying all students within a specific grade or assigned to a particular bus route. Finally, for the I[nfo] command, I used a dictionary to count the number of students in each grade.

<u>Task Log</u>
- **Parse students.txt** (Read and validated the file, handled missing or improperly formatted date) Done By Nicholas for 30 minutes.
- **Implement S[tudent] Command** (Supported both S: <lastname> and S: <lastname> B) Done by Nicholas for 1 hour.
- **Implement T[eacher] Command** (Handled filtering by teacher's last name and listing assigned students) Done by Nicholas for 30 minutes.
- **Implement G[rade] Command** (Included listing students in a grade and finding highest/lowest GPA) Done by Nicholas for 1 hour.
- **Implement B[us] Command** (Added functionality to filter students by bus route) Done by Nicholas for 30 minutes.
- **Implement A[verage] Command** (Calculated average GPA for students in a specific grade) Done by Nicholas for 30 minutes.
- **Implement I[nfo] Command** (Computed and displayed the count of students in each grade) Done by Nicholas for 30 minutes.

<u>Testing</u>
I performed the testing using a predefined test suite (tests.txt) that included both valid commands and edge cases after I implemented all the commands. The testing session lasted approximately 40 minutes.

Here are the bugs I found during testing:

1. **Case Sensitivity Issue**: There was an issue with capitalization for matching last names. I fixed this by converting all inputs to lowercase, which took about 10 minutes to fix.
2. **Empty Input Handling**: The program crashed when an empty command was entered. I added a validation check to handle empty input, taking about 10 minutes to fix.
3. **Incorrect Output for Edge Cases**: Commands with no matching results displayed incorrect messages. I fixed this by adding default outputs, which took 20 minutes.