

Credit Name: CSE 2120 Data Structures 1**Assignment Name: CourseGrades Mastery Project**

Describe the errors you've encountered while working on this assignment. What caused the error and how do you overcome the error?

The biggest issue with the CourseGrades project was handling out-of-bounds exceptions when calculating averages for a student or test. If a user entered a student or test number that didn't exist (e.g., student 13 or test 6), the program would crash. This happened because I didn't validate the indices before accessing the two-dimensional array. I added input validation to ensure the indices were within range before proceeding with calculations.

```
// Method to calculate the average grade for a specific student
public double studentAvg(int studentNumber) {
    if (studentNumber < 1 || studentNumber > grades.length) {
        throw new IllegalArgumentException("Invalid student number.");
    }

    int studentIndex = studentNumber - 1;
    int total = 0;

    for (int score : grades[studentIndex]) {
        total += score;
    }

    return (double) total / grades[studentIndex].length;
}
```