PROG 2100 FINAL PROJECT

STUDENT INFORMATION SYSTEM

Assignment Value: 40% of overall the course mark.

Due Date: **29th Nov (**See due date designated on the assignment on D2L.)
Late submissions will receive the standard late submission penalty as stated in the course outline. (5% overall deduction per day late)

Assignment Instructions:

Use IDE to create applications (c++ files) in which you'll code the solution for the given problem.

Submissions:

You will submit your work for this assignment via GitHub. A GitHub Repo should include all required C++ files along with console output. **You must upload the solution to the public GitHub repo.**

Evaluation:

To ensure the greatest chance of success on this assignment, be sure to check the marking rubric contained at the end of this document or in D2L. The rubric contains the criteria your instructor will be assessing when marking your assignment.

Final Project: Student Information System

Requirements: -

A program that stores information about the students in a class and enables users to manipulate the data regarding each student. The program has the following features:

1. Each student in the class has these attributes:
   - Last name
   - First name
   - Student number
   - Grade for midterm #1
   - Grade for midterm #2
   - Grade for final
2. Prints the list of all students in the class on the screen.
3. Print the list of students in alphabetical order of their last names (If two or more students have the same last names, the program will sort based on their first names)
4. Enables the user to add more students to the list.
5. Calculate the letter grades of all students based on the following rule:
   - A: For an average higher than 90%
   - B: For an average between 80%-90%
   - C: For an average between 70%-80%
   - D: For an average between 60%-70%
   - F: For an average below 60%
6. Print the data of a specific student.
7. Remove a particular student from the list.
8. Delete all student data.
9. Users can set the percentage that each of the midterm and final grades contribute to the average grade of students (By default there is 25% for midterm #1, 25% for midterm #2, and 50% for the final grade)

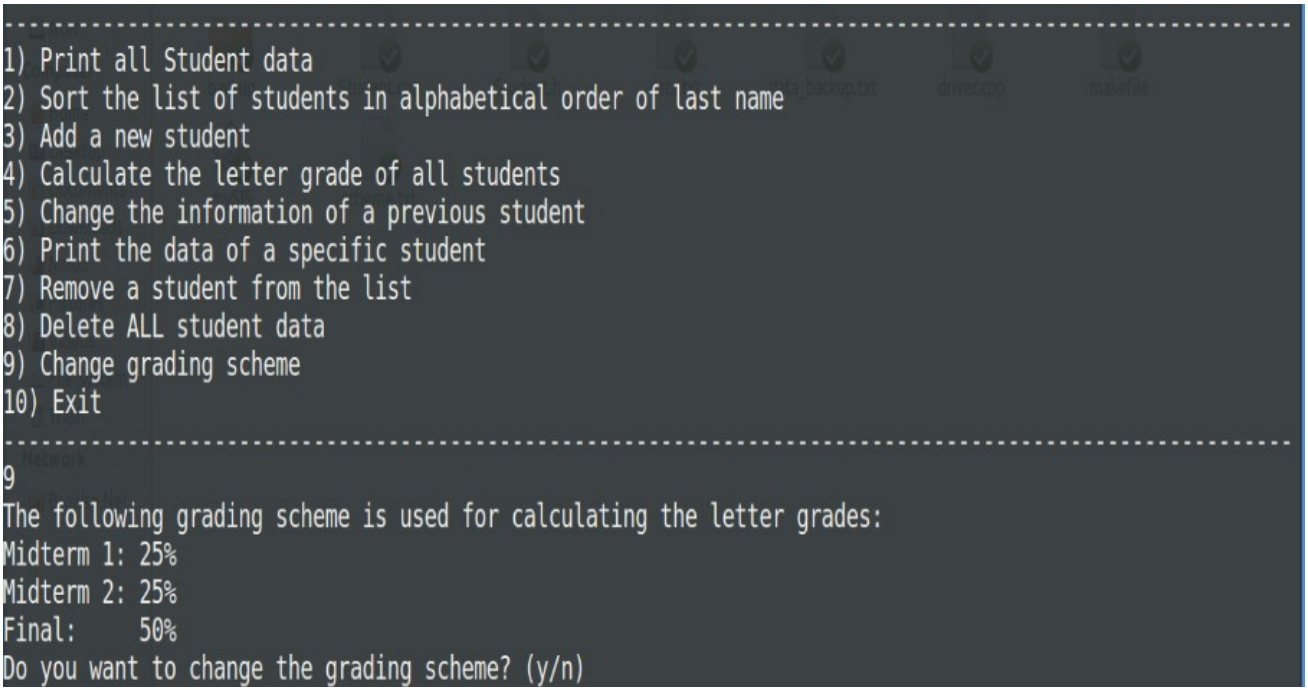
Your solution must contain examples demonstrating your understanding of the appropriate use of C++ language concepts.

Submission: -

As part of this final project, please follow the below checklist while submitting.

- Source Code on GitHub
- Screen Recording to explain the system workflow.
- Presentation to explain your solution.

Screen Shots



Program 1 – Student Information System

Criteria	Insufficient (0 pts)	Needs Development (3-5 pts)	Sufficient (7 pts)	Excellent (10 pts)	Mark
Submissions: GitHub Source Code & Screen Recording	• Little to no effort was made or contains too many errors/omissions.	• A reasonable effort was made, but there are multiple areas for improvement.	• A good effort was made, but at least one error or omission exists.	• An extended effort was made, and go beyond the mentioned requirement.	
In-code Documentation & Code Quality	• Little to no effort was made or contains too many errors/omissions.	• A reasonable effort was made, but there are multiple areas for improvement.	• A good effort was made, but at least one error or omission exists.	• An extended effort was made and go beyond expectations. Also demonstrated a strong understanding of the in-code documentation and code quality.	
System Design & Solution: Dynamic Input/Output, Fulfill all the mentioned requirement	• Little to no effort was made or contains too many errors/omissions.	• A reasonable effort was made, but there are multiple areas for improvement.	• A good effort was made, but at least one error or omission exists.	• An extended effort was made and go beyond the mentioned requirement. Also demonstrated a strong understanding of the solution design.	
C++ Language Concepts: Variables, Datatypes, Logic control statements, Arrays, OOPS, Functions, Structs, Pointers, File I/O, and a lot.	• Little to no effort was made or contains too many errors/omissions.	• A reasonable effort was made, but there are multiple areas for improvement.	• A good effort was made, but at least one error or omission exists.	• An extended effort was made and demonstrated a strong understanding of the C++ Language concepts.	
				Total:	**/40**

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