

# Student Record Management System

Due Date: April 16<sup>th</sup>, 2023, 11:59PM

**Description:** In this project, you will create a console application that manages student records. The application will allow users to add new students, display all students, search for students by name or ID, delete students, and display summary statistics. The student records will be stored in a text file.

**Project Requirements:** Create a class named "Student" with the following properties:

- a. Name (string)
- b. ID (int)
- c. GPA (double)

Create a console application that contains the following functionality:

- a. Load data from the text file when the application starts.
- b. Display a menu with the following options:
  - i. Add new student
  - ii. Display all students
  - iii. Search student
  - iv. Delete student
  - v. Display summary
  - vi. Exit
- c. Implement each menu option as follows:
  - i. Add new student: prompt the user for the student's name, ID, and GPA, create a new Student object with these properties, and add the object to a list of students
  - ii. Display all students: display a list of all the students in the list
  - iii. Search student: prompt the user to choose whether to search by ID or name, then prompt the user for the search term. If the search term matches any students, display the matching students; otherwise, display a message indicating that no matching students were found.
  - iv. Delete student: prompt the user for the student's ID, find the student with that ID in the list, and remove the student from the list. If no matching student is found, display a message indicating that no matching student was found.
  - v. Display summary: display the total number of students, the highest GPA, and the lowest GPA.

- vi. Exit: save the list of students to the text file and exit the application.
- d. Save the list of students to the text file when the application exits.

### **Project Deliverables:**

1. Please zip the entire folder that you created.
2. A documentation discussing about the functionality of various menu options, how the application works, any error that you encountered while implementing it. The entire document needs to be of minimum 5 pages and maximum 10 pages.

**Good Luck with your project.**