

Project Summary

Problem Statement

You are hired as a contractor to help a university migrate an existing student system to a new platform using C++ language. Since the application already exists, its requirements exist as well, and they are outlined in the next section. You are responsible for implementing the part of the system based on these requirements. A list of data is provided as part of these requirements. This part of the system is responsible for reading and manipulating the provided data.

Detail Requirement

The program must write to containing two classes (i.e., Student and Roster). The program will maintain a current roster of students within a given course. Student data for the program include student ID, first name, last name, email address, age, an array of the number of days to complete each course, and degree program. This information can be found in the “studentData Table” below. The program will read a list of five students and use function calls to manipulate data. While parsing the list of data, the program should create student objects. The entire student list will be stored in one array of students called classRosterArray. The specific data-related output will be directed to the console.

Programing Environment

Window 10/11, Microsoft Visual Studio Community 2022 (64-bit)
Version 17.0.4

Libraries Used

No Other 3rd Party Libraries Used

Result

The application is broken down into 6 files, 3 headers, and 3 .cpp files. Demonstrate the classic Setter and Getter methods, switch statement, enumeration, custom object class, constructor, and destructor techniques.

```
Microsoft Visual Studio Debug Console
A2   First_Name: Suzan      Last_Name: Erickson    Age: 19 daysInCourse: {50,30,40}    Degree Program: NETWORK
A3   First_Name: Jack       Last_Name: Napoli     Age: 19 daysInCourse: {20,40,33}    Degree Program: SOFTWARE
A4   First_Name: Erin       Last_Name: Black      Age: 22 daysInCourse: {50,58,40}    Degree Program: SECURITY
A5   First_Name: Louis      Last_Name: Wong       Age: 29 daysInCourse: {10,15,10}    Degree Program: SOFTWARE
John1989@gmail.com
Erickson_1990@gmail.com
The_lawyer99yahoo.com
Avg. Days in Course: 35
Avg. Days in Course: 40
Avg. Days in Course: 31
Avg. Days in Course: 49.3333
Avg. Days in Course: 11.6667
A3   First_Name: Jack       Last_Name: Napoli     Age: 19 daysInCourse: {20,40,33}    Degree Program: SOFTWARE
A5   First_Name: Louis      Last_Name: Wong       Age: 29 daysInCourse: {10,15,10}    Degree Program: SOFTWARE
A3 Student Removed!
A1   First_Name: John       Last_Name: Smith      Age: 20 daysInCourse: {30,35,40}    Degree Program: SECURITY
A2   First_Name: Suzan      Last_Name: Erickson    Age: 19 daysInCourse: {50,30,40}    Degree Program: NETWORK
A4   First_Name: Erin       Last_Name: Black      Age: 22 daysInCourse: {50,58,40}    Degree Program: SECURITY
A5   First_Name: Louis      Last_Name: Wong       Age: 29 daysInCourse: {10,15,10}    Degree Program: SOFTWARE
Error: A3 Student Not Found.
Object Roster Destructed.
Object Student Destructed.
Object Student Destructed.
Object Student Destructed.
Object Student Destructed.
Object Student Destructed.
C:\Users\Louis\source\repos\C867_Project_Louis_Wong\Debug\C867_Project_Louis_Wong.exe (process 30880) exited with code 0
Press any key to close this window . . .
```

Project Link and Source Code

Command Line Application in C++:

<https://github.com/GiggleSamurai/Object-Oriented-Classes-Application-in-raw-C-.git>

NOTICE: The URL links are **not** clickable from GitHub pdf rendering, please download the pdf to click on the links. You can also access the project from the directory folder of this document. Both data set and project are contained in this folder.