Homework 5, 1 Extra Credit *(Due: Jun 06)*
C++ PROGRAMMING - COSC 2321

Department of Computer Science and Electrical Engineering

Summer Session I, 2022

Exercises
*Create a **New Project** for every exercise. Take a screenshot of the source code along with its output and place the **source code** and the **screenshot** in a **zipped folder** named **LastNameFirstName_HW5***

Exercise 1

Given the following **struct/database** ask user to enter major and GPA. If, for example, the user enters, **Computer Science** and **3.0** your algorithm should print all **students/records** whose major is Computer Science with a GPA of equal to or above 3.0. If the user enters nothing for major your algorithm should display **all students**, irrespective of their major, whose GPA is equal or above 3.0

Note 1: You can use the *getline(cin, major);* where major is declared as: *string major;*

Note 2: You can download the source of the struct from Files->SourceCode->Lec10->struct.cpp

```cpp
15    int main()
16    {
17        const int SIZE = 8;
18        Student St[SIZE] = { { 10, 3.37, "Computer Science" },
19                             { 13, 3.41, "Electrical Engineering" },
20                             { 15, 2.39, "Biological Sciences" },
21                             { 11, 3.43, "Mechanical Engineering" },
22                             { 9, 1.93, "Computer Science" },
23                             { 8, 3.88, "Computer Science" },
24                             { 12, 1.89, "Computer Science" },
25                             { 14, 2.24, "Mechanical Engineering" } };
```

Exercise 2

Similarly to Ex. 1, the results from the query should be **stored** into a **dynamically allocated** struct. **Sort** the results using the sorting algorithm as shown in:

sorting structure

If the user enters 1, sort the **dynamically allocated** struct by ID; if the user enters 2, sort by GPA; if the user enters 3, sort by major

Note: Submit through **Canvas**