

Lab 9 (Due: Jun 03)

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_Lab9**

Exercise 1

Outside of **main**, define a **struct array** of **Students** of **SIZE 3**. The three members of the struct array are: **int HWgrades[3]**, **double HWaverage**, and **int ID**. Ask the user to enter three HW grades and compute the average HW grade. Enter the ID of the student, too. Enter values into your struct array using only a **pointer**; use the same **pointer** to read values from the struct array and print

Exercise 2

Outside of **main**, define a *Student* **struct** with two members, an *ID* and a *GPA*. In **main**, create an **array of structures** of size 3. Pass structure and its size to **myFunction**. In **myFunction** find the highest GPA and return the address of the *Student* (struct) to **main**. In **main**, print the **ID** and the **GPA** of the student with the highest GPA

Note: The size of the struct array should be defined as a **const int**

Exercise 3

Similarly to Ex. 2, create a **dynamically allocated array of structs**. The size of the struct array should be given by the user at **run-time**

Note: As in Ex. 2, you have to use **myFunction** and print the *Student* struct with the highest GPA from **main**

Note: Submit through **Canvas**