# Lab 2 (*Due: May 19*) 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\_Lab2** 

#### Exercise 1

Create an **int array** of size 5. The size of the array should be defined as a **preprocessor directive**. Ask user to enter values into the array. Print contents of array

#### Exercise 2

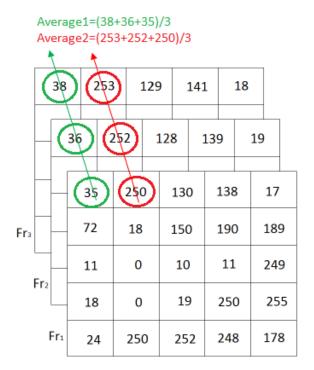
Similarly to Ex. 1 above, create now a 2D array of size  $3 \times 3$  (use **preprocessor** for the size of rows and columns). Ask user to enter values into the array. Print the contents of the array as a 2D matrix

### Exercise 3

Similarly to Ex. 2 above, create a 3D array of size [3][2][2] (z, x, y); the numbers entered should be in the range of 0...255. Find the mean value (average) of each x, y cell across the three different matrices. The resulting array will be a two-dimensional array containing the averages of the three-dimensional array (this is an example of an RGB2Gray conversion). Use **preprocessor** for the sizes of the arrays

**Note:** See next page the a plot of a 3D matrix. The mean (i.e., average) of the 3 green circles should be computed. The same goes with the 3 red circles and so on so forth resulting in a 2D array

See overleaf



Note: Submit through Canvas