

Lab 4 (Due: May 24)

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_Lab4**

Exercise 1

Use a *static* variable inside *demo* function to output 0 to 4. Use the following code in main function

```
int main()
{
    for (int i=0; i<5; i++)
        demo();
    return 0;
}
```

Exercise 2

Write a *sum* function (sums all the parameters of the function) that makes use of *default arguments*. Based on the code shown below the output of the program should be **425, 350, 80** (for the three *cout*)

Note: What should be the default arguments in order to get the afore-mentioned results?

```
int main()
{
    cout << sum(10, 15) << endl;
    cout << sum(10, 15, 25) << endl;
    cout << sum(10, 15, 25, 30) << endl;
    return 0;
}
```

Exercise 3

Write a function that returns *two results*, the **sine** and **cosine** of a number (use the **sin** and **cos** functions, respectively, as well as the appropriate header file).

Note: Make use of a *reference variable* to 'return' the cosine of a number

See overleaf

Exercise 4

In **main**, define two variables **x** and **y** of data type **int** and **double**, respectively. Ask the user to enter two numbers, an int and a double, and store them to the corresponding variable. Define two functions with the **same name**, i.e, myPower, that compute the power of a number and return the result to main. Print result from main

Note: Make use of overloaded functions

Note: Submit through **Canvas**