EECE 231 — Introduction to Programming Using C++ and MATLAB Programming Assignment 1

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Introduction

Your lab instructors will guide you on how to start your development environment and make it ready so that you can use it to write programs. Until we learn more about C++, you should consider the code below as a template to start your programs.

```
#include <iostream>
using namespace std;

int main()
{
  // write your code here
  return 0;
}
```

Shortly, the `#include <iostream>` line of code specifies that the program below will use the input output stream library to interface with the system.

The `using namespace std;` line of code specifies that the system should consider `std` (short for standard) as the current namespace. That is, the system will look for variables we use in our program in the `std` namespace.

The `main` function is the entry function of a standalone C++ program. You will write your C++ code in the context of the `main` function for the following problems. The function returns a number to the system to declare its status when done. We will return 0 to declare success for now.

Problem 1

Write a program that displays the following text:

```
************************************************************
*
*          Welcome to C++ programming
*
************************************************************
```

Problem 2

Write a program that does the following:

- Prompts the user to input 4 integers and store them in 4 variables

- Prints the contents of the 4 integer variables

- Computes their sum and stores it in a variable called *sum*

- Prints the content of the variable *sum*

- Computes the average of the 4 integers and stores it in a variable of type **double** called *average*

- Prints the content of the variable *average*

Problem 3

Write a program which asks the user to enter the elapsed time in seconds. Your program is supposed to convert the time into hours, minutes, and seconds, and display the results as in the following example.

```
Please enter elapsed time: 781
Converted time: 7:12:54
```