

Concurrent and Distributed Computing  
Tutorial 1  
CPS3227

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## Objective

The aim of this tutorial session is to be able to have a proper environment set-up for C programming and to revise the basic concepts of C programming

- a. Write a basic program that prints “Hello World” to the console

- Compile the program using “gcc”

```
gcc -Wall hello.c -o hello
```

Note: The option -Wall turns on all the most commonly-used compiler warnings.

- b. Functions

- Write a program that adds and subtracts two integers using function callback mechanisms
- The program should include the following:
  - A function that returns the addition of two arguments.
  - A function that returns the subtraction of two arguments.
  - A function that prints an integer passed to it as argument.
  - A function that takes four parameters two integers and two function pointers noted below

```
typedef void (*CallbackFunctionPrint)(int p_a);  
typedef int (*CallbackFunctionOP)(int p_a, int p_b);
```

- c. Using Header files

- Write a program that stores and manages a student record
- The program should include the following:
  - A function that creates a student record.
  - A function that updates a student record.
  - A function that converts to string.
  - The type definition for student should consist of the age, id, length and name.