**TD N°1 : Introduction to Algorithmic / Algorithmic's Syntax and Semantics**

**Part I : Sequential algorithms**

**Exercise 01:**

## Write an algorithm to display the Hello message on the  screen.

**Exercise 02:**

Write an algorithm that allows the entrance of two numbers and the display of their product.

**Part II : Decision-making Algorithms**

**Exercise 03:**

## Write an algorithm that allows to display whether an integer entered on the keyboard is Odd or Even.

**Exercise 04:**

## Write an algorithm  that allows the display of the largest of  three integers entered on the keyboard.

**Exercise 05:**

## Write an algorithm  that asks the user for two numbers  M  and N and then informs him if the product of these two numbers is positive or negative. The case where the product can be null is included in the program.

## Exercise 06:

## A store offers to its customers 15% off on the purchase amounts over 2000 DA. Write an algorithm that allows to enter the total price excluding VAT and to calculate the amount including VAT taking into account the discount and that VAT = 20%.

**Exercise 07:**

Write an algorithm to display months in letters according to the number entered on the keyboard. (If the user types 1 the program displays January, if 2 displays  February, if 3 displays March, and so on...)

**Part III : Loops**

**Exercise 08:**

- Write an algorithm that calculates the  sum    S = 1 + 2 + 3 + ... + 10, using the While loop.

- Do the same using the For loop.

**Exercise 09:**

- Write an algorithm that calculates the sum  S = 1 + 2 + 3 + ... + N, where N is entered  by the user, using the While loop.

- Do the same using the For loop.

**Exercise 10:**

Write an algorithm that displays the factorial of an integer entered by the user.

**Part IV :**

**Exercise 11:**

Write an algorithm  that allows the calculation of the greatest common divisor (GCD) between two integers entered by the user.     For example:      M= 15    et    N=10     GCD (15 , 10) =  5

**Exercise 12:**

Write an algorithm that allows you to enter an integer N and display the triangle of stars. for example  N = 4

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