

TP 4: Control instructions (For and While loops , if and witch instructions)

Exercise.1

Write a program that calculates the factorial of a number once with the For loop and then with the while loop

Exercise.2

Write a program that finds the roots of a second-degree equation denoted by

$$ax^2 + bx + c = 0.$$

Exercise 3: Calculate the value of y

$$y = \begin{cases} \exp(x) + \sin(x) & ; \quad x < 1 \\ x^2 - \ln(x) & ; \quad x \geq 1 \end{cases}$$

Exercise .4:

While loop or the for loop. Write a program in Matlab for

- Calculer la somme : $\sum_{K=1}^N K = 1 + 2 + 3 + \dots + N$
- Calculer la factorielle de N $N! = 1 * 2 * 3 * \dots * N$

Exercise 5:

Write a program in Matlab that determines:

- The max and its position in each linen
- The min and its position in each column

Exercise 6

Write a program in Matlab language that displays the message "Number" 10 times. (use the for and while loop)

Exercise 7

Write a program in Matlab language that displays the first 10 integers. (use the for and while loop).

Exercise 8

Write a program in Matlab language that displays the first 10 integers with a message. (use for and while loop) .

Exercise 9

Write a program in Matlab language that calculates and displays the sum of the first 20 integers. (use the for and while loop) .