TD Series N°02
Conditional treatments

Exercise 01

Write a program (in C) that asks the user for an integer *N* and buys whether the number *N* is even or odd according to its parity.

Exercise 02

1. Write a program (in C) to display the absolute value of the difference between two real numbers entered from the keyboard.

$$\begin{cases} \mid x - y \mid = x - y & si \quad x > y \\ \mid x - y \mid = -(x - y) & si \quad x < y \end{cases}$$

2. Modify your program to handle the case where x and y are equal.

Exercise 03

Write a program (in C) that asks the user to enter 5 integers and then buys the smallest of them. The program must use only 2 variables.

Exercise 04

Write a program (in C) to solve the equation **ax^2** + **bx** + c = 0, considering all special cases.

Exercise 05

Write a program (in C) that asks the user for his BAC average and buys his grade.
- Mention Très Bien for an average equal to or higher than 16
- Mention Bien for an average above or equal to 14 and below 16
- Mention Assez Bien for an average greater than or equal to 12 and less than 14
- Passable for an average greater than or equal to 10 and less than 12
- Not admitted for an average of less than 10.

Home exercises

Write a program (in C) to simulate a calculator.
Two real numbers are entered on the keyboard. According to a choice made from a menu displayed on the screen, we wish to calculate the sum or the product or the average or the minimum or the maximum of these two numbers.
The menu should appear as follows:

```
**************** MENU ******************
     1: ----------> Somme -----------------
     2: ----------> Product -----------------
     3: ----------> Average ---------------
     4: ----------> Minimum ---------------
     5: ----------> Maximum --------------
     -------------------------------------------------
```

What's your choice?