



Level: 1st year of computer science
Course: ADS1

series: TD/TP N°: 02

Academic year: 2025/2026
Chapter 2 : Variables

Exercise 1 :

Determine the error if it exists for each identifier
5TD, _3, bonne chance, TP, mathématiques, Δ, D-A,
end, TP

Exercise 2:

Give the type and result of the following expressions, in
algorithm and in C language.

- a) $5-3.*2+2$
- b) $10/5*5$
- c) $(7+6) \bmod 5$
- d) $12 \operatorname{div} 2 > 17 \bmod 5 * 2$
- e) $1380 \operatorname{div} 60 \bmod 60$
- f) $'h' > 'Q'$ and $17 > 5$
- g) $\text{not} ('h' > 'Q')$

Rewrite previous expressions in C language.

Exercise 3:

Give the values of the variables after the execution of
each instruction of this algorithm.

Algorithm Exo3

var A, B: integer

begin

A ← 7

B ← A-4

A ← A-1

B ← A+5

end

Exercise 4:

Give the values of the variables after execution.

Algorithm Exo4

var A, B: integer

begin

A ← 7

B ← 5

A ← B

B ← A

end

- Does this algorithm allow to exchange the values of A and B?
- Propose changes to exchange the values of A and B

Exercise 5:

Let's consider the following algorithm:

Algorithm Exo5

var a, b: integer

begin

a ← 7

b ← 5

a ← a * b

b ← a/b

a ← a/b

end

- What does this algorithm do?

Exercise 6: (at home) Run this algorithm:

Algorithm assignment

Variables a, b, c, x, y, z : integer

d, e, f, g : Boolean

h, i : character

begin

a ← 2

h ← 'c'

b ← 3 * a

c ← 10

i ← 'r'

d ← (b - c) = a

e ← Not d

c ← b - c - a

f ← (c ≠ 12) and (e)

y ← c

x ← b

g ← h > i

end

TP

Exercise 1:

- 1) Create a new project
- 2) Declare a variable 'x' of integer type.
- 3) Initialize x to 100
- 4) Display x in octal, decimal, hexadecimal, and as a character.
- 5) Display its square and its cube

Exercise 2:

Using the **printf** display instruction, write a program that displays the result of each expression from **Exercise 2** of the TD.

Exercise 3:

- Translate the algorithm for exercise 3 of TD in C.
- Add the instruction that displays the result.