REPUBLIQUE ALGERIENNE DEMOCRATIQUE ET POPULAIRE
MINISTERE DE L'ENSEIGNEMENT SUPERIEUR ET DE LA RECHERCHE SCIENTIFIQUE

Université de M'sila Faculté des Mathématiques et de l'Informatique Département d'informatique		جامعة المسيلة كلية الرياضيات والإعلام الآلي قسم الإعلام الآلي

Level: 1st year of computer science **Course**: ADS1	**series TD/TP N° : 03**	**Academic year:**2024/2025 **Chapter 2** : I/O

Exercise 1 : (TD)
Write an algorithm that reads the name and birth year of a person, as well as the current year. Then, it displays the age of that person.

Display example:
Name: Said
Year of birth: 2006
Current year: 2024
Hello Said, you are 18 years old.

Exercise 2: (TP)
Write a C program that converts a lowercase letter into an uppercase letter.
N. B. : the letters are ordered such that: 'A'<'B'<…<'Z'<…<'a'<'b'<…<'z'

Exercise 3: (TD/TP)
Write an algorithm and its C program to calculate the average of the ADS1 module.

Exercise 4: (TD/TP)
Write an algorithm and its C program that receives an angle in degrees, then displays this angle in grades and radians.
N. B. : rad = deg° × π/180   gr=rad × 200/ π

Exercise 5: (TP)
Write a C program that reads the time in seconds and then displays it in hours, minutes and seconds.

Exercise 6: (at home)
Write an algorithm and its C program to calculate the area and perimeter of a rectangle.

Exercise 7: (at home)
Create an algorithm and its C program to convert degrees Celsius to Fahrenheit.
N. B. : $°F = \frac{9 \times °C}{5} + 32$

Exercise 8: (at home)
Write an algorithm that reads the length in centimeters and then displays it in yards (yd), feet (ft) and inches (in).
N. B. : yd= 91.44 cm   ft= 30.48 cm   in= 2.54cm

Exercise 9: (at home)
Here is the program in front.
Write (or copy) this program to your machine.
Run this program for a=8, then for a=33
What does this program do?
What happens if the value of "a" exceeds 64?

```c
#include <stdio.h>
int main() {
    int a, b, c=0,p=1;
    printf("enter a nbr < 64\n");
    scanf("%d", &a);

    b=a%8;
    a/=8;
    c+=b*p;
    p*=10;

    b=a%8;
    a/=8;
    c+=b*p;
    p*=10;

    printf("%d", c);
    return 0;
}
```