



République Algérienne Démocratique et Populaire
Ministère de l'Enseignement Supérieur Et de la
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Programmation orientée objet (TP)

Java Basic Syntax -- TP01 --

Exercise 01:

using `System.out.println` Display Your full name.

Exercise 02:

print the result of the following expression:

- The addition of the two numbers 12 and 3.
- The subtraction of the number 5 from 20.
- The division of 15 by 3.
- The modulo of 15 by 3.

Exercise 03:

Declare different variables to store your **full name**, your **age**, your **phone number**, a **credit card number** 56105910810825, an **expiration date** (e.g., "26/05"), and a variable indicating whether you are a **student** or not. after that display those variables.

Exercise 04:

Display the sum of `5 + 10`, using two variables: `x` and `y`.

Exercise 05:

reads the length and width of a rectangle from the user and calculates and displays the area of the rectangle.

Exercise 06:

Declare an array of integers named numbers with a size of 5.

Populate the array with some integer values.

Display each element of the numbers array individually.

Calculate and display the sum of all elements in the numbers array.

Challenge 01:

calculate if the year is a leap year and return true to the variable **leapYear**

if it is a leap year, otherwise return false.

To determine whether a year is a leap year, follow these steps:

- 1.If the year is evenly divisible by 4, go to step2. Otherwise, go to step 5.
- 2.If the year is evenly divisible by 100, go to step3. Otherwise, go to step 4.
- 3.If the year is evenly divisible by 400, go to step4. Otherwise, go to step 5.
- 4.The year is a leap year (it has 366 days). The variable **leapYear** needs to return true.
- 5.The year is not a leap year (it has 365 days). The variable **leapYear** needs to return false.

The following years are not leap years: 1700, 1800, 1900, 2100, 2200, 2300, 2500, 2600 This is because they are evenly divisible by 100 but not by 400.

The following years are leap years: 1600, 2000, 2400 This is because they are evenly divisible by both 100 and 400.

Exercise 07:

Write a Java program that prompts the user to enter a grade (A, B, C, D, or F),

and then uses a switch statement to provide a description for the grade

A --> Excellent.

B --> Good.

C --> Satisfactor.

D --> Needs Improvements

F --> Fail

Challenge 02:

find the first and the last digit of the Variable number, using a loop and calculate the sum of the first and the last digit of that number. if the number is negative the results must be -1.

Exercise 08:

Write a Java program that calculates the sum of all numbers from 1 to N, where N is a positive integer provided by the user. You can use a for loop to perform this calculation.

Exercise 09:

Write a Java program that calculates the factorial of a positive integer entered by the user using a while loop. The program should prompt the user for the number and then compute its factorial.