

For use unit test you must create all function in tasks/task.py
In wich task It specify a function name. You must use it. For
check your result you must return all your result in your
function. All lib are forbidden.

Task 1 🌶️

Write a function named message who return "Hello world!".

Task 2 🌶️

Write a function named product who take two int number in parameter and return the product of both parameters.

Task 3 🌶️

Write a function named exchange who take 2 parameters and invert it. You must return both of parameters after treatment.

Task 4 🌶️

Write a function named parity who check if a number passed in parameters is even or odd.

Task 5 🌶️

Write a fuction named biggest who return the largest of three numbers bind by user.

Task 6 🌶️

Write a function named "evaluatingGrade" that evaluates a grade entered by the user (if the grade is greater than 10, it displays "passed", otherwise "failed" - Note: the grade is between 0 and 20).

Task 7 🌶️

Write a function named "positiveNegativeProduct" that asks the user for two numbers m and n and then informs whether the product of these two numbers is positive, negative, or zero.

Task 8 🌶️

Write a function named "absoluteValue" that calculates the absolute value of an integer entered by the user.

Task 9 🌶️

Write a function named "averageOfThreeIntegers" that calculates the average of three integers entered by the user.

Task 10 🌶️

A shop offers its customers a 15% discount for purchases over €200. Write a function named "calculateTotalPrice" to enter the total price excluding tax and calculate the total price including the discount and 20% VAT.

Task 11 🌶️

The photocopy center charges €0.25 for the first 10 copies, €0.20 for the next twenty, and €0.10 thereafter. Write a function named "copyingBill" that asks the user to enter the number of copies made and displays the corresponding bill.

Task 12 🌶️

Write a function named "childAgeCategory" that asks for a child's age and informs about their category, knowing that the categories are as follows:

"poussin from 6 to 7 years old",
"pupille from 8 to 9 years old",
"minime from 10 to 11 years old",
"cadet after 12 years old".

Task 13 🌶️

Write a function named "monthInLetters" that displays the month in letters according to the number entered by the user.

Task 14 🌶️

Write a function named "displayGoodEvening" that displays the message "Good evening" 10 times using the While loop.

Task 15 🌶️

Write a function named "sum1To10" that calculates the sum $S = 1 + 2 + 3 + \dots + 10$ using the While loop.

Task 16 🌶️🌶️

Write a function named "sum1ToN" that calculates the sum $S = 1 + 2 + 3 + \dots + N$, where N is entered by the user using the While loop.

Task 17 🌶️

Write a function named "displayHelloTenTimes" that displays the message "Hello" 10 times using the For loop.

Task 18 🌶️

Write a function named "sum1To10UsingForLoop" that calculates the sum $S = 1 + 2 + 3 + \dots + 10$ using the For loop.

Task 19 🌶️

Write a function named "sum1ToNUsingForLoop" that calculates the sum $S = 1 + 2 + 3 + \dots + N$, where N is entered by the user using the For loop.

Task 20 🌶️

Write a function named "multiplicationTableOf5" that displays the multiplication table of 5 using the For loop.

Task 21 🌶️

Write a function named "multiplicationTableOfInteger" that displays the multiplication table of an integer entered by the user using the For loop.

Task 22 🌶️

Write a function named "displayHelloTenTimesUsingWhileLoop" that displays the message "Hello" 10 times using the While loop.

Task 23 🌶️

Write a function named "sum1To10UsingWhileLoop" that calculates the sum $S = 1 + 2 + 3 + \dots + 10$ using the While loop.

Task 24 🌶️

Write a function named "multiplicationTableOf8UsingWhileLoop" that displays the multiplication table of 8 using the While loop.

Task 25 🌶️

Write a function named "enterAndDisplayArray" that allows entering 10 integers and storing them in an array named Tableau, then displays them.

Task 26 🌶️

Write a function named "calculateAverageOfNotes" that allows entering 10 notes and displays their average.

Task 27 🌶️

Write a function named "maximumOfArray" that allows entering 10 integers into an array and displays the maximum of these integers.

Task 28 🌶️

Write a function named "occurrencesOfNElement" that allows entering 10 integers into an array and calculates the number of occurrences of an element N in this array, where N is entered by the user.

Task 29 🌶️🌶️

Write a function named "sortArrayInAscendingOrder" that allows entering 10 integers into an array and sorting this array in ascending order, then displays the array after sorting.

Task 30 🌶️

Write a function named "factorialOfInteger" that calculates the factorial of an integer entered by the user.

Task 31 🌶️

Écrire un algorithme permettant d'afficher les nombres paires compris entre 0 et N, où N saisi par l'utilisateur.

Task 32 🌶️

Write a function named "evenNumbersUpToN" that displays the even numbers between 0 and N, where N is entered by the user.

Task 33 🌶️

Write a function named "greatestCommonDivisor" that calculates the greatest common divisor between two integers entered by the user.

Task 34 🌶️

Write a function named "displayIntegerTriangle" that displays a triangle of integers according to an integer entered by the user.

Exemple N=4

1

22

333

4444

Task 35 🌶️

Write a function named "numberOfDigits" that calculates the number of digits of an integer N entered by the user. Exemple N = 10843 digit number is : 5

Task 36 🌶️

Write a function named "reverseDigits" that reverses the digits of an integer N entered by the user.

Task 37 🌶️

Write a function named "displayStarTriangle" that allows entering an integer N and displays the star triangle corresponding to it.

Exemple N = 4

*

Task 38 🌶️

Write a function named "enterAndCountPairsAndOdds" that allows entering 10 integers into an array and counts how many elements are even and odd.

Task 39 🌶️🌶️

Write a function named "isPrimeNumber" that displays whether an integer N entered at the keyboard is prime or not.

Task 40 🌶️

Write a function named "separateEvenAndOdd" that asks for the entry of an array T of 10 integers, puts the even elements in an array T1 and the odd elements in an array T2, then displays T1 and T2.

Task 41 🌶️🌶️

Write a function named "countOccurrencesOfFive" that allows the user to enter a sequence of integers ending with 0, and displays the number of occurrences of 5 at the end.

Task 42 🌶️

Write a function named "areConsecutive" that allows entering 10 integers and determines whether these integers are consecutive or not.

Task 43 🌶️

Write a function named "differenceBetweenPairsAndOdds" that allows entering 10 integers and calculates the difference between the sum of the even elements and the sum of the odd elements.

Exemple : 1 6 7 4 5 3 1 8 2 5 ==> $(6+4+8+2) - (1+7+5+3+5+1) = -2$.

Task 44 🌶️

Write a function named "powerOfXToN" that calculates x raised to the power n, given a real number x and a positive integer n.

Task 45 🌶️

Write a function named "testEqualityOfArrays" that tests the equality between two arrays of integers (size 10).

Task 46 🌶️

Write a function named "countDuplicateElements" that counts the number of duplicate elements (two or more) in an array of integers entered by the user.

Task 47 🌶️

Write a function named "characterType" that reads a character and indicates whether it is a letter or not; if it is a letter, it indicates whether it is lowercase or uppercase and whether it is a vowel or consonant.

Task 48 🌶️

Write a function named "moveZerosToEndOfArray" that shifts zero values to the end of the array while keeping the order of the elements.

Exemple 1 2 0 6 9 0 0 8 0 3

Résultat 1 2 6 9 8 3 0 0 0 0.

Task 49 🌶️

Write a function named "ascendingOrderThreeIntegers" that exchanges and displays the values of three integers (A, B, and C) entered by the user in ascending order.

Task 50 🌶️🌶️🌶️

Write a function named "exchangeTwoIntegersWithoutThirdVariable" that exchanges the values of two integers A and B entered by the user without using a third auxiliary variable.

The Functions

Task 51 🌶️

Write a function named "calculateTTCPrice" that calculates the TTC price, this function will receive a Real type parameter named "priceHT" and a second Real type parameter named "tva".

Task 52 🌶️

Write a function named "displayEvenOrOdd" that displays if an integer passed as a parameter is even or odd.

Task 53 🌶️

Write a function named "stringLength" that returns the number of characters in a string passed as a parameter.

Task 54 🌶️

Write a function named "characterOccurrences" that searches how many times a character is present in a string passed as a parameter.

Task 55 🌶️

Write a function named "absoluteValueNumber" that calculates the absolute value of a number passed as a parameter.

Task 56 🌶️

Write a function named "displayMultiplicationTable" that displays the multiplication table of a positive integer passed as a parameter.

Task 57 🌶️🌶️

Write a function named "calculateGCD" that calculates the greatest common divisor of two strictly positive integers passed as parameters.

Task 58 🌶️

Write a function named "sumProduct" that reads two numbers, calculates their sum and product, and displays whether they are positive or negative.

Task 59 🌶️🌶️

Write a function named "evenNumbersPercentage" that reads a list of integers (N numbers) with the last value = -1 and displays the number of even integers and their percentage relative to the given integers.

Task 60 🌶️

Write a function named "displayPairsBetweenMN" that displays all the even values between M and N if $M < N$.

Task 61 🌶️🌶️

Write a function who return True if the numbers pass in parameters is prime number else it return False.

Récurives functions

Task 62 🌶️🌶️

Write a recursive function named "factorial" that calculates the factorial of an integer entered by the user.

Task 63 🌶️🌶️

Write a recursive function named "sum1ToN" that calculates the sum of integers from 1 to N.

Task 64 🌶️🌶️

Write a recursive function named "power" that calculates x raised to the power n.

Task 65 🌶️🌶️

Write a recursive function named "displayIntegers0To10" that displays integers from 0 to 10.

Task 66 🌶️🌶️

Write a recursive function named "displayIntegersAB" that displays integers from A to B, where A and B are parameters of this function.

Task 67 🌶️🌶️🌶️

Write a recursive function named "calculateGCDUsingEuclid" that calculates the greatest common divisor of two integers passed as parameters, using the Euclidean algorithm.

Task 68 🌶️🌶️🌶️🌶️

Write a recursive function named "displayMatrixElements" that displays the elements of a matrix passed as a parameter.

Task 69 🌶️🌶️🌶️🌶️

Write a recursive function named "fibonacciSequence" that calculates the image of an integer (passed as a parameter) by a Fibonacci sequence.