

## Functions Assignment - 2

1. Write a Python function to check whether a string is a pangram or not.

Note : Pangrams are words or sentences containing every letter of the alphabet at least once.

For example : "The quick brown fox jumps over the lazy dog"

2. Write a Python program that accepts a hyphen-separated sequence of words as input and prints the words in a hyphen-separated sequence after sorting them alphabetically.

*Sample Items* : green-red-yellow-black-white

*Expected Result* : black-green-red-white-yellow

3. Write a Python function to check whether a number is "Perfect" or not.

According to Wikipedia: In number theory, a perfect number is a positive integer that is equal to the sum of its proper positive divisors, that is, the sum of its positive divisors excluding the number itself (also known as its aliquot sum). Equivalently, a perfect number is a number that is half the sum of all of its positive divisors (including itself).

*Example :* The first perfect number is 6, because 1, 2, and 3 are its proper positive divisors, and  $1 + 2 + 3 = 6$ . Equivalently, the number 6 is equal to half the sum of all its positive divisors:  $(1 + 2 + 3 + 6) / 2 = 6$ . The next perfect number is  $28 = 1 + 2 + 4 + 7 + 14$ . This is followed by the perfect numbers 496 and 8128.

4. Write a Python function that takes a number as a parameter and checks whether the number is prime or not.

Note : A prime number (or a prime) is a natural number greater than 1 and that has no positive divisors other than 1 and itself.

5. Write a function `factorial_iter(n)` that returns the factorial of the non-negative integer `n` using an iterative approach.

Input: 5

Output: 120

6. Write a python Program to find volume, surface area of a cuboid

Input :

length = 9

breadth = 6

height = 10

Output :

Surface area = 408

volume = 540

7. Define min() function which takes a sequence and return minimum value without using built-in min() function.

Input: min([2,3,4,5,7,1])

Output: 1

8. Take two input from the user and apply operations like add, subtract, multiply, division, floor division, modulus using separate function for each operation.

Input: 5,5

Output: Addition : 10

Substractions: 0

Multiply: 25

Division: 1

Floor Division: 1

Modulus: 0

9. Write a Python function to check if a given number is a Narcissistic number.

Note: A Narcissistic number is a number that is the sum of its own digits each raised to the power of the number of digits.

Example:

Input: 153

Output: True (since  $1^3 + 5^3 + 3^3 = 153$ )