

CAMPUS LADS	
SOFTWARE REVIEW – CICLO I	Rev 01/06/2023
FUNCIONES	Trainer Ing.
	Carlos H. Rueda C.

INTRODUCCIÓN

Resuelva los siguientes enunciados en Python haciendo un menú que el usuario pueda ingresar una opción y lo lleve a la resolución del ejercicio. Por ejemplo:

MENU

1- Cálculo de la combinatoria

2- Convertir texto a número

3- Calcular el IVA de una factura

4- Salir

>> Escoja una opción (1-4)?

1. Combinatorics is a branch of mathematics that deals with counting, arranging, and selecting objects without regard to their specific order. It's concerned with counting the number of ways to choose or arrange items from a set. One important concept in combinatorics is the concept of "combinations."

A combination of a set of items is a selection of those items where the order does not matter. The formula to calculate the number of combinations (denoted as "C(n, k)") from a set of "n" items, choosing "k" items at a time, is given by:

$$C(n,k) = \frac{n!}{k! \cdot (n-k)! \, n!}$$

Where:

- C(n,k) represents the number of combinations.
- "n" is the total number of items to choose from.
- "k" is the number of items to be chosen.
- "n!" represents the factorial of "n."
- "k!" represents the factorial of "k."
- "(n k)!" represents the factorial of "(n k)."

This formula calculates the number of ways you can choose "k" items from a set of "n" items without regard to their order. Combinations are commonly used in probability, statistics, and various counting problems in mathematics and science.

Write a Python program that calculates combinations based on the factorial function. Use the following formula:



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The program should take two inputs, 'n' and 'k', and then calculate and display the value of 'C(n, k)' using the provided formula."

2. Hacer una función que, a partir de una cadena con textos y números, quite los textos. Ejemplo:

datos = 'aaaaaa1.2b2cde110230'

El resultado debe ser '122110230

3. Escribir una función que calcule el total de una factura tras aplicarle el IVA. La función debe recibir la cantidad sin IVA y el porcentaje de IVA a aplicar, y devolver el total de la factura.