**Factorial**

Factorial is a mathematical operation denoted by the symbol "!", where given a non-negative integer "n", the factorial of "n" is the product of all positive integers from 1 up to "n".

For example, the factorial of 5 (written as 5!) is: 5! = 5 x 4 x 3 x 2 x 1 = 120

Factorial is commonly used in combinatorics and probability theory to calculate the number of possible permutations and combinations of a set of objects or events.

**Project:**

This is a Python class called FactorialCalculator that calculates the factorial of a given number.

The class has an \_\_init\_\_ method that takes an integer as an argument and initializes the number attribute with it.

The class also has a calculate\_factorial\_of\_number method that uses the math module to calculate the factorial of the number attribute and stores the result in the factorial\_of\_number attribute.

The class also defines a getter and setter method for the number attribute, which ensures that only integers can be passed as an argument.

Additionally, the class defines a \_\_repr\_\_ method that returns a string representation of the FactorialCalculator object.

The commented out code at the end of the file suggests that the class is intended to be used as a command line utility. It prompts the user to enter a number, creates a FactorialCalculator object with that number, calculates the factorial of the number, and prints the result.

**Unit Testing**

Unit testing is a software testing technique in which individual units or components of software are tested in isolation from the rest of the system. The goal of unit testing is to ensure that each unit of code is functioning correctly and meets its specified requirements.

Overall, unit testing is an important part of the software development process that helps ensure that code is of high quality, reliable, and meets its intended requirements.