ALGO Lab Sheet 06

1. What is a recursive method, briefly explain?
    - Recursion is the technique of making a function call itself. This technique provides a way to break complicated problems down into simple problems which are easier to solve. Recursion may be a bit difficult to understand. The best way to figure out how it works is to experiment with it.
    - Example: Loops

2. What is identified as an iteration, briefly explain?
    - Iteration is the repetition of a process in order to generate a (possibly unbounded) sequence of outcomes. Each repetition of the process is a single iteration, and the outcome of each iteration is then the starting point of the next iteration.
    - Simply a loop would be considered as iteration.

3. What is Factorial and Fibonacci. Show how they can used both as recursive and iterative.
    - Factorial is a mathematical operation that calculates the product of all positive integers up to a given number. It is denoted by the exclamation mark (!).
    - For example, the factorial of 5 is written as 5! and it is calculated as 5 x 4 x 3 x 2 x 1 = 120.

    - The Fibonacci sequence is a series of numbers in which each number is the sum of the two preceding ones. It starts with 0 and 1, and the subsequent numbers are obtained by adding the two numbers before them. The sequence typically begins as 0, 1, 1, 2, 3, 5, 8, 13, 21, and so on.

    - For example, the Fibonacci as, 1+0=1,1+1=2,2+1=3,3+2=5,5+3=8,8+5=13… 1,2,3,5,8,13