

# Lab 11

## Recursion in C++

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### Lab objectives

This lab will provide students with an introduction to the fundamentals of recursion in C++. After completing this lab, students will be able to

- Understand the structure of recursion in C++
- Solve iterative problems using recursion

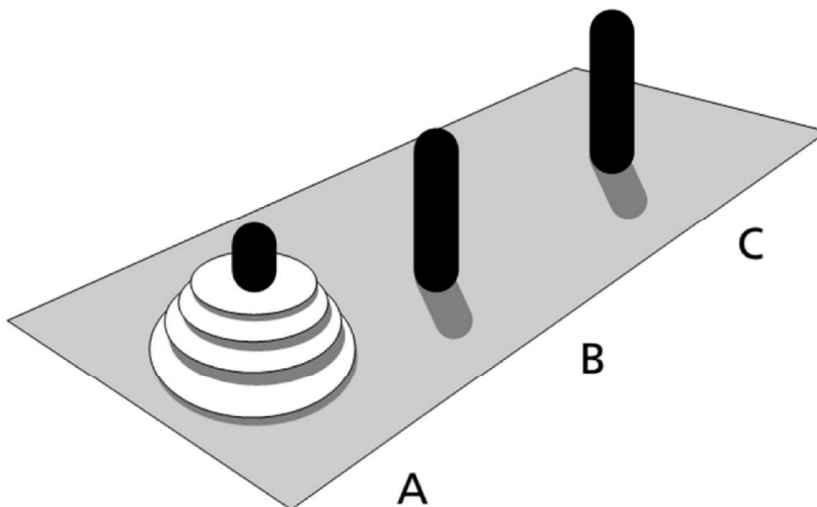
### Task: 01

Implement a C++ program that accepts an integer from the user and calculates its factorial using recursion.

### Task: 02

Develop a C++ program that generates Fibonacci series through recursion. User will enter the number of terms.

### Task: 03 (The Towers of Hanoi)



As per our discussion in the previous lab, you are supposed to develop a C++ program that moves all 'n' disks from tower A to tower B considering the following rules:

- a. Tower 'C' is an auxiliary tower and can be used temporarily
- b. Only one disk can be moved at a time
- c. No larger disk may be put on top of a smaller disk

**Note:** User will enter the value of 'n' (Number of disks)