LAB 10: Pointer and Recursion

Class:

1. Write a program to calculate the sum of diagonal matrix of n\*n using pointer.
2. Write a program to calculate the factorial of a given number using recursion.
3. Write a program in C to calculate the sum of numbers from 1 to n using recursion.\
4. Write a program in C to find the sum of digits of a number using recursion.

Extra:

1. Write a program in C to convert a decimal number to binary using recursion.

Home:

1. C Program to Solve Tower of Hanoi using Recursion.

Tower of Hanoi is a mathematical puzzle where we have three rods (**A**, **B**, and **C**) and **N** disks. Initially, all the disks are stacked in decreasing value of diameter i.e., the smallest disk is placed on the top and they are on rod **A**. The objective of the puzzle is to move the entire stack to another rod (here considered **C**), obeying the following simple rules:

* Only one disk can be moved at a time.
* Each move consists of taking the upper disk from one of the stacks and placing it on top of another stack i.e. a disk can only be moved if it is the uppermost disk on a stack.
* No disk may be placed on top of a smaller disk.

