

# Lab Assignment 02

Marks

\*\*\*For each of the following problems write C++ program by using both memoization and tabulation methods\*\*\*

## Problem - 1

→ [Fibonacci Number](#) 20

## Problem - 2

→ [FARIDA](#) 20

## Problem - 3

→ [Boredom](#) 20

## Problem - 4

→ [N-th Tribonacci Number](#) 20

## Problem - 5

- 20
- You are given an integer n. You can perform any of the following operations on it as many times you want -
- Subtract 1 from it
  - If it is divisible by 2 divide by 2
  - If it is divisible by 3 divide by 3

Find the minimum number of operations to make  $n=1$

### Constraints -

$1 \leq n \leq 10^5$

### **Output -**

Print a single integer, the minimum number of operations to make  $n=1$

<b>Sample Input-</b>	<b>Sample Output-</b>
7	3
11	4

### **Explanation-**

When  $n = 7$ ,

By using 3 operations we can go from 7 to 1.

>> 1st step -> subtract 1 from 7 then it became 6

>> 2nd step -> 6 is divisible by 3 hence we can divide it by 3 and it became 2

>> 3rd step -> 2 is divisible by 2 hence we can divide it by 2 and it became 1