Week 13- Day 1 : Coding Challenge

(Maximum marks -15)

Q-1) Fibonacci Number - solve without DP

https://leetcode.com/problems/fibonacci-number/

(5 marks)

(Easy)

The Fibonacci numbers, commonly denoted F(n) form a sequence, called the Fibonacci sequence, such that each number is the sum of the two preceding ones, starting from 0 and 1. That is,

F(0) = 0, F(1) = 1

F(n) = F(n - 1) + F(n - 2), for n > 1.

Given n, calculate F(n).

Example 1:

Input: n = 2

Output: 1

Explanation: F(2) = F(1) + F(0) = 1 + 0 = 1.

Q-2)Solve above question with DP (5 marks)

Q-3)Pow(x, n) - Solve using DP (5 marks)

https://leetcode.com/problems/powx-n/

(Medium)

Implement pow(x, n), which calculates x raised to the power n (i.e., xn).

Example 1:

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Input: x = 2.00000, n = 10
Output: 1024.00000
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Marks distribution:

Question 1,2 and 3 carry 5 marks each.