DAY 13

INTERVIEW BIT PROBLEMS :

1. Remove Nth Node from List End

Given a linked list, remove the nth node from the end of list and return its head.
For example,
Given linked list: 1->2->3->4->5, and n = 2.
After removing the second node from the end, the linked list becomes 1->2->3->5.

Note:
If n is greater than the size of the list, remove the first node of the list.

CODE :

PYTHON

```
# Definition for singly-linked list.
# class ListNode:
#     def __init__(self, x):
#         self.val = x
#         self.next = None

class Solution:
    # @param A : head node of linked list
    # @param B : integer
    # @return the head node in the linked list
    def removeNthFromEnd(self, A, B):
        ptr=A
        c=0
        while(ptr!=None):
            c+=1
            ptr=ptr.next
        if(c==1):
            ptr=None
            return ptr
        if(c<=B):
            A=A.next
            return A
        l=c-B+1
        ptr=A
        for i in range(0,l-2):
            ptr=ptr.next
        ptr.next=ptr.next.next
        return A
```

2. Noble Integer

Given an integer array, find if an **integer p exists in the array such that the number of integers greater than p in the array equals to p**
If such an integer is found return 1 else return -1.

CODE :

PYTHON

```
class Solution:
    # @param A : list of integers
    # @return an integer
    def solve(self, A):
        A.sort()
        n=len(A)
        for i in range(n-1):
            if A[i]==A[i+1]:
                continue
            if A[i]==n-i-1:
                return 1
        if A[n-1]==0:
            return 1
        return -1
```