DAY 34

INTERVIEW BIT PROBLEMS :

1. Combinations

Given two integers n and k, return all possible combinations of k numbers out of 1 2 3 ... n.
Make sure the combinations are sorted.
To elaborate,
Within every entry, elements should be sorted. [1, 4] is a valid entry while [4, 1] is not.
Entries should be sorted within themselves.
Example :
If **n = 4 and k = 2**, a solution is:
[
  [1,2],
  [1,3],
  [1,4],
  [2,3],
  [2,4],
  [3,4],
]

CODE :

PYTHON

```
from itertools import combinations as cbi
class Solution:
    # @param A : integer
    # @param B : integer
    # @return a list of list of integers
    def combine(self, A, B):
        inp=list(range(1,A+1))
        combi_list=list(cbi(inp,B))
        out=list(map(list,combi_list))
        return out
```

(OR)

```
class Solution:
    def combo_fun(self, start_ind,end_ind, k):
        if k == 0:
            return [[]]
        if end_ind - start_ind + 1 < k:
            return []
        out= []
        for i in range(start_ind, end_ind + 1):
            for ele in self.combo_fun(i + 1, end_ind, k- 1):
                out.append([i] + ele)
        return out
```

```
# @param A : integer
# @param B : integer
# @return a list of list of integers
def combine(self, A, B):
    return self.combo_fun(1, A, B)
```