

combination

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77. Combinations

Medium 4303 150 Add to List Share

Given two integers n and k , return all possible combinations of k numbers out of the range $[1, n]$.

You may return the answer in **any order**.

Example 1:

Input: $n = 4, k = 2$

Output:

```
[
  [2,4],
  [3,4],
  [2,3],
  [1,2],
  [1,3],
  [1,4],
]
```

Approach 2:-
start with a empty vector-
 $k = 2$ $n = 4$

$\{1,2\} \subseteq \{1,2,3,4\}$

$$2^n = nC_0 + nC_1 + nC_2 + nC_3$$
$$2^4 = 4C_0 + 4C_1 + 4C_2 + 4C_3$$

if (k

idx=1

exclude

include

present.push_back
(idx);

1 2 3 4

base case

$k == \text{present.size}()$

$\text{ans.pushback}(\text{present})$

$\text{return};$

base case

if (idx > n)

$\text{return};$

$[3,4], [2,4], [2,3], [1,2], [1,4], [1,3]$