

77. Combinations

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],
]
```

Example 2:

Input: `n = 1, k = 1`

Output: `[[1]]`

```
def combine(self, n: int, k: int) -> List[List[int]]:
    res = []
    arr = [i for i in range(1,n+1)]
    self.permute(arr, [], res, k)
    return res

def permute(self, arr, ssf, res, k):
    if len(ssf) == k:
        res.append(list(ssf))
        return
    for idx in range(len(arr)):
        ssf.append(arr[idx])
        rof = arr[idx+1:]
        self.permute(rof, ssf, res, k)
        ssf.pop()
```