

# Leet Code

## Day-37 Q-01 Permutation Sequence

The set  $[1, 2, 3, \dots, n]$  contains a total of  $n!$  unique permutations.

By listing and labeling all of the permutations in order, we get the following sequence for  $n = 3$ :

1. "123"
2. "132"
3. "213"
4. "231"
5. "312"
6. "321"

Given  $n$  and  $k$ , return the  $k^{\text{th}}$  permutation sequence.

### Note:

- Given  $n$  will be between 1 and 9 inclusive.
- Given  $k$  will be between 1 and  $n!$  inclusive.

### Example 1:

Input:  $n = 3, k = 3$

Output: "213"

### Example 2:

Input:  $n = 4, k = 9$

Output: "2314"