

Problem 60: Permutation Sequence

Problem Information

Difficulty: Hard

Acceptance Rate: 51.28%

Paid Only: No

Tags: Math, Recursion

Problem Description

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 th permutation sequence.

Example 1:

Input: $n = 3, k = 3$ **Output:** "213"

Example 2:

Input: $n = 4, k = 9$ **Output:** "2314"

Example 3:

Input: $n = 3, k = 1$ **Output:** "123"

Constraints:

$1 \leq n \leq 9, 1 \leq k \leq n!$

Code Snippets

C++:

```
class Solution {  
public:  
    string getPermutation(int n, int k) {  
  
    }  
};
```

Java:

```
class Solution {  
    public String getPermutation(int n, int k) {  
  
    }  
}
```

Python3:

```
class Solution:  
    def getPermutation(self, n: int, k: int) -> str:
```