

Problem 967: Numbers With Same Consecutive Differences

Problem Information

Difficulty: **Medium**

Acceptance Rate: 58.99%

Paid Only: No

Tags: Backtracking, Breadth-First Search

Problem Description

Given two integers n and k , return an array of all the integers of length n where the difference between every two consecutive digits is k . You may return the answer in any order.

Note that the integers should not have leading zeros. Integers as `02` and `043` are not allowed.

Example 1:

Input: $n = 3, k = 7$ **Output:** `[181,292,707,818,929]` **Explanation:** Note that `070` is not a valid number, because it has leading zeroes.

Example 2:

Input: $n = 2, k = 1$ **Output:** `[10,12,21,23,32,34,43,45,54,56,65,67,76,78,87,89,98]`

Constraints:

$2 \leq n \leq 9$ $0 \leq k \leq 9$

Code Snippets

C++:

```
class Solution {  
public:  
    vector<int> numsSameConsecDiff(int n, int k) {  
  
    }  
};
```

Java:

```
class Solution {  
    public int[] numsSameConsecDiff(int n, int k) {  
  
    }  
}
```

Python3:

```
class Solution:  
    def numsSameConsecDiff(self, n: int, k: int) -> List[int]:
```