

## 444. Sequence Reconstruction

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Check whether the original sequence `org` can be uniquely reconstructed from the sequences in `seqs`. The `org` sequence is a permutation of the integers from 1 to  $n$ , with  $1 \leq n \leq 10^4$ . Reconstruction means building a shortest common supersequence of the sequences in `seqs` (i.e., a shortest sequence so that all sequences in `seqs` are subsequences of it). Determine whether there is only one sequence that can be reconstructed from `seqs` and it is the `org` sequence.

### Example 1:

Input: `org = [1,2,3], seqs = [[1,2],[1,3]]`

Output: `False`

Explanation: `[1,2,3]` is not the only one sequence that can be reconstructed, because `[1,3,2]` is also a valid sequence that can be reconstructed.

### Example 2:

Input: `org = [1,2,3], seqs = [[1,2]]`

Output: `False`

Explanation: The reconstructed sequence can only be `[1,2]`.

### Example 3:

Input: `org = [1,2,3], seqs = [[1,2],[1,3],[2,3]]`

Output: `true`

Explanation: The sequences `[1,2]`, `[1,3]`, and `[2,3]` can uniquely reconstruct the original sequence `[1,2,3]`.

### Example 4:

Input: `org = [4,1,5,2,6,3], seqs = [[5,2,6,3],[4,1,5,2]]`

Output: `true`

### Constraints:

- $1 \leq n \leq 10^4$
- `org` is a permutation of  $\{1, 2, \dots, n\}$ .
- `seqs[i][j]` fits in a 32-bit signed integer.

### UPDATE (2017/1/8):

The `seqs` parameter had been changed to a list of list of strings (instead of a 2d array of strings). Please reload the code definition to get the latest changes.

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```

1 class Solution(object):
2     def sequenceReconstruction(self, org, seqs):
3         """
4         :type org: List[int]
5         :type seqs: List[List[int]]
6         :rtype: bool
7         """
8 
```