

444. Sequence Reconstruction

Medium👍 419💬 1331❤️ Add to List🔗 Share

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,...,n)`.
- $1 \leq seqs[i].length \leq 10^5$
- `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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```
class Solution {  
    public boolean sequenceReconstruction(int[] org, List<List<Integer>> seqs) {  
    }  
}
```