

2368. Reachable Nodes With Restrictions

Solved ●

Medium Topics Companies Hint

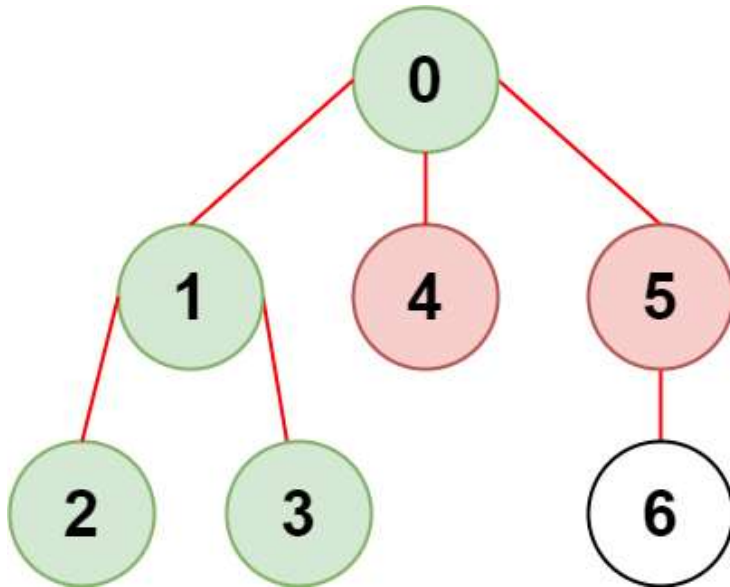
There is an undirected tree with n nodes labeled from 0 to $n - 1$ and $n - 1$ edges.

You are given a 2D integer array `edges` of length $n - 1$ where `edges[i] = [ai, bi]` indicates that there is an edge between nodes `ai` and `bi` in the tree. You are also given an integer array `restricted` which represents **restricted** nodes.

Return the **maximum** number of nodes you can reach from node `0` without visiting a restricted node.

Note that node `0` will **not** be a restricted node.

Example 1:



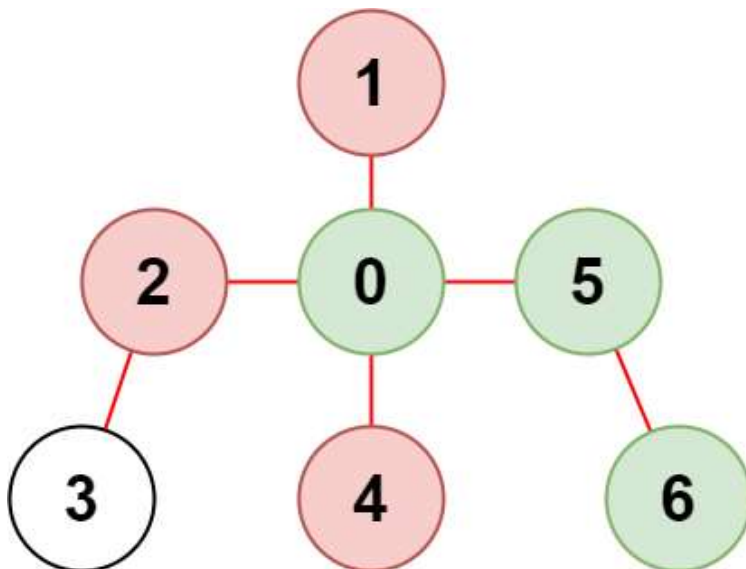
Input: $n = 7$, `edges = [[0,1],[1,2],[3,1],[4,0],[0,5],[5,6]]`, `restricted = [4,5]`

Output: 4

Explanation: The diagram above shows the tree.

We have that `[0,1,2,3]` are the only nodes that can be reached from node `0` without visiting a restricted node.

Example 2:



Input: $n = 7$, `edges = [[0,1],[0,2],[0,5],[0,4],[3,2],[6,5]]`, `restricted = [4,2,1]`

Output: 3

Explanation: The diagram above shows the tree.
We have that [0,5,6] are the only nodes that can be reached from node 0 without visiting a restricted node.

Constraints:

- $2 \leq n \leq 10^5$
- `edges.length == n - 1`
- `edges[i].length == 2`
- $0 \leq a_i, b_i < n$
- $a_i \neq b_i$
- `edges` represents a valid tree.
- $1 \leq \text{restricted.length} < n$
- $1 \leq \text{restricted}[i] < n$
- All the values of `restricted` are **unique**.

Seen this question in a real interview before? 1/5

Yes No

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