

1557. Minimum Number of Vertices to Reach All Nodes

Medium

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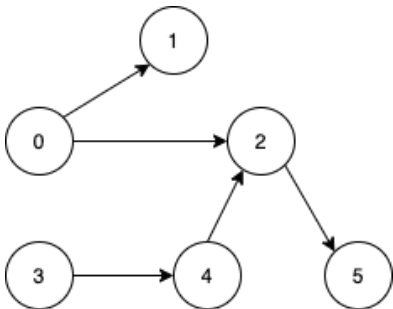
 Hint

Given a **directed acyclic graph**, with n vertices numbered from 0 to $n-1$, and an array `edges` where `edges[i] = [fromi, toi]` represents a directed edge from `fromi` to `toi`.

Find the *smallest set of vertices from which all nodes in the graph are reachable*. It's guaranteed that a unique solution exists.

Notice that you can return the vertices in any order.

Example 1:

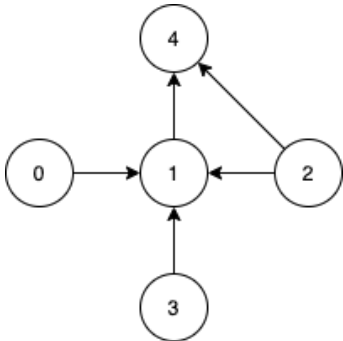


Input: `n = 6, edges = [[0,1],[0,2],[2,5],[3,4],[4,2]]`

Output: `[0,3]`

Explanation: It's not possible to reach all the nodes from a single vertex. From `0` we can reach `[0,1,2,5]`.

Example 2:



Input: `n = 5, edges = [[0,1],[2,1],[3,1],[1,4],[2,4]]`

Output: `[0,2,3]`

Explanation: Notice that vertices `0`, `3` and `2` are not reachable from any other node, so we must include them in the result. The set `[0,2,3]` will still reach node `4`.

Constraints:

- $2 \leq n \leq 10^5$
- $1 \leq \text{edges.length} \leq \min(10^5, n * (n - 1) / 2)$
- `edges[i].length == 2`
- $0 \leq \text{from}_i, \text{to}_i < n$
- All pairs $(\text{from}_i, \text{to}_i)$ are distinct.

Seen this question in a real interview before? 1/4

Yes No

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