Minimum Number of Vertices to Reach All Nodes

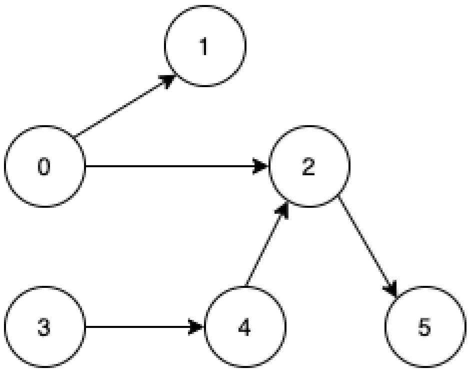
LeetCode

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

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

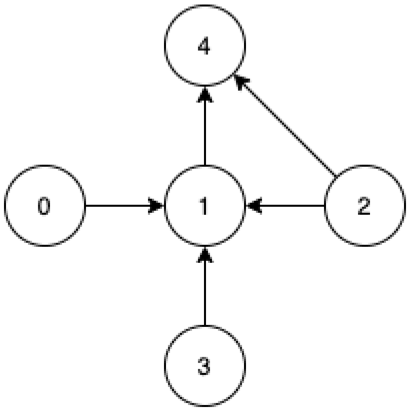
Notice that you can return the vertices in any order.

Example:



Output: {0, 3}

Example 1:



Output: {0, 2, 3}

Approach 1: Find the minimum vertices to reach all nodes using Indegree count

- **Explanation:**

    - The **findSmallestSetOfVertices** function calculates the in-degrees of each vertex based on the given edges.
    - Vertices with in-degree 0 are identified as those not reachable by any other vertices.
- **Time Complexity:**
    - **The time complexity is O(V + E), where V is the number of vertices and E is the number of edges in the graph.**
        - **Calculating in-degrees for each edge.**
- **Space Complexity:**
    - **The space complexity is O(V), where V is the number of vertices in the graph.**
        - **Storing in-degree information for each vertex.**