

100116. Find Champion II

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There are  $n$  teams numbered from  $0$  to  $n - 1$  in a tournament; each team is also a node in a **DAG**.

You are given the integer  $n$  and a **0-indexed** 2D integer array `edges` of length  $m$  representing the **DAG**, where `edges[i] = [ui, vi]` indicates that there is a directed edge from team  $u_i$  to team  $v_i$  in the graph.

A directed edge from  $a$  to  $b$  in the graph means that team  $a$  is **stronger** than team  $b$  and team  $b$  is **weaker** than team  $a$ .

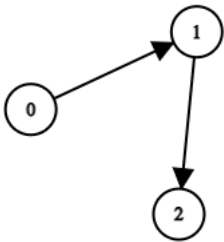
Team  $a$  will be the **champion** of the tournament if there is no team  $b$  that is **stronger** than team  $a$ .

Return the team that will be the **champion** of the tournament if there is a **unique** champion, otherwise, return  $-1$ .

User Accepted:	5633
User Tried:	6399
Total Accepted:	5992
Total Submissions:	9378
Difficulty:	Medium

- Notes
- A **cycle** is a series of nodes  $a_1, a_2, \dots, a_n, a_{n+1}$  such that node  $a_1$  is the same node as node  $a_{n+1}$ , the nodes  $a_1, a_2, \dots, a_n$  are distinct, and there is a directed edge from the node  $a_i$  to node  $a_{i+1}$  for every  $i$  in the range  $[1, n]$ .
  - A **DAG** is a directed graph that does not have any **cycle**.

Example 1:



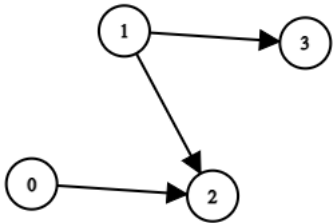
```
graph TD; 0((0)) --> 1((1)); 1((1)) --> 2((2));
```

**Input:**  $n = 3$ , `edges = [[0,1],[1,2]]`

**Output:** `0`

**Explanation:** Team 1 is weaker than team 0. Team 2 is weaker than team 1. So the champion is team 0.

Example 2:



```
graph TD; 1((1)) --> 3((3)); 1((1)) --> 2((2)); 0((0)) --> 2((2));
```

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

**Output:** `-1`

**Explanation:** Team 2 is weaker than team 0 and team 1. Team 3 is weaker than team 1. But team 1 and team 0 are not weaker than a

Constraints:

- $1 \leq n \leq 100$
- $m == \text{edges.length}$
- $0 \leq m \leq n * (n - 1) / 2$
- $\text{edges}[i].\text{length} == 2$
- $0 \leq \text{edge}[i][j] \leq n - 1$
- $\text{edges}[i][0] \neq \text{edges}[i][1]$
- The input is generated such that if team a is stronger than team b, team b is not stronger than team a.
- The input is generated such that if team a is stronger than team b and team b is stronger than team c, then team a is stronger than team c.

JavaScript



```

1 const findChampion = (n, edges) => {
2   let hit = new Set(), not = new Set();
3   for (const [, v] of edges) hit.add(v);
4   for (let i = 0; i < n; i++) {
5     if (!hit.has(i)) not.add(i);
6   }
7   return not.size == 1 ? not.values().next().value : -1;
8 };

```

☐ Custom Testcase☒ Use Example Testcases

Run

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Submission Result: **Accepted** (/submissions/detail/1091752321/) ⓘ

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