

# 1462. Course Schedule IV

Medium Topics Companies Hint

There are a total of numCourses courses you have to take, labeled from 0 to numCourses – 1. You are given an array prerequisites who

• For example, the pair [0, 1] indicates that you have to take course 0 before you can take course 1.

Prerequisites can also be **indirect**. If course a is a prerequisite of course b, and course b is a prerequisite of course c, then course a is a You are also given an array queries where queries[j] =  $[u_j, v_j]$ . For the  $j^{th}$  query, you should answer whether course  $u_j$  is a prerequisite of course b.

Return a boolean array answer, where answer[j] is the answer to the jth query.

## Example 1:



Input: numCourses = 2, prerequisites = [[1,0]], queries = [[0,1],[1,0]]

Output: [false,true]

**Explanation:** The pair [1, 0] indicates that you have to take course 1 before you can take course 0. Course 0 is not a prerequisite of course 1, but the opposite is true.

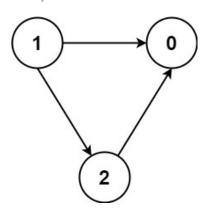
#### Example 2:

Input: numCourses = 2, prerequisites = [], queries = [[1,0],[0,1]]

Output: [false, false]

Explanation: There are no prerequisites, and each course is independent.

# Example 3:



Input: numCourses = 3, prerequisites = [[1,2],[1,0],[2,0]], queries = [[1,0],[1,2]]

Output: [true,true]

## Constraints:

- 2 <= numCourses <= 100
- 0 <= prerequisites.length <= (numCourses \* (numCourses 1) / 2)
- prerequisites[i].length == 2
- $0 \le a_i$ ,  $b_i \le n 1$
- a<sub>i</sub> != b<sub>i</sub>
- All the pairs [a<sub>i</sub>, b<sub>i</sub>] are **unique**.
- The prerequisites graph has no cycles.
- 1 <= queries.length <=  $10^4$
- $0 \le u_i$ ,  $v_i \le n 1$
- u<sub>i</sub> != v<sub>i</sub>

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