There are a total of numCourses courses you have to take, labeled from 0 to numCourses - 1. You are given an array prerequisites where prerequisites[i] = [ai, bi] indicates that you **must** take course bi first if you want to take course ai.

* For example, the pair [0, 1], indicates that to take course 0 you have to first take course 1.

Return *the ordering of courses you should take to finish all courses*. If there are many valid answers, return **any** of them. If it is impossible to finish all courses, return **an empty array**.

**Example 1:**

Input: numCourses = 2, prerequisites = [[1,0]]  
Output: [0,1]  
Explanation: There are a total of 2 courses to take. To take course 1 you should have finished course 0. So the correct course order is [0,1].

**Example 2:**

Input: numCourses = 4, prerequisites = [[1,0],[2,0],[3,1],[3,2]]  
Output: [0,2,1,3]  
Explanation: There are a total of 4 courses to take. To take course 3 you should have finished both courses 1 and 2. Both courses 1 and 2 should be taken after you finished course 0.  
So one correct course order is [0,1,2,3]. Another correct ordering is [0,2,1,3].

**Example 3:**

Input: numCourses = 1, prerequisites = []  
Output: [0]

**Constraints:**

* 1 <= numCourses <= 2000
* 0 <= prerequisites.length <= numCourses \* (numCourses - 1)
* prerequisites[i].length == 2
* 0 <= ai, bi < numCourses
* ai != bi
* All the pairs [ai, bi] are **distinct**.