Course Schedule II

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] = [a_i, b_i] indicates that you must take course b_i first if you want to take course a_i.

- 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 <= a_i, b_i < numCourses
- a_i != b_i
- All the pairs [a_i, b_i] are distinct.