Minimum Cost Walk in Weighted Graph

There is an undirected weighted graph with n vertices labeled from 0 to n - 1.

You are given the integer n and an array edges, where edges[i] = [u_i, v_i, w_i] indicates that there is an edge between vertices u_i and v_i with a weight of w_i.

A walk on a graph is a sequence of vertices and edges. The walk starts and ends with a vertex, and each edge connects the vertex that comes before it and the vertex that comes after it. It's important to note that a walk may visit the same edge or vertex more than once.

The **cost** of a walk starting at node u and ending at node v is defined as the bitwise AND of the weights of the edges traversed during the walk. In other words, if the sequence of edge weights encountered during the walk is w_0, w_1, w_2, ..., w_k, then the cost is calculated as w_0 & w_1 & w_2 & ... & w_k, where & denotes the bitwise AND operator.

You are also given a 2D array query, where query[i] = [s_i, t_i]. For each query, you need to find the minimum cost of the walk starting at vertex s_i and ending at vertex t_i. If there exists no such walk, the answer is -1.

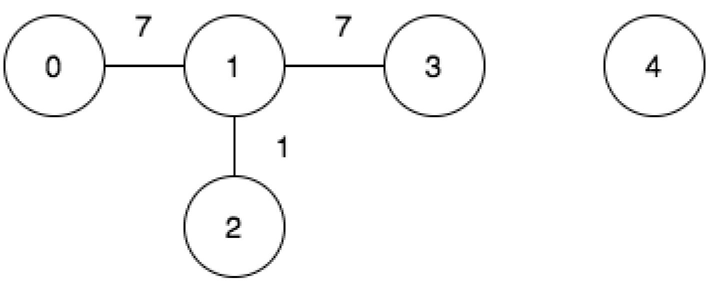
Return *the array* answer*, where* answer[i] *denotes the* ***minimum*** *cost of a walk for query* i.

Example 1:

Input: n = 5, edges = [[0,1,7],[1,3,7],[1,2,1]], query = [[0,3],[3,4]]

Output: [1,-1]

Explanation:



To achieve the cost of 1 in the first query, we need to move on the following edges: 0->1 (weight 7), 1->2 (weight 1), 2->1 (weight 1), 1->3 (weight 7).

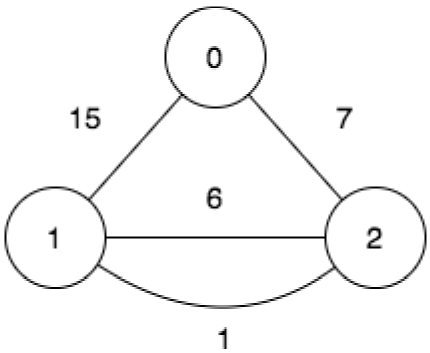
In the second query, there is no walk between nodes 3 and 4, so the answer is -1.

Example 2:

Input: n = 3, edges = [[0,2,7],[0,1,15],[1,2,6],[1,2,1]], query = [[1,2]]

Output: [0]

Explanation:



To achieve the cost of 0 in the first query, we need to move on the following edges: 1->2 (weight 1), 2->1 (weight 6), 1->2 (weight 1).

Constraints:

- 2 <= n <= 10^5
- 0 <= edges.length <= 10^5
- edges[i].length == 3
- 0 <= u_i, v_i <= n - 1
- u_i != v_i
- 0 <= w_i <= 10^5
- 1 <= query.length <= 10^5
- query[i].length == 2
- 0 <= s_i, t_i <= n - 1
- s_i != t_i