3112. Minimum Time to Visit Disappearing Nodes

Description

There is an undirected graph of `n` nodes. You are given a 2D array `edges`, where `edges[i] = [u_i, v_i, length_i]` describes an edge between node `u_i` and node `v_i` with a traversal time of `length_i` units.

Additionally, you are given an array `disappear`, where `disappear[i]` denotes the time when the node `i` disappears from the graph and you won't be able to visit it.

Notice that the graph might be disconnected and might contain multiple edges.

Return the array `answer`, with `answer[i]` denoting the **minimum** units of time required to reach node `i` from node 0. If node `i` is **unreachable** from node 0 then `answer[i]` is `-1`.

Example 1:

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

Output: [0,-1,4]

Explanation:

We are starting our journey from node 0, and our goal is to find the minimum time required to reach each node before it disappears.

- For node 0, we don't need any time as it is our starting point.
- For node 1, we need at least 2 units of time to traverse `edges[0]`. Unfortunately, it disappears at that moment, so we won't be able to visit it.
- For node 2, we need at least 4 units of time to traverse `edges[2]`.

Example 2:

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

Output: [0,2,3]

Explanation:

We are starting our journey from node 0, and our goal is to find the minimum time required to reach each node before it disappears.

- For node 0, we don't need any time as it is the starting point.
- For node 1, we need at least 2 units of time to traverse `edges[0]`.
- For node 2, we need at least 3 units of time to traverse `edges[0]` and `edges[1]`.

Example 3:

Input: n = 2, edges = [[0,1,1]], disappear = [1,1]

Output: [0,-1]

Explanation:

Exactly when we reach node 1, it disappears.

Constraints:

- `1 <= n <= 5 * 10^4`
- `0 <= edges.length <= 10^5`
- `edges[i] == [u_i, v_i, length_i]`
- `0 <= u_i, v_i <= n - 1`
- `1 <= length_i <= 10^5`
- `disappear.length == n`
- `1 <= disappear[i] <= 10^5`