1489. Find Critical and Pseudo-Critical Edges in Minimum Spanning Tree

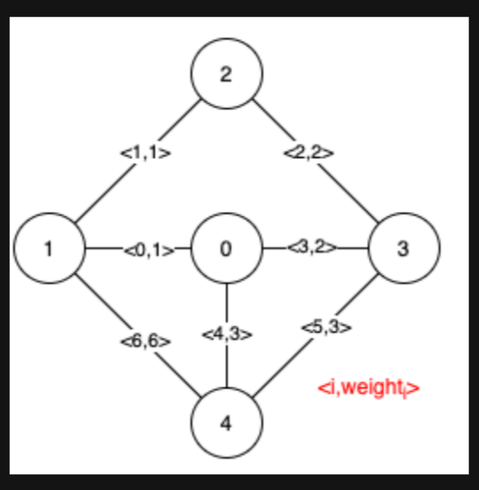
Description

Given a weighted undirected connected graph with `n` vertices numbered from `0` to `n - 1`, and an array `edges` where `edges[i] = [a i , b i , weight i ]` represents a bidirectional and weighted edge between nodes `a i` and `b i` . A minimum spanning tree (MST) is a subset of the graph's edges that connects all vertices without cycles and with the minimum possible total edge weight.

Find *all the critical and pseudo-critical edges in the given graph's minimum spanning tree (MST)* . An MST edge whose deletion from the graph would cause the MST weight to increase is called a *critical edge* . On the other hand, a pseudo-critical edge is that which can appear in some MSTs but not all.

Note that you can return the indices of the edges in any order.

Example 1:

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Input: n = 5, edges = [[0,1,1],[1,2,1],[2,3,2],[0,3,2],[0,4,3],[3,4,3],[1,4,6]]
Output: [[0,1],[2,3,4,5]]
Explanation: The figure above describes the graph.
The following figure shows all the possible MSTs:
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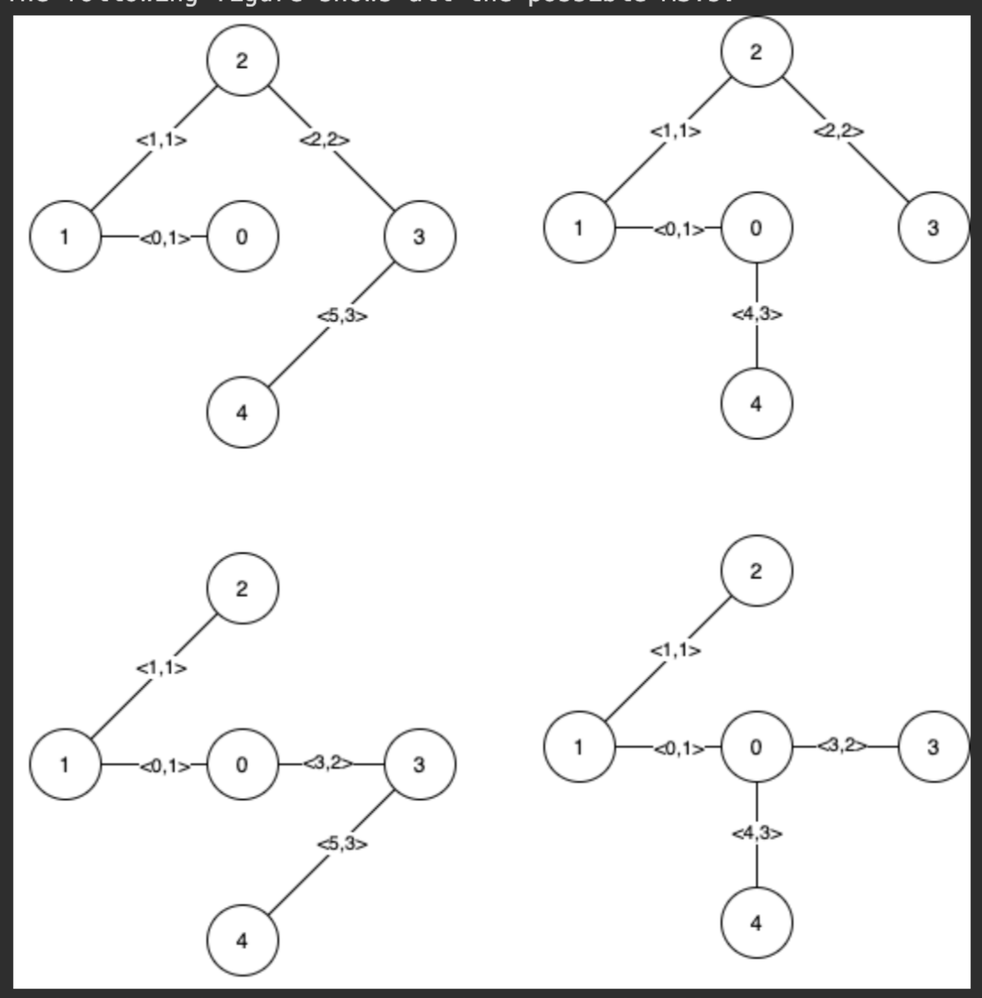
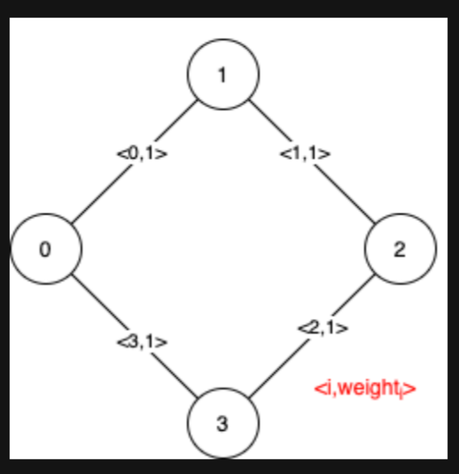



```
Notice that the two edges 0 and 1 appear in all MSTs, therefore they are critical edges, so we return them in the first list of the output.
The edges 2, 3, 4, and 5 are only part of some MSTs, therefore they are considered pseudo-critical edges. We add them to the second list of the
output.
```

Example 2:




```
Input: n = 4, edges = [[0,1,1],[1,2,1],[2,3,1],[0,3,1]]
Output: [[],[0,1,2,3]]
Explanation: We can observe that since all 4 edges have equal weight, choosing any 3 edges from the given 4 will yield an MST. Therefore all 4
edges are pseudo-critical.
```

Constraints:

- `2 <= n <= 100`
- `1 <= edges.length <= min(200, n * (n - 1) / 2)`
- `edges[i].length == 3`
- `0 <= a i < b i < n`
- `1 <= weight i <= 1000`
- All pairs `(a i , b i )` are **distinct** .