Problem 1273: Delete Tree Nodes

Problem Information

Difficulty: Medium
Acceptance Rate: 61.45%
Paid Only: Yes
Tags: Array, Tree, Depth-First Search, Breadth-First Search

Problem Description

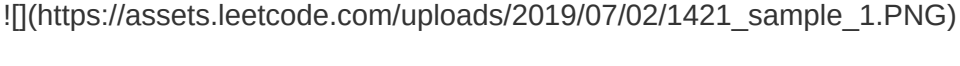
A tree rooted at node 0 is given as follows:

* The number of nodes is `nodes`; * The value of the `ith` node is `value[i]`; * The parent of the `ith` node is `parent[i]`.

Remove every subtree whose sum of values of nodes is zero.

Return _the number of the remaining nodes in the tree_.

Example 1:



Input: nodes = 7, parent = [-1,0,0,1,2,2,2], value = [1,-2,4,0,-2,-1,-1] **Output:** 2

Example 2:

Input: nodes = 7, parent = [-1,0,0,1,2,2,2], value = [1,-2,4,0,-2,-1,-2] **Output:** 6

Constraints:

* `1 <= nodes <= 104` * `parent.length == nodes` * `0 <= parent[i] <= nodes - 1` * `parent[0] == -1` which indicates that `0` is the root. * `value.length == nodes` * `-105 <= value[i] <= 105` * The given input is **guaranteed** to represent a **valid tree**.

Code Snippets

C++:

```
class Solution {
public:
int deleteTreeNodes(int nodes, vector<int>& parent, vector<int>& value) {

}
};
```

Java:

```
class Solution {
public int deleteTreeNodes(int nodes, int[] parent, int[] value) {

}
}
```

Python3:

```
class Solution:
def deleteTreeNodes(self, nodes: int, parent: List[int], value: List[int]) ->
int:
```