

Description

Solution

Submissions

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Python

Autocomplete

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1168. Optimize Water Distribution in a Village

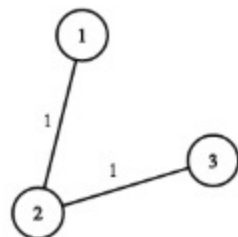
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There are n houses in a village. We want to supply water for all the houses by building wells and laying pipes.

For each house i , we can either build a well inside it directly with cost $wells[i]$, or pipe in water from another well to it. The costs to lay pipes between houses are given by the array $pipes$, where each $pipes[i] = [house1, house2, cost]$ represents the cost to connect $house1$ and $house2$ together using a pipe. Connections are bidirectional.

Find the minimum total cost to supply water to all houses.

Example 1:



Input: $n = 3$, $wells = [1, 2, 2]$, $pipes = [[1, 2, 1], [2, 3, 1]]$

Output: 3

Explanation:

The image shows the costs of connecting houses using pipes.

The best strategy is to build a well in the first house with cost 1 and connect the other houses to it with cost 2 so the total cost is 3.

Constraints:

- $1 \leq n \leq 10000$
- $wells.length == n$
- $0 \leq wells[i] \leq 10^5$
- $1 \leq pipes.length \leq 10000$

```
1 class Solution(object):
2     def minCostToSupplyWater(self, n, wells, pipes):
3         """
4         :type n: int
5         :type wells: List[int]
6         :type pipes: List[List[int]]
7         :rtype: int
8         """
9
```