

2307. Check for Contradictions in Equations

Description

You are given a 2D array of strings `equations` and an array of real numbers `values`, where `equations[i] = [Ai, Bi]` and `values[i]` means that `Ai / Bi = values[i]`.

Determine if there exists a contradiction in the equations. Return `true` *if there is a contradiction, or* `false` *otherwise*.

Note :

- When checking if two numbers are equal, check that their **absolute difference** is less than `10-5`.
- The testcases are generated such that there are no cases targeting precision, i.e. using `double` is enough to solve the problem.

Example 1:

Input: equations = [["a","b"],["b","c"],["a","c"]], values = [3,0.5,1.5]

Output: false

Explanation:
The given equations are: a / b = 3, b / c = 0.5, a / c = 1.5
There are no contradictions in the equations. One possible assignment to satisfy all equations is:
a = 3, b = 1 and c = 2.

Example 2:

Input: equations = [["le","et"],["le","code"],["code","et"]], values = [2,5,0.5]

Output: true

Explanation:
The given equations are: le / et = 2, le / code = 5, code / et = 0.5
Based on the first two equations, we get code / et = 0.4.
Since the third equation is code / et = 0.5, we get a contradiction.

Constraints:

- `1 <= equations.length <= 100`
- `equations[i].length == 2`
- `1 <= Ai.length, Bi.length <= 5`
- `Ai`, `Bi` consist of lowercase English letters.
- `equations.length == values.length`
- `0.0 < values[i] <= 10.0`
- `values[i]` has a maximum of 2 decimal places.

