990. Satisfiability of Equality Equations

Description

You are given an array of strings `equations` that represent relationships between variables where each string `equations[i]` is of length `4` and takes one of two different forms: `"x i ==y i "` or `"x i !=y i "`.Here, `x i` and `y i` are lowercase letters (not necessarily different) that represent one-letter variable names.

Return `true` *if it is possible to assign integers to variable names so as to satisfy all the given equations, or* `false` *otherwise*.

Example 1:

```
Input: equations = ["a==b","b!=a"]
Output: false
Explanation: If we assign say, a = 1 and b = 1, then the first equation is satisfied, but not the second.
There is no way to assign the variables to satisfy both equations.
```

Example 2:

```
Input: equations = ["b==a","a==b"]
Output: true
Explanation: We could assign a = 1 and b = 1 to satisfy both equations.
```

Constraints:

- `1 <= equations.length <= 500`
- `equations[i].length == 4`
- `equations[i][0]` is a lowercase letter.
- `equations[i][1]` is either `'='` or `'!'`.
- `equations[i][2]` is `'='`.
- `equations[i][3]` is a lowercase letter.