PSH: The Enemy of My Enemy is My Friend

Ancient wisdom holds that friendships can be defined by the ancient proverbs "the enemy of my enemy is my friend" and "the enemy of my friend is my enemy." For an upcoming episode of Mythbusters, you have been asked to put these proverbs to the test. In your experiments, you will see if given a list of enemy relationships, you could unambiguously determine whether any pair of people are friends or enemies.

For example, assume that you know that Machiavelli is enemies with Alice, Alice is enemies with Chuck, and Chuck is enemies with Bob. Then, the myth is plausible. In this scenario, we have two sets of friends, set A {Machiavelli, Chuck} and set B {Alice, Bob}. Moreover, every pair of people, with one chosen from set A and one chose from set B, will be enemies of each other.

On the other hand, assume Alice and Bob are enemies, Bob and Chuck are enemies, and Chuck and Alice are enemies. Here the myth is busted because Alice is Chuck's friend based on the proverbs, but Alice is Chuck's enemy based on a specified relationship.

Input Format

The input begins with a integer n, 1 <= n <= 100,000, which defines the number of enemy relationships. Following this are n lines in the format:

[person1] [person2]

indicating that person1 and person2 are enemies. Both [person1] and [person2] will be strings made up of lowercase letters and numbers exclusively.
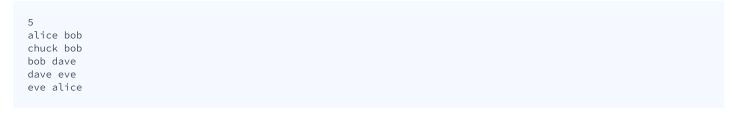
Note that every person will be connected to every other person through a chain of one or more enemy relationships.

Output Format

If the proverbs and the input leads to a contradiction, in Mythbusters fashion, you should output the phrase "Busted!"

Otherwise, your program should begin by outputting "Plausible" on a line by itself. Then, in alphabetical order, you should output a list of the largest group of friends that can be identified by the input. If there is a tie in the size of the largest groups, output the group containing the member name that comes first alphabetically.

Sample Input

```
5
alice bob
chuck bob
bob dave
dave eve
eve alice
```

Sample Output

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Plausible
alice
chuck
dave
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Explanation

We can conclude that {alice, chuck, dave} are friends because they share a common enemy bob.

Moreover, {bob, eve} are friends because the share a common enemy alice.

Of these two sets, the first is largest, so we output this one.