Do You Know the Way to San Jose?

"You've got to be very careful if you don't know where you are going because you might not get there."

- Yogi Berra

Having lost your GPS navigation system, you must manage to navigate through Silicon Valley manually. The problem is that you have only a limited knowledge of the geography. Your task will be to determine if you know how to get from your current location to San Jose.

Input Format

The input consists of a positive integer n, $0 \leq n \leq 1000$, representing all of the cities between which you can navigate. Note that if you can get from city A to city B, you can also get from city B to city A.

Following this line, will be n lines containing the pairs of cities. Note that each city name will not have any spaces in it - rather any spaces will be replaced with underscore characters.

Following the list of city pairs, will be a non-negative integer t, $t \leq 1000$, indicating a number of test cases.

Each test case will have a starting city name, listed on a line by itself. The city names in the test cases will be formatted in the same way as those in the city pairs.

Output Format

For each test case, you are to output either `Yes` or `No` on a line by itself. Output `Yes` if you know how to navigate from the starting city to San_Jose. Output `No` otherwise.

Sample Input

```
6
San_Francisco San_Mateo
Redwood_City San_Mateo
Palo_Alto Mountain_View
Mountain_View Cupertino
Mountain_View Menlo_Park
Cupertino San_Jose
4
Menlo_Park
San_Jose
San_Mateo
Sunnyvale
```

Sample Output

```
Yes
Yes
No
No
```

Explanation

In the first text case, from `Menlo_Park` you can get to `Mountain_View` and then `Cupertino` and then `San_Jose`.

In the second test case, you are alread in `San_Jose`.

In the third and fourth test cases, you do not know how to get to `San_Jose` from the starting city.