CCC '04 S1 - Fix

Time Limit: 2.0s **Memory Limit:** 64M

Canadian Computing Competition: 2004 Stage 1, Senior #1

A collection of words is *prefix-free* if no word is a prefix of any other word. A collection of words is *suffix-free* if no word is a suffix of any other word. A collection of words is fix-free if it is both prefix-free and suffix-free.

For this problem, a word is a sequence of lower-case letters of length between 1 and 25. A word X is a prefix of word Y if X consists of the first n characters of Y, in order, for some n. That is, the word `cat` has prefixes `c`, `ca`, and `cat`. Similarly, a word X is a suffix of Y if X consists of the last n characters of Y, in order, for some n.

Your input will be $3N + 1$ lines: the first line will be the number N, and the remaining $3N$ lines will be the N collections of 3 words each. (That is, lines 2, 3, and 4 compose the first collection, lines 5, 6, and 7 compose the second collection, and so on). Your output will be N lines, each line containing either `Yes` (if that collection of words is fix-free) or `No` (if that collection is not fix-free).

Sample Input

```
2
abba
aab
bab
a
ab
aa
```

Sample Output

```
Yes
No
```