A - Temperature Triggered Sign

Time Limit: 2 sec
Memory Limit: 1024 MB

You have a thermometer that measures the outdoor temperature, and you're also carrying a small sign with you. The thermometer reads the temperature as an integer value, 'a,' while the sign displays a message using a string 's' that consists of lowercase English letters.

In this scenario, you need to create a program that handles a display mechanism. So, your program should either showcase the string 's' when the temperature not less than 3200, or it should change the sign to display "red" if the temperature falls below 3200.

Constraints

$2800 \leq a < 5000$
s is a string of length between 1 and 10 (inclusive).
Each character of s is a lowercase English letter.

Input:

Input is given from Standard Input in the following format:
a
s

Output:

If a is not less than 3200, print s; if a is less than 3200, print red.

Example:

Input 1	Output 1
3200 pink	pink

a=3200 is not less than 3200, so we print s= pink.

Input 2	Output 2
3199 pink	red

a=3199 is less than 3200, so we print red.

Input 3	Output 3
4049 red	red

a=4049 is not less than 3200, so we print s= red.

B - Mr. Robot

Time Limit: 2 sec
Memory Limit: 1024 MB

Suppose for a day, you imagine yourself as Mr. Robot, who can perform multiple tasks with his multiple identities. Now one of the identities has been assigned a string, now you need to determine whether the encrypted string is of your use or not.

You need to check for the following conditions:

- The first character should be an English uppercase character.
- A string of length 6, that is a decimal representation of an integer between 100000 and 999999, inclusive.
- The last character, also to be an English uppercase character.

Constraints:

S consists of uppercase English letters and digits.
The length of S is between 1 and 10, inclusive

Input:

Input a string S.

Output:

Print Yes, if it is of use to you, else print No.

Examples:

Input 1	Output 1
Q142857Z	Yes

S satisfies all the conditions such that; Q and Z are uppercase English letters, and 142857 is a string that is a decimal representation of an integer between 100000 and 999999, so S satisfies the condition.

Input 2	Output 2
AB912278C	No

AB is not an uppercase English letter, so S does not satisfy the condition.

Input 3	Output 3
X900000	No

Input 4	Output 4
K012345K	No

012345 is not a string of length 6 that is a decimal representation of an integer between 100000 and 999999, so S does not satisfy the condition.

C - Charlie and The String Factory

Time Limit: 2 sec
Memory Limit: 1024 MB

Charlie has been given an N number of strings, such that, each string, S_1, S_2, ..., S_N has length M and consists of lowercase English letters. S_i, here are pairwise distinct. Charlie, being the owner, has assigned this task to you, the employee. To get a raise, you need to impress Charlie and for that you need to determine whether you can rearrange these strings to obtain a new sequence of strings T_1, T_2, ..., T_N such that: For all integers i such that $1 \le i \le N - 1$, you can alter exactly one character of T_i to another lowercase English letter to make it equal to T_{i+1}.

Constraints

$2 \le N \le 8$
$1 \le M \le 5$
S_i is a string of length M consisting of lowercase English letters. ($1 \le i \le N$)
S_i is pairwise distinct.

Input:

The input is given from Standard Input in the following format:

N M
S₁
S₂
…
Sₙ

Output:

Print Yes, if one can obtain a conforming sequence, else No.

Examples:

Input 1	Output 1	Explanation 1
4 4 bbed abcd abed fbed	Yes	We can rearrange them in this order: abcd, abed, bbed, fbed. This sequence satisfies the condition.

Input 2	Output 2	Explanation 2
2 5 abcde abced	No	No matter how the strings are rearranged, the condition is never satisfied.

Input 3	Output 3
8 4 fast face cast race fact rice nice case	Yes