

## A. Equal or Not Equal

time limit per test: 2 seconds  
memory limit per test: 256 megabytes

You had  $n$  positive integers  $a_1, a_2, \dots, a_n$  arranged in a circle. For each pair of neighboring numbers ( $a_1$  and  $a_2$ ,  $a_2$  and  $a_3$ , ...,  $a_{n-1}$  and  $a_n$ , and  $a_n$  and  $a_1$ ), you wrote down: are the numbers in the pair equal or not.

Unfortunately, you've lost a piece of paper with the array  $a$ . Moreover, you are afraid that even information about equality of neighboring elements may be inconsistent. So, you are wondering: is there any array  $a$  which is consistent with information you have about equality or non-equality of corresponding pairs?

### Input

The first line contains a single integer  $t$  ( $1 \leq t \leq 1000$ ) — the number of test cases. Next  $t$  cases follow.

The first and only line of each test case contains a non-empty string  $s$  consisting of characters E and/or N. The length of  $s$  is equal to the size of array  $n$  and  $2 \leq n \leq 50$ . For each  $i$  from 1 to  $n$ :

- if  $s_i = E$  then  $a_i$  is equal to  $a_{i+1}$  ( $a_n = a_1$  for  $i = n$ );
- if  $s_i = N$  then  $a_i$  is not equal to  $a_{i+1}$  ( $a_n \neq a_1$  for  $i = n$ ).

### Output

For each test case, print YES if it's possible to choose array  $a$  that are consistent with information from  $s$  you know. Otherwise, print NO.

It can be proved, that if there exists some array  $a$ , then there exists an array  $a$  of positive integers with values less or equal to  $10^9$ .

### Example

input	Copy
4 EEE EN ENNEENE NENN	
output	Copy
YES NO YES YES	

### Note

In the first test case, you can choose, for example,  $a_1 = a_2 = a_3 = 5$ .

In the second test case, there is no array  $a$ , since, according to  $s_1$ ,  $a_1$  is equal to  $a_2$ , but, according to  $s_2$ ,  $a_2$  is not equal to  $a_1$ .

In the third test case, you can, for example, choose array  $a = [20, 20, 4, 50, 50, 50, 20]$ .

In the fourth test case, you can, for example, choose  $a = [1, 3, 3, 7]$ .

### Educational Codeforces Round 119 (Rated for Div. 2)

Finished

Practice



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Clone Contest

### → Submit?

Language: GNU G++17 7.3.0

Choose file: Choose File No file chosen

Submit

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constructive algorithms dsu implementation

\*800

No tag edit access

### → Contest materials

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