Fiona has always loved poetry, and recently she discovered a fascinating poetical form. *Tautograms* are a special case of alliteration, which is the occurrence of the same letter at the beginning of adjacent words. In particular, a sentence is a tautogram if all of its words start with the same letter.

For instance, the following sentences are tautograms:

- Flowers Flourish from France

- Sam Simmonds speaks softly

- Peter pIckEd pePPers

- truly tautograms triumph

Fiona wants to dazzle her boyfriend with a romantic letter full of this kind of sentences. Please help Fiona to check if each sentence she wrote down is a tautogram or not.

Input

Each test case is given in a single line that contains a sentence. A sentence consists of a sequence of at most 50 words separated by single spaces. A word is a sequence of at most 20 contiguous uppercase and lowercase letters from the English alphabet. A word contains at least one letter and a sentence contains at least one word.

The last test case is followed by a line containing only a single character '*' (asterisk).

Output

For each test case output a single line containing an uppercase 'Y' if the sentence is a tautogram, or an uppercase 'N' otherwise.

Sample Input

```
Flowers Flourish from France
Sam Simmonds speaks softly
Peter pIckEd pePPers
truly tautograms triumph
this is NOT a tautogram
*
```

Sample Output

```
Y
Y
Y
Y
N
```