

B. s-palindrome

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

Let's call a string "`s-palindrome`" if it is symmetric about the middle of the string. For example, the string "`oHo`" is "`s-palindrome`", but the string "`aa`" is not. The string "`aa`" is not "`s-palindrome`", because the second half of it is not a mirror reflection of the first half.

English alphabet

You are given a string s . Check if the string is "`s-palindrome`".

Input

The only line contains the string s ($1 \leq |s| \leq 1000$) which consists of only English letters.

Output

Print "`TAK`" if the string s is "`s-palindrome`" and "`NIE`" otherwise.

Examples

input
<code>oXoxoXo</code>
output
<code>TAK</code>
input
<code>bod</code>
output
<code>TAK</code>
input
<code>ER</code>
output
<code>NIE</code>