Problem H
huaauhahhuahau

It is common among young people to use strings of letters in chats which often seem random to represent laughter. Some common examples are:

```
huaauhahhuahau
hehehehe
ahahahaha
jaisjjkasjksjjskjakijs
huehuehue
```

Claudia is a young programmer who was intrigued by the sound of "digital laughter". She can not even pronounce some of them!! But she realized that some of them seem to show better the feeling of laugther than others. The first thing she noticed is that the consonants do not interfere in how digital laughter influence the transmission of the feeling. The second thing she noticed is that the funniest digital laughs are those in which the vowels are the same when read in its natural order (left to right) and in reverse order (right to left), ignoring the consonants. For example, "hahaha" and "huaauhahhuahau" are some of the funniest laughs, while "riajkdhhihhjak" and "huehuehue" are not.

Claudia is very busy with the statiscal analysis of digital laughter and asked for help to write a program that says, for a digital laugh, if it is one of the funniest or not.

Input

The input contais a sequence with no more than 50 characters, containing only lowercase letters and at least one vowel. Vowels are the letters '`a`','`e`','`i`','`o`','`u`'.

Output

Your program should print "`S`", in case the laugh is one of the funniest, or "`N`" otherwise.

Examples

Input	Output
`hahaha`	`S`
`riajkjdhhihhjak`	`N`
`a`	`S`
`huaauhahhuahau`	`S`