

Code Speak

(problem by Jason Oliphant)

With the AI Overlords always listening, you and your team decide that you need to develop a coded language to speak to one another, something simple so you can understand, but created in a way that LLMs would have trouble with. That's when you come up with an idea.

You know that LLMs work in tokens, which are pieces of words rather than individual letters, so your code language will consist of inserting an extra syllable, "ib", before every vowel in a word. In the case where multiple vowels occur in a row, only place "ib" before the first occurrence. For our purposes, 'y' does not count as a vowel.

Given a sequence of lowercase words, convert them to your code speak and output the result.

Input

The first line of input will contain a single integer, n , ($1 \leq n \leq 40$).

The following line will consist of n space-separated words, the message that must be converted to code-speak. The words will consist of lowercase english characters only (a-z) and each word will be no more than 40 characters.

Output

Output the message converted to code speak as n space-separated words on one line, just as in the input.

Examples

Before each vowel, you must output the letters "ib" in lowercase. Note that the "y" in "byu" does not count as a vowel.

Sample input 1

```
4
i love byu hspc
```

Sample output 1

```
ibi libovibe byibu hspc
```

Limits

Time limit is 1 second.

Memory limit is 1024 megabytes.