

# Vowel Density

## Description

For the scope of this problems, vowels are the letters A, E, I, O, and U (and their lowercase forms).

Vowel density is the ratio of vowels to total letters. For example, "Erlang" has the vowel density  $2/6$ .

Given a list of words, find the words of least and greatest vowel density. In both cases, break ties by *choosing* the lexicographically first word (case-sensitive).

## Input

The first line is the number of words,  $0 < N \leq 100$ .

On each of the next N lines is a "word", which is non-empty sequence of letters not exceeding 50 characters.

## Output

The first line is the word of least vowel density.

The last line is the word of greatest vowel density.

Words should have the same case as in the input.

### Input

3  
strengths  
Aerie  
gray

### Output

strengths  
Aerie

### Input

2  
Me  
me

### Output

Me  
Me

To clarify: Of the ones with greatest vowel density, choose the lexicographically first one. Of the ones with least vowel density, choose the lexicographically first one.