Problem A
Name Generation

Ingrid is the founder and CEO of bicycle retailer BIKEA. The company sells bicycles for customers to assemble themselves.

BIKEA has N different bicycles to offer. Ingrid wants to give each of them a human-readable name, to make it easy to remember. But doing this by hand is a very time consuming task.

You are given the number N, and your task is to generate N different names. To make the names readable, they must satisfy the following:

1. Each name has length between 3 and 20, and only consists of lowercase English letters.

2. Three consecutive letters of a name cannot all be vowels or consonants. Here we consider a, e, i, o, u vowels, while the remaining 21 letters are consonants.

For example, `hello`, `abc`, and `lkab` are all valid names, whereas `ingrid`, `bo` and `louise` are invalid.

Input

The input consists of one integer N ($1 \leq N \leq 30000$), the number of names to generate.

Output

Print N lines, each of them containing a name. It can be proven that it is possible to generate N different names.

Sample Input 1	Sample Output 1
3	abdullah
	bjorn
	nils