Melodious password

Jeremy and Clara are learning about passwords and created a game to test their "hacking" skills. Jeremy made rules for valid passwords and Clara needs to write a program to generate all possible passwords that meet those rules. Jeremy's rules are these:

- a password consists of exactly n lowercase English letters.
- the password is *melodious*, meaning that consonants can only be next to vowels and vowels can only be next to consonants. Example: `bawahaha`
- the password cannot contain the letter y (because it's both a consonant and vowel).
- the first letter of the password can be either a vowel or consonant.

Given the length, n, of the password, output all of the possible passwords that meet the conditions above. **Your output will be considered correct if and only if it contains all melodious passwords of length n.**

Input Format

The line of input contains the integer n (the length of the password).

Constraints

- $1 \leq n \leq 6$

Output Format

Print your output strings, one per line. Your output will be considered correct if and only if it contains all melodious passwords of length n in any order.

Sample Input 0

```
1
```

Sample Output 0

```
w
t
v
g
l
o
h
i
x
q
j
r
k
p
a
m
d
e
z
c
n
```

```
u
b
f
s
```

Explanation 0

The length of the password is 1. We can list all letters $a - z$ except y for our list of possible passwords.