

MNYC '16: Abdoof

Time limit: 1.0s **Memory limit:** 256M

Abdul has created a naming convention for places (countries, cities, streets, etc.). Words are composed of sections. There are three valid types of sections: A, B and C. The following elements are categorized into section A: `ch`, `t`, `m`, `d`, `b`, `bd`, `r`. The following elements are categorized into section B: `a`, `e`, `i`, `oo`. Finally, the following elements are categorized into section C: `n`, `v`, `f`. Valid words are composed of sections that follow strict placement rules. A word may start with either section A or B. A word must be at least 2 sections in length. A word cannot have two consecutive sections of the same type. A word must end with either section A or C. Section C can only end a word, and thus not exist anywhere else. A name consists of two or more words. The case is not relevant.

Given a name, check whether or not it is a valid name, according to the naming convention explained above. If it is valid, output `valid` otherwise, output `invalid`.

Input Specification

A single line with a name containing $1 \leq W \leq 100$ words. Each word has $1 \leq L \leq 200$ letters.

Output Specification

`valid` or `invalid` depending on whether the name given was a valid or invalid name according to Abdul's naming convention.

Sample Input 1

```
Abdoof Arif
```

Sample Output 1

```
valid
```

Sample Input 2

```
Abdul
```

Sample Output 2

invalid

Explanation for Sample Output 2

First of all, the word `Abdu1` is not a valid word. Secondly, there is only 1 word in the name.