

No Fishing!

Time limit: 3 seconds

Memory limit: 1024 megabytes

Please design a program that can filter messages with banned words in a chat room and the one who sent this message will get one warning. Once a person gets three warnings, all his or her messages will be ignored in the chat room. The comparison between the banned words and messages should be case-sensitive.

- **Input Format**

The first line will contain an integer *n* and a string of the *banned word*. *n* represents the number of following messages you need to filter. The *banned word* is the word that should not appear in the chat room after filtering. In the next *n* lines, the format of input messages will be *name: message*.

- **Output Format**

For each input except the first line, the program outputs the line directly if the *name* does not get three warnings, and the *message* does not contain the *banned word*.

If the *name* has got three warnings, then the program print "*name* is banned." for that line.

Notice that you only need to filter the *banned words* in the message. If the *banned word* appear in the *name*, you don't need to filter it.

- **Technical Specifications**

- $1 \leq n \leq 1000$
- *Banned word* is a string that only contains the alphabet and number characters. The length of *banned word* will not exceed 128 characters.
- *Name* is a string that only contains alphabet and number characters. The length of it will not exceed 20 characters.
- *Message* consists of several strings, which are split by spaces. Each string consists of ASCII code from 32 to 126, which is basically all printable characters.
- The length of *name: message* will not exceed 4095.

- **There are some restrictions you need to follow:**

1. You are not allowed to include `<string.h>` or other libraries with functions about string process.

Input Example	Output Example
11 easy Tozy: Weeeeeeeee!!!!!!	Tozy: Weeeeeeeee!!!!!! NaNin: Hi, guys <3

Ruwan: I'm UC genius. So easy.

NaNin: Hi, guys <3

NaNin: I'm 159cm!

8tan: Easy.

Ruwan: Yeah, eeeeeeasy.

Ruwan: You should play other games.

Ruwan: This game is too easy.

Ruwan: Why don't you change games?

Ruwan: Hello?

HaHa: ea_sy lollllll

NaNin: I'm 159cm!

8tan: Easy.

Ruwan: You should play other games.

Ruwan is banned.

HaHa: ea_sy lollllll