MALD Contest 1 P1 - Scratch Cat and DDoS

Time limit: 1.0s **Memory limit:** 64M

One day, the Scratch Cat decided to use his hacker skills to shut down all websites in Yuboland. There are N websites available for him to hack. However, the Scratch Cat isn't intelligent enough to decide whether a website is hosted by Yuboland.

Therefore, he came up with a rule to determine that. The Scratch Cat believes that a website is hosted by Yuboland if

- 1. yubo (all lowercase) is a substring of the website's URL,
- 2. The website is directly before or after a website that satisfies the first rule.



wHy iS sCrAtCh.MiT.EdU bLoCkEd?!

Please determine the websites that the Scratch Cat will hack in alphabetical order.

Constraints

 $1 \le N \le 10^4$

 $1 \leq |s_i| \leq 100$

Input Specification

The first line will contain an integer N, the number of websites available for the Scratch Cat to hack.

The next N lines will each contain a string s_i , the URL for the $i^{
m th}$ website.

Output Specification

Output the URLs of the websites that the Scratch Cat will hack in alphabetical order. **Do not** output duplicate URLs.

Sample Input

5
dmoj.ca
scratch.mit.edu
yubosucks.scratch
scratch.mit.edu
canada.ca

Sample Output

scratch.mit.edu
yubosucks.scratch

Explanation

The second URL, <code>scratch.mit.edu</code>, is directly before a URL containing <code>yubo</code> as a substring. The third URL directly contains <code>yubo</code>. The fourth URL is identical to the second and is directly after a URL containing <code>yubo</code>. The sorted list of URLs is then <code>{scratch.mit.edu</code>, <code>yubosucks.scratch</code>}. Notice two <code>scratch.mit.edu</code> URLs that satisfy the conditions, but only one is output because they are the same website.