CODEFORCES β
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PROBLEMS   SUBMIT   STATUS   STANDINGS   CUSTOM TEST

A. Sinking Ship

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

The ship crashed into a reef and is sinking. Now the entire crew must be evacuated. All n crew members have already lined up in a row (for convenience let's label them all from left to right with positive integers from 1 to n) and await further instructions. However, one should evacuate the crew properly, in a strict order. Specifically:

The first crew members to leave the ship are rats. Then women and children (both groups have the same priority) leave the ship. After that all men are evacuated from the ship. The captain leaves the sinking ship last.

If we cannot determine exactly who should leave the ship first for any two members of the crew by the rules from the previous paragraph, then the one who stands to the left in the line leaves the ship first (or in other words, the one whose number in the line is less).

For each crew member we know his status as a crew member, and also his name. All crew members have different names. Determine the order in which to evacuate the crew.

Input

The first line contains an integer n, which is the number of people in the crew ($1 \le n \le 100$). Then follow n lines. The i-th of those lines contains two words — the name of the crew member who is i-th in line, and his status on the ship. The words are separated by exactly one space. There are no other spaces in the line. The names consist of Latin letters, the first letter is uppercase, the rest are lowercase. The length of any name is from 1 to 10 characters. The status can have the following values: rat for a rat, woman for a woman, child for a child, man for a man, captain for the captain. The crew contains exactly one captain.

Output

Print n lines. The i-th of them should contain the name of the crew member who must be the i-th one to leave the ship.

Examples

input
6 Jack captain Alice woman Charlie man Teddy rat Bob child Julia woman

output
Teddy Alice Bob Julia Charlie Jack

Codeforces Beta Round #59 (Div. 2)
Finished

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ACM-ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

[Start virtual contest]

→ Problem tags

implementation   sortings   strings
No tag edit access

→ Contest materials

- Announcement ✕
- Tutorial #1 ✕
- Tutorial #2 ✕
- Tutorial #3 ✕