

## B. The Teacher of Physical Education

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

$n$  pupils came to Physical Education lesson. We know the name and the height of each pupil.

Your task is to help the teacher of Physical Education to line up all pupils in non-decreasing order of their heights.

### Input

The first line contains the positive integer  $n$  ( $1 \leq n \leq 5000$ ) — the number of pupils.

The next  $n$  lines contain the pupils' description. In the  $i$ -th line there is pupil's name  $name_i$  (a non-empty string which consists of uppercase and lowercase Latin letters, the length does not exceed five) and pupil's height  $x_i$  ( $130 \leq x_i \leq 215$ ). Some pupils can have the same name. Uppercase and lowercase letters of the alphabet should be considered different.

### Output

Print  $n$  lines — pupils' names in the non-decreasing order of their heights. Each line must contain exactly one name.

If there are several answers, print any of them. Uppercase and lowercase letters of the alphabet should be considered different.

### Examples

input
4 Ivan 150 Igor 215 Dasha 158 Katya 150
output
Ivan Katya Dasha Igor

input
2 SASHA 180 SASHA 170
output
SASHA SASHA