Take Me To Your Leader

Space Aliens have landed, and they very much want to confront the leader of the world. They are approaching people demanding under penalty of shock by extra-terrestrial taser, the answer to the following questions: "Who are you?" and "Who is your leader?" However, not being a very cooperative species, we are responding only with our name and the name of our immediate boss. The aliens, not being a very methodical lot, have gone around and asked everyone these questions.

They now must figure out who is our leader. Unfortunately for them, we appear to have several leaders. So they have decided that the person with the most followers must be our leader.

Input Format

The input consists of an initial line with an integer n, $0 < n <= 10^5$ on a line by itself, representing the number of relationships that the Space Aliens have identified. Following this are n lines, in the following format:

```
Name Boss_Name
```

Where

- `Name` is a unique string, made up of lower-case letters and the underscore (no whitespace), of the person who was asked the questions.

- `Boss_Name` is a string, made up of lower-case letters and the underscore (no whitespace), of the answer the person gave to "Who is your leader?"

Output Format

The output of the program is the person at the top of the hierarchy with the most followers. In the case of a tie, you should output the leader whose name appear first in alphabetical order. Note that these followers include not just those directly reporting to them, but also those indirectly reporting to them.

Sample Input

```
9
boxer napoleon
benjamin squealer
altieri aprile
barese altieri
bluebell napoleon
curto altieri
sasso barese
squealer bluebell
sheep bluebell
```

Sample Output

```
napoleon
```

Explanation

`napoleon` has the following direct and indirect followers: `benjamin`, `bluebell`, `boxer`, `sheep`, and `squealer`.

`aprile` has the following direct and indirect followers: `altieri`, `barese`, `curto`, and `sasso`.

Since `napoleon` has more followers, we output his name.