C - New Skill Acquired

Editorial (/contests/abc424/tasks/abc424_c/editorial)

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Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 300 points

Problem Statement

Takahashi is playing a game. This game has N skills numbered 1 through N.

You are given N pairs of integers $(A_1, B_1), \ldots, (A_N, B_N)$.
If $(A_i, B_i) = (0, 0)$, then Takahashi has already learned skill i.
Otherwise, Takahashi can learn skill i if and only if at least one of skills A_i and B_i has already been learned.

Including the skills already learned, find the number of skills that Takahashi can ultimately learn.

Constraints

- $1 \le N \le 2 \times 10^5$
- $(A_i, B_i) = (0, 0)$ or $1 \le A_i, B_i \le N$
- All input values are integers.

Input

The input is given from Standard Input in the following format:

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$$N$$
$$A_1 \quad B_1$$
$$A_2 \quad B_2$$
$$\vdots$$
$$A_N \quad B_N$$

Output

Output the answer.

Sample Input 1   Copy

```
6
0 0
1 3
3 2
5 5
4 6
6 4
```

Sample Output 1   Copy

```
3
```

At first, Takahashi has already learned skill 1. Because skill 1 has been learned, skill 2 can be learned, and learning skill 2 enables learning skill 3. Since it is impossible to learn skills $4, 5, 6$, the answer is 3.

Sample Input 2   Copy

```
4
0 0
0 0
0 0
0 0
```

Sample Output 2   Copy

```
4
```

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