

Kicking Shoes

Input file: **standard input**
Output file: **standard output**
Time limit: 1 second
Memory limit: 256 megabytes

maomao90 was bored, so he decided to play his favourite computer game, which is a simulation of his hobby, kicking shoes.

There are N people numbered from 0 to $N - 1$. Initially, all of them are standing at position 0.

At time t several things will happen in order:

1. Everyone with $t_i < t$ will take a step forward.
2. Person i with $t < t_i$ can choose to kick their shoe to x_i . If there is someone at position x_i currently, they will be knocked in the head and disappear, and if there are multiple people at the x_i , person i can choose who to knock. Note that the shoes **do not take time to travel** and will reach x_i instantaneously.
3. If person i has reached x_i , he will disappear.

maomao90 gains 1 happiness for each person that is knocked in the head. If maomao90 can choose the timings that each person kicks their shoe, find the maximum happiness that maomao90 can achieve.

Note that a shoe cannot hit 2 people at once and 2 shoes cannot hit the same person.

Input

The first line contains a single integer N ($1 \leq N \leq 2 \cdot 10^5$) — the number of people

The next N lines contains integers t_i and x_i ($1 \leq t_i, x_i \leq 10^9$) — the time that person i will start walking and the position person i will throw his shoe to.

Output

Print a single integer representing the maximum happiness maomao90 can achieve.

Examples

standard input	standard output
5 2 4 1 5 3 1 4 4 5 2	2
3 3 1 1 4 5 2	1

Note

For the first example, the diagram below shows the possible events that happens from time 0 to 5:

0. Person 1 kicks his shoe to position 5.

1. Nothing happens
2. Person 1 moves one step forward, then person 0 and 2 both kick their shoes to position 4 and 1 respectively. Person 1 is at position 1, so he is hit in the head by person 2's shoe and he disappears.
3. Person 0 moves one step forward, then person 3 kicks his shoe to position 4
4. Person 0 and person 2 move one step forward, then person 4 kicks his shoe to position 2. Person 0 is at position 2, so he is hit in the head by person 4's shoe and he disappears. Person 2 also reaches his destination, so he also disappears.
5. Person 3 moves one step forward

