



## Binge Watching

Totally exhausted of the three intensive days of our SOI workshop, you turn on your television as soon as you get home. The choice is huge. Among the thousand of channels, there is always something interesting on.

You want to binge watch as many shows as you can, but you can not watch more than one programme simultaneously. But in case that one show ends at the exact moment when another one starts, you can swap from one to the other. What is the maximum number of shows that you can watch?

(Please do not try this at home - we recommend you to solve the remaining tasks on this judge and on [www.soi.ch](http://www.soi.ch) → Train → Training Tasks.)

### Input

The first line of the input contains a single integer  $N$ , the number of shows on the schedule. The next  $N$  lines contain the starting and ending times  $(a_i, b_i)$  of the individual shows  $1 \leq i \leq N$ .

### Output

Output a single integer, the maximum number of shows that you can watch.

### Limits

There are 10 groups of tests, each worth 10 points.

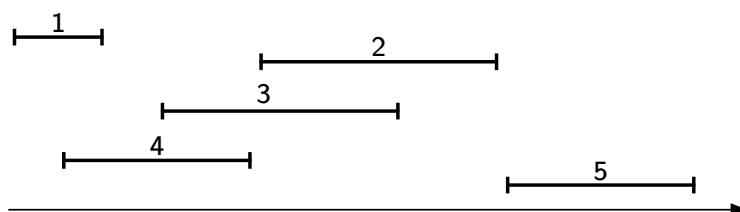
- In groups 1 to 3, we have  $n \leq 10$ .
- In groups 4 to 6, we have  $n \leq 1\,000$ .
- In groups 7 to 10, we have  $n \leq 100\,000$ .

In all tests, we have  $0 \leq a_i < b_i \leq 1\,000\,000\,000$  for all  $i$ .

### Examples

Input	Output
5 0 2 5 10 3 8 1 4 8 12	3

*Out of the five shows, you can watch at most three without any overlaps.*





Input	Output
4 1 10 2 3 4 5 6 7	3