

E. Restaurant

Time limit: 4s

Memory limit: 256 MB

A restaurant received n orders for the rental. Each rental order reserve the restaurant for a continuous period of time, the i -th order is characterized by two time values — the start time l_i and the finish time r_i ($l_i \leq r_i$).

Restaurant management can accept and reject orders. What is the maximal number of orders the restaurant can accept?

No two accepted orders can intersect, i.e. they can't share even a moment of time. If one order ends in the moment other starts, they can't be accepted both.

Input

The first line contains integer number n ($1 \leq n \leq 5 \cdot 10^5$) — number of orders. The following n lines contain integer values l_i and r_i each ($1 \leq l_i \leq r_i \leq 10^9$).

Output

Print the maximal number of orders that can be accepted.

Examples

input
2 7 11 4 7
output
1

input
5 1 2 2 3 3 4 4 5 5 6
output
3

input
6 4 8 1 5 4 7 2 5 1 3 6 8
output

