Task 2: `Swords`

Yan Hao has n swords numbered from 1 to n. Sword i has attack $a[i]$ and defence $b[i]$.

Yan Hao thinks that sword i is **useless** if there exists a different sword j ($j \neq i$) such that $a[i] \leq a[j]$ and $b[i] \leq b[j]$. That is, a sword i is **useless** if the attack and defence of another sword j are both at least as good as that of sword i. If a sword is **not useless**, we say that it is **useful**.

Two swords are considered equivalent if they have the same attack and same defence. It is guaranteed that no pair of swords are equivalent.

Help Yan Hao find the number of **useful** swords in his collection.

Input format

Your program must read from standard input.

The first line of input contains exactly 1 integer, n.

The next n lines of input contains two space-separated integers each. The i-th such line of input will contain $a[i]$ and $b[i]$ respectively, indicating the attack and defence of sword i.

Output format

Your program must print to standard output.

The output should contain one integer, the number of **useful** swords.

The output should contain only a single integer. Do not print any additional text such as 'Enter a number' or 'The answer is'.

Subtasks

For all testcases, the input will satisfy the following bounds:

- $1 \leq n \leq 100\,000$

- $1 \leq a[i], b[i] \leq 10^9$

- For all $1 \leq i < j \leq n$, $a[i] \neq a[j]$ or $b[i] \neq b[j]$

Your program will be tested on input instances that satisfy the following restrictions:

Subtask	Marks	Additional Constraints
1	11	$n \leq 500$
2	21	$a[i], b[i] \leq 500$
3	34	$a[i] = i$
4	25	$a[i] \neq a[j]$ for every $1 \leq i < j \leq n$
5	9	No additional constraints

Sample Testcase 1

This testcase is valid for subtasks 1, 2, 4 and 5.

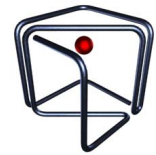| Input	Output
3 2 3 1 3 5 3	1

Sample Testcase 1 Explanation

Comparing sword 1 with sword 3, we have $a[1] = 2 \leq 5 = a[3]$ and $b[1] = 3 \leq 3 = b[3]$, so sword 1 is **useless**.

Comparing sword 2 with sword 1, we have $a[2] = 1 \leq 2 = a[1]$ and $b[2] = 3 \leq 3 = b[1]$, so sword 2 is **useless**.

Sword 3 is the only **useful** sword.

Sample Testcase 2

This testcase is valid for subtasks 1, 2, 4 and 5.

Input	Output
4 5 6 2 5 6 9 1 3	1