Competitive Programming SS24

Submit until end of contest

Problem: hygiene (1.0 second timelimit)

The final contest in Competitive Programming is around the corner, but currently there are some restrictions around test in presence. Specifically, all students have to be seated at a minimum distance from each other. Recently, we got the floor plan for the contest site and now want to check whether the seats conform to the regulations. To do that, we need the minimum distance between two seats in the floor plan. Can you calculate this for us?

Input First, there is a line with $2 \leq n \leq 10^5$ (Yes, the contest site is quite large), the number of available seats. For each of seat, follows one line, with the coordinates $0 \leq x, y \leq 10^6$. Of course, we don't stack students so the coordinates are distinct.

Output To prevent rounding errors, print the ***SQUARE*** of the distance between the closest two students.

Sample input

```
4
0 0
5 4
2 2
4 1
```

Sample output

```
5
```