Closest Pair of Routers

You're in charge of maintaining up the WiFi network on a college campus. There are a number of routers installed across campus, but they aren't set up efficiently. Some are much closer together than others. You are responsible for finding the routers which are closest together and moving them to areas with less coverage. Given the locations of each router as a 2D point, you need to find the two routers which are the closest together.

Input

The first line of input contains an integer N giving the number of routers on campus. Following that are N lines, with each giving the X and Y coordinate of a router, separated by a space. Each of these will be a floating point number.

Output

Output should consist of a single line giving the coordinates of the two routers which are the closest together. The coordinates should be printed with two digits after the decimal point.

The two router locations should be ordered by X coordinates. If the X coordinates are the same, they should be ordered by Y coordinate.

Example Input

```
11
68.63 -15.99
23.19 67.25
-71.29 43.29
33.31 -67.77
-69.07 69.07
-18.87 -35.80
-2.39 48.88
-56.14 -2.47
53.82 -60.69
43.75 -62.79
14.07 57.19
```

Example Output

(43.75, -62.79) (53.82, -60.69)