TC2038 Análisis y Diseño de Algoritmos Avanzados
Act15 – Best Friends in BeagleTown
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Forma de Trabajo: *Individual*.

In BeagleTown live many happy and friendly beagles, but now we are looking for the two beagles that are the best friends. They live and walk around BeagleTown, but we define their friendship for how close they are, so the two beagles we are looking for, are them who are the closest.

Given **n** points (x, y) where each beagle is in BeagleTown, you have to display the beagles who are the Best Friends and the distance of them in BeagleTown.

Input

First comes **n** (beagles, $2 \leq n \leq 10^6$), after this comes **n** line with the name of the beagle (one word) and 2 integers **x** and **y** ($0 \leq x, y \leq 10^9$).

Output

A line showing the name of the two beagles who are the Best Friends (in lexicographic order) and the distance of the two beagles rounded with 2 digits. See the format in the sample output.

Sample Input

```
5
Sparko 5 10
Rocky 2 30
Prue 1 15
Nico 10 2
Nerea 20 5
```

Sample Output

```
Best friend in BeagleTown are: Prue & Sparko (6.40)
```