

Write a program to identify the youngest person and the oldest person in a class.

Input

The number n ($1 \leq n \leq 100$) in the first line determines the number of people in a class. The following n lines contain person's name and his/her birthdate.

The information in each line is of this format:

personName dd mm yyyy

where *personName* is a single word less than 15 letters, *dd mm yyyy* are date, month and year of the birthdate.

Suppose that no one has the same name or the same birthdate.

Output

Print out 2 lines containing the name of youngest person and oldest person, respectively.

Sample Input

```
5
Mickey 1 10 1991
Alice 30 12 1990
Tom 15 8 1993
Jerry 18 9 1990
Garfield 20 9 1990
```

Sample Output

```
Tom
Jerry
```