The young programmer Sasha wrote his first testing system. He was so happy that it compiled that he decided to invite his school friends to his own contest.

But at the end of the round, it turned out that the system does not know how to sort the teams in the results table. Help Sasha implement this sorting.

Teams are ordered according to ACM rules:

- by the number of tasks solved in descending order;
- if the number of solved problems is equal – by penalty time in ascending order;
- ceteris paribus – by team number in ascending order.

The first line contains a natural number N ($1 \leq N \leq 100$) – the number of teams participating in the contest.

The i-th of the next N lines contains the number of solved problems S ($0 \leq S \leq 100$) and the penalty time T ($0 \leq T \leq 100$) of the team with number i.

Print N numbers – the numbers of the commands in the order in which they should appear in the table.

Sample input:

```
5
3 50
5 720
1 7
0 0
8 500
```

Sample output:

```
5 2 1 3 4
```