

The Tournament Results

Charles is running a E-sports tournament. In the tournament, players play games against another player, with the winner advancing to the next round. Players keep playing until there is just one player left. Unfortunatley, Charles has mixed up the order of the results, so we need to figure out which players are still remaining in the tournament.

Input Format

The input to the program is a list of results, one per line, as follows:

```
Player0 Score0 Player1 Score1
```

Where

- `Player0` is the first player's name
- `Score0` is the first player's score
- `Player1` is the second player's name
- `Score1` is the second player's score

Note that you can use a scanner object's `hasNext()` method to determine when you have reached the end of the input.

Constraints

The scores will be integers between 0 and 1000, inclusive.

The player's names will be alphabetic strings containing no spaces.

All games have a winner (i.e. there are no games that ended in a tie.)

You must use a `TreeSet`, `TreeMap`, `HashSet`, and/or `HashMap` to solve this problem.

The running time of your solution must be $O(n \log n)$ or faster, where n is the number of teams.

Output Format

The output of the program is a list of the players that are still alive in the tournament in alphabetical order, with one player name per line.

Sample Input 0

```
Alice 100 Bob 5
Bob 30 Chuck 25
Dave 10 Alice 30
Eve 30 Frank 40
George 23 Frank 20
Henry 24 Alice 1
```

Sample Output 0

```
George
Henry
```

Explanation 0

The players in this tournament are Alice, Bob, Chuck, Dave, Eve, Frank, George, and Henry. Alice lost to Henry; Bob lost to Alice; Chuck lost to Bob; Eve lost to Frank; and Frank lost to George. Thus, the only players still alive in the tournament are George and

Henry.