

Problem I

Election Campaign

Time Limit: 10 seconds

As you know, it is time for another exciting election! This year, the campaign signage is even more absurd than usual. Perhaps the most ridiculous aspect is how posters have been haphazardly placed on public walls. In particular, there is one very long wall that many posters have been placed on. People have rudely slapped up posters promoting their favourite candidate and many of these cover parts of previously-placed posters.

Each poster's height is exactly as tall as the wall, but their horizontal spans can vary. In particular, a poster i is given by the x -coordinates of its left and right edges, say l_i and r_i . We then say that poster i covers all points x such that $l_i < x < r_i$.

Now consider posters i and j with edges at l_i, r_i and l_j, r_j respectively. Say that poster i *partially obscures* poster j if poster i was placed after poster j and if there is some point x covered by both i and j but not covered by any other poster placed before i and after j .



Note that this is not the same as simply saying poster i covers some point that is also covered by poster j . We don't want to blame i for covering part of j if this part was already covered by other posters placed before i .

You want to see how rudely the posters are placed. For each poster i , you should find the list of all other posters j such that poster i partially obscures poster j .

Input

The first line of input contains a single integer $T \leq 10$ indicating the number of test cases. A test case begins with a single integer $1 \leq n \leq 10^5$ indicating the number of posters in the input. Then n lines follow, each describing a poster. The i th such line describes the i th poster that was placed on the wall and this is given by two coordinates l_r, r_i satisfying $1 \leq l_1 < r_i \leq 10^9$.

Output

The output for each test case consists of $n + 1$ lines. The first line is simply *Case #:* where # indicates which test case is being processed. The remaining n lines describe how posters are directly obscured.

The i th such line begins with a number s_i indicating how many posters are directly obscured by poster i . On the same line, these s_i posters are given in increasing order. A single space should appear between every pair of consecutive numbers on this line.

Sample Input**Sample Output**

3	Case 1:
3	0
0 5	0
5 10	2 1 2
2 6	Case 2:
5	0
0 2	1 1
1 3	1 2
2 4	1 3
3 5	1 4
4 6	Case 3:
3	0
1 2	1 1
1 2	1 2
1 2	