

Help the Queen

(Input file name will be taken as first parameter to your program)

Daenerys has just arrived at her ancestral home, The Dragonstone, and wants to invade Westeros as soon as possible without wasting any time. Tyrion, hand of the queen, advises her to attack the enemy from all possible directions. As there are many different tribes in Daenerys' army i.e. Dothraki, Unsullied and Dornish, etc. Tyrion wants to use each of them in different locations. To finalize his plan, he needs to know how many men each tribe has.

Grey Worm is sent to count the men in each tribe and return back as soon as possible. He, along with Massandi, goes to army camps and writes the names of each man and the name of his tribe. They ended up with hundreds of names which are not in any particular order and they have also realized that they have written some names multiple times. Counting names from this list manually is a very time consuming task and also there are chances of error while detecting the duplicates because any duplicates should only be counted once. To avoid any chance of error they need help from someone very good in such skills.

A raven arrived at Arbisoft asking for help to count men in each tribe and also detect possible duplicates. The queen is waiting for our reply and we want you to write a program for this so that we can reply as soon as possible.

Input

Input will be read from a file. First line of input will be an integer **T** representing the number of test cases. Each test case starts with a number **N**. Next **N** lines have a string containing the name of the tribe followed by the name of a man. You can assume that the name of the tribe will always be of one word.

Output

Output will be written to a file. For each test case, output a string 'Case: #' where # represent case number. Next lines will contain, in alphabetical order, the tribe name and number of men in that tribe separated by a space. There will be an empty line between each test case output.

Sample Input

```
1
3
Dothraki Drogon
Unsullied Grey Worm
Dothraki Drogo
```

Sample Output

```
Case: 1
Dothraki 2
```

Unsullied 1