13190   Rockabye Tobby

"Rockabye baby, don't you cry".

Tobby is very good at catching the ball, he loves that game so much, that one day he decided to go out and play, even though it was raining. He played for a long time and in addition to catching the ball many times, he also got a cold, poor Tobby. That is why now his mother will take care of him, Big doggie momma, singing that beautiful lullaby (rockabye) and giving him the medications in the moments that must be taken.

In the medical prescription sent by the doctor, he specifies the name of the medications and how often they should be taken. The doctor told him that if he takes the medications constantly, he will be relieved after taking k medicines. Tobby does not like being sick (in fact no one likes to be), so he promises his mother to be constant with the drugs, that is why he now wants to know what are the first k drugs that he has to take to feel better. Can you help him?

Input

Input begins with a line containing an integer T $(1 \leq T \leq 5)$, the number of test cases.

For each test case, the medical prescription is written as follows:

Each test case begins with a line containing two integers, n $(1 \leq n \leq 3*10^3)$ and k $(1 \leq k \leq 10^4)$, indicating the number of medications sent by the doctor and the minimum number of medicines Tobby must take to feel better.

The following n lines will be of the form, '*name frecuency*' $(1 \leq |name| \leq 15, 1 \leq frecuency \leq 3*10^3)$, indicating the name of the medication and how often it should be taken.

The medicines are listed according to their degree of priority, i.e. the first one will be the most important drug and the last one, the least important.

Output

For each test case, the output must have k lines, each of the form, '*t m*', indicating that in the moment t Tobby must take the drug m.

If there are two or more drugs that must be given at the same time t, they should be printed according to their priority.

Sample Input

```
1
2 5
Acetaminophen 20
Loratadine 30
```

Sample Output

```
20 Acetaminophen
30 Loratadine
40 Acetaminophen
60 Acetaminophen
60 Loratadine
```