

# Medal Tally

You are the statistician for the 2012 London Olympics. Your job is to keep track of medals won by different countries and broadcast the medal tally to viewers all around the world. You will be given the data of the medals won by different countries in no particular order. Output the medal tally. The convention to be used is sort by the number of gold medals a country has earned. In the event of a tie in the number of gold medals, the number of silver medals is taken into consideration, and then the number of bronze medals.

## Input

First line contains 2 integers, D (no of lines = no of medals) and N (the no. of countries participating in Olympics, 1 index based).

Next D lines are of the form "a b" (quotes for clarity). 'a' is the country no. ( $1 \leq a \leq N$ ) and 'b' takes 3 possible values (G for a gold medal, S for a silver medal and B for a bronze medal).

## Output

First line should contain the 5 space separated strings: "Country Gold Silver Bronze Total" (Total → total no. of medals won by a country).

Next you should output the medal tally in the form of the strings described above, one country per line.

Note however that you should output only those countries in the tally which has atleast 1 medal from the Olympics. In case where any countries obtain same no. of gold, silver and bronze medal, place that country above which has less country index. See sample output for more clarification.

## Constraints

$$1 \leq D \leq 1000$$

$$1 \leq N \leq 1000$$

## Example

**Input:**

10 5

2 G

3 S

2 B

5 G

4 B

4 B

5 B

2 G

2 B

2 S

**Output:**

Country Gold Silver Bronze Total

2 2 1 2 5

5 1 0 1 2

3 0 1 0 1

4 0 0 2 2