

Ranger Station Signal Network

In a vast forest, multiple ranger stations are set up to monitor wildlife activity. Each station can communicate with other nearby stations using radio signals. There are three types of signals available—Red (R), Green (G), and Blue (B). Each signal connection allows bi-directional communication between the two given stations.

Your task is to determine how many connected groups of stations exist for each type of signal in this network. Given the number of stations and a list of signal connections between pairs of stations, find out how many connected groups are formed for each signal type.

Input Format:

- The first line contains two integers n ($1 \leq n \leq 100$) and e ($1 \leq e \leq 10^4$) representing the number of stations and the number of signal connections, respectively.
- Each of the n subsequent lines contains the label of the station, followed by space-separated (signal, station) pairs adjacent to it in the ascending order of node labels. For eg: 1 R 2 G 3 represents station 1 followed by the signal station pairs of (R,2) and (G,3) with the connection of type R between 1 and 2, and type G between 1 and 3, respectively.

Output Format:

- The first line represents the number of connected groups that are of type Red (R).
- The second line represents the number of connected groups that are of type Green (G).
- The third line represents the number of connected groups that are of type Blue (B).

Sample Test Cases:

Input 1:

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5 16
1 R 2 G 3 G 4 B 4
2 R 1 R 3 B 3 G 5 B 5
3 G 1 R 2 B 2
4 G 1 B 1
5 G 2 B 2
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Output 1:

3
2
2

Input 2:

6 24
1 R 2 G 3 B 4
2 R 1 R 3 G 4 B 5
3 G 1 R 2 R 4 G 5 B 6
4 B 1 G 2 R 3 R 5 G 6
5 B 2 G 3 R 4 R 6
6 B 3 G 4 R 5

Output 2:

1
2
3