Repeated words   P30170_en

Segon Concurs de Programació de la FME (2005-05-05)

Write a program that, given a sequence of words, computes how many characters have in total the words that appear once, how many characters have in total the words that appear twice, how many characters have in total the words that appear thrice, etc.

Input

Input consists of several cases. Each case begins with a number $1 \leq n \leq 10^5$, followed by n words.

Output

For each case of the input and for each number x of repetitions, print in a line the total number of characters (not counting repetitions) of the words that appear exactly x times, If there is no word with x repetitions, do not print anything for this x. Print an empty line after every case.

Sample input

```
12 z z ab dddddd z z ab yy yy yy yy x
2 c3po r2d2
```

Sample output

```
1 : 7
2 : 2
4 : 3

1 : 8
```

Problem information

Author : Salvador Roura
Translator : Carlos Molina
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