

Document Analytics

Jojo is reviewing his assignment. His assignment is an essay consisting of several pages, numbered by integers starting from 1. Just before he uploaded his assignment, he remembered that his teacher previously said that each page needs to have at least X words. To his teacher, a word is a group of consecutive characters with at least one letter that is not separated by any spaces or newlines.

Unfortunately, Jojo's text editor is not capable of counting the number of words on each page. He asks you to make a program that can tell him which pages only have number of words less than X. He also asked you to tell the number of words of those pages. Help him!

Format Input

The input can be read from the file testdata.in.

The first line consists of an integer X, which represents the minimum number of words for each page the teacher wants.

The remaining lines until the end of the file describe Jojo's essay. Every page of his essay is ended with a line consisting of a single character '#'.

Format Output

Output several lines with format "page A: B word(s)" without quotes, where A is the page number and B is the number of words on A-th page, and the inequality B < X holds. Output those pages sorted by the page number in ascending order.

If there is no page which has words less than X, output "The essay is correct" without quotes.

Constraints

- $1 \le X \le 50000$
- The number of pages will not exceed 10 pages
- Each line consists of a non-empty string, which length will not exceed 50 characters
- Each line consists of only lower case latin alphabet and whitespaces, except the last line of each page which consists of a single character '#'
- The total number of lines in Jojo's essay will not exceed 1000 lines, including the lines which consist of only a single character '#'

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Sample Input 1 (testdata.in)

```
10
lorem ipsum dolor sit amet
consectetur adipiscing elit
#
sed do eiusmod tempor
incididunt ut labore et
dolore magna aliqua
#
```

Sample Output (standard output)

```
page 1: 8 word(s)
```

Sample Input 2 (testdata.in)

```
1
jojo
#
lili
#
bibi
#
```

Sample Output 2 (standard output)

The essay is correct

Explanation

In the first sample, the second page consists of 11 words.

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Jojo sedang mengecek ulang tugasnya. Tugasnya berupa sebuah esai yang tersusun atas beberapa halaman, dinomori dengan bilangan bulat mulai dari 1. Tepat sebelum ia mau mengumpulkan tugasnya, ia teringat gurunya mengatakan bahwa setiap halaman harus terdapat minimal X kata. Menurut gurunya, sebuah kata adalah sekumpulan karakter berurutan yang tersusun atas setidaknya satu karakter dan tidak dibisahkan oleh spasi atau newline.

Sayangnya, aplikasi text editor milik Jojo tidak mampu untuk menghitung banyaknya kata pada setiap halaman. Ia meminta tolong Anda untuk membuat sebuah program yang dapat memberitahu dia, halaman mana yang hanya memiliki jumlah kata kurang dari X. Dia juga meminta Anda untuk memberi tahu jumlah kata dari halaman-halaman tersebut. Bantu dia!

Format Input

Masukan dapat dibaca dari file testdata.in.

Baris pertama berisi sebuah bilangan bulat X, yang merepresentasikan jumlah kata minimum yang diinginkan oleh sang guru untuk masing-masing halaman.

Baris sisanya hingga akhir dari file mendeskripsikan essay milik Jojo. Setiap halaman akan diakhiri dengan sebuah baris yang berisi sebuah karakter '#'.

Format Output

Keluarkan beberapa baris dengan format "page A: B word(s)" tanpa kutip untuk setiap halaman, dimana A adalah nomor halaman dan B adalah banyaknya kata di halaman ke-A, dan pertidaksamaan B < X berlaku. Keluarkan halaman-halaman tersebut secara terurut menaik berdasarkan nomor halaman. Anda dapat melihat contoh kasus uji untuk lebih jelasnya.

Jika tidak terdapat halaman yang memiliki jumlah kata kurang dari X, keluarkan "The essay is correct" tanpa kutip.

Constraints

- 1 < X < 50000
- Jumlah halaman tidak akan melebihi 10 halaman
- Setiap baris tersusun atas string tidak kosong, yang panjang nya tidak lebih dari 50 karakter.

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- Setiap baris tersusun atas hanya huruf kecil alfabet latin dan spasi, selain baris terakhir dari masing-masing halaman yang tersusun atas sebuah karakter '#'
- Jumlah baris yang ada di esai milik Jojo tidak melebihi 1000 baris, termasuk baris yang tersusun atas hanya sebuah karakter '#'

Sample Input (testdata.in)

```
lorem ipsum dolor sit amet
consectetur adipiscing elit

#
sed do eiusmod tempor
incididunt ut labore et
dolore magna aliqua
#
```

Sample Output (standard output)

```
page 1: 8 word(s)
```

Sample Input 2 (testdata.in)



Sample Output 2 (standard output)

```
The essay is correct
```

Explanation

Pada contoh kasus uji pertama, halaman kedua tersusun atas 11 kata.

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