

2006 Most wanted word

Write a program to find the most frequent word in a file of text. A word is any non-empty continuous sequence of alphabetic characters. Case is not regarded as significant, so the words “bother” and “BOTHeR” should be considered the same word.

Any non-alphabetic characters (including control characters such as newlines) can be used to separate words. Thus “isn’t” is counted as two words, the second of which is a one letter word consisting only of the letter “t”.

If more than one word appears with the maximum frequency, then the first word to reach the maximum frequency is required.

Input

Input will consist of a set of paragraphs each terminated by a single line containing only the character ‘#’ which will not otherwise occur anywhere in the text. No paragraph will contain more than 2000 different words, and no word will be more than 20 letters long. The input is terminated by a test case with no words at all. This case should produce no output.

Output

For each paragraph, your program should print one line containing the frequency of the most frequent word, right justified in a field of width 4, followed by a space and the most frequently occurring word itself, entirely in lower case.

Sample Input

```
This is a simple file of test data, which should
not cause your program any trouble. Do note that
it contains several punctuation characters. Of course,
this is not really a problem, because such characters
are treated in the same way as spaces.
```

```
#
Don't use contractions; it isn't nice.
```

```
#
aBc def AbC def dfe ABC
```

```
#
123
#
```

Sample Output

```
  2 of
  2 t
  3 abc
```