

Given a line of text you will have to find out the frequencies of the ASCII characters present in it. The given lines will contain none of the first 32 or last 128 ASCII characters. Of course lines may end with `\n` and `\r` but always keep those out of consideration.

Input

Several lines of text are given as input. Each line of text is considered as a single input. Maximum length of each line is 1000.

Output

Print the ASCII value of the ASCII characters which are present and their frequency according to the given format below. A blank line should separate each set of output. Print the ASCII characters in the ascending order of their frequencies. If two characters are present the same time print the information of the ASCII character with higher ASCII value first. Input is terminated by end of file.

Sample Input

```
AAABBC  
122333
```

Sample Output

```
67 1  
66 2  
65 3  
  
49 1  
50 2  
51 3
```