HOMEWORK 1

Write a program to remove all the blank characters (space and tab) in a line. Then, count the number of appearances of each character.

Input

A single line with a maximum length of 5000 characters

Output

First line: The line after remove all the blank characters. If the line is empty, don't print anything in the output.

Next lines: Each line contain a character that appears in the line and its count. Note that, the characters must appear according to their ASCII number order. (http://www.asciitable.com)

Example:

Input	Output
Hello World	HelloWorld H 1 W 1 d 1 e 1 l 3 o 2 r 1
Welcome to CS240.	<pre>WelcometoCS240 1 0 1 2 1 4 1 C 1 S 1 W 1 c 1 e 2 1 1 m 1 o 2 t 1</pre>