Word Count

In web searching applications, one of the most basic tasks is counting the words appearing in the web page.

Can you write a program to solve this task?

Input

The input contains a single case, indicating the text of the web page.

The text contains many English words in several lines and in each line there could be more than one word. The input only contains English words, separated by space or line breaks. Words are **case-sensitive**.

Output

Print the words in alphabetic order with the corresponding appearance count in the text. For each word, please print the result in a single line (separate the word and the number with space).

Sample Input	Sample Output
Computer system computer design algorithm design and analysis quantum computer computer science department	Computer 1 algorithm 1 analysis 1 and 1 computer 3 department 1 design 2 quantum 1 science 1 system 1