Task:

Input Format

You are given two strings, and , separated by a new line. Each string will consist of lower case Latin characters ('a'-'z').

Output Format

In the first line print two space-separated integers, representing the length of and respectively.

In the second line print the string produced by concatenating and ().

In the third line print two strings separated by a space, and . and are the same as and , respectively, except that their first characters are swapped.

Example:

Input 1

abcd

ef

Output 1

4 2

abcdef

ebcd af