Problem A. Anagram

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	64 megabytes

Given string S and a list of words L. Each word from L and S contains only letters from 'a' to 'z'. Erase all anagrams of S and duplicates from the list. The word is an anagram of another word, if it can be obtained by rearrangement of its letters. Print remaining words from the list in ascending order.

Input

List of words.

Output

List of words.

Example

standard input	standard output
abc abcd abc cba bca	abcd

Problem B. Checker

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	64 megabytes

Given string A, B and C. Print chars from ‘a’ to ‘z’ which not appeared in strings.

Input

Three strings with letters in range ’a’ .. ’z’.

Output

Letters in ascending order.

Examples

standard input	standard output
twnwdlu xfilson vlwpfhj	abcegkmqryz
llbxoyk eriuqtx icrmrdp	afghjnsvwz

Problem C. Common strings

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	64 megabytes

You are given strings A, B and C. Print all common chars of these strings in lexicographical without repetition.

Input

strings A, B, C

Output

all common chars

Example

standard input	standard output
kbtu fit forevert	t

Problem D. Chars

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	64 megabytes

Given string A which contains only lower case letters. Replace all consequence chars from english alphabet with number of consequence chars. For example, “absolute” => “2solute”, “abcfdef”=>”3f3” , “result”=>”result”

Input

String A

Output

Result of the program

Examples

standard input	standard output
absolute	2solute
abcrdefg	3r4

Problem E. Descending order

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	64 megabytes

You are given two integer numbers N, K. Find all divisors of number N and store them in vector (or array). Sort these numbers in descending order. Print Kth from begining.

Input

two integer numbers N, K

Output

Print Kth from begining

Example

standard input	standard output
17 2	1

Problem F. Exam

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	64 megabytes

Given pairs of string and int. Where string is name of the student and int is his score for programming exam. One student can pass exam several times. Find best result for each student and print them in ascending order by name.

Input

List of pairs.

Output

List of pairs.

Example

standard input	standard output
A 12 A 20 C 10 A 30 B 2 B 1 C 23 B 1	A 30 B 2 C 23