Problem A

In this problem, you will be given a string S1 containing lowercase characters only. You will have to build a new string S2 in which the characters in S1 will be in ascending order.

Input: a string S1, $1<=|S1|<=10^6$

Output: the string S2.

Sample Case:

Input	Output
axxbabcbabb	aaabbbbbcxx
ayacbxay	aaabcxyy

Problem B

In this problem, you will have to sort given pair of numbers.

Input:
First line: n, a number (1<=n<=10^6).
Next n lines: $x_i y_i$, a number (0 <= x_i <= 1000, 0 <= y_i <= 1000).

Output:
Each line will contain the pair values in ascending order according to the value of x_i. In case of same x_i, sort according to y_i.

Sample Case:

Input	Output
4 5 2 2 3 2 5 2 3	2 3 2 3 2 5 5 2

Problem C

In this problem, you will be given a set of numbers in sorted order. Then you will be given queries to find if the number exists in the given numbers.
Input:
First line: n, a number (1<=n<=10^5).
Next n lines: x_i, a number (0 <= x_i <= 1000000)
Next line: q, number of queries (1<=n<=10^5)
Next q lines: y_i, a query number (0 <= y_i <= 1000000)

Output:
Each line will containing the result of the query. The result is 1 if the query is found, 0 otherwise.

Sample Case:

Input	Output
5 1 3 5 6 7 3 1 11 6	1 0 1