

Helping tool

Mr.Khan thinks about the meaning of life very often. He does this constantly, even when typing in the editor. When he was typing ,some keys are being pressed repeatedly. For example, instead of the phrase "i am khan" he can type "iiii aaaam khhaann".

Mr. Khan decided to automate the process of correcting such errors. He decided to write a tool to the text editor that will remove pairs of same consecutive letters . Of course, this is not exactly what Mr.Khan needs, but he's got to start from something!

Now you are a programmer and write the main tool module. Your program should remove from a string all pairs of same letters, which are consecutive. If after the removal there appear new pairs, the program should remove them as well. while the string contains a pair of consecutive same letters, the pair should be deleted.

Input

The input data consists of a single line to be processed. The length of the line is from 1 to 200000 characters (input must be EOF file).

Output

Print the given string after it is processed. if reamaining string is empty just print -1 .

input :

xraccabccbry

baabd

aaaa

Output :

xy

d

-1

Problem setter: Mamun