Problem A. Almost Bobo Number

Input file:	*standard input*
Output file:	*standard output*
Time limit:	3 seconds
Memory limit:	512 mebibytes

A positive integer is called a *bobo number* if its decimal representation can be obtained by concatenating two copies of the same integer. For example, 12341234 and 3232 are *bobo numbers*, while 1234321 and 1322 are not.

A positive integer is called an *almost bobo number* if, after merging all the consecutive equal digits, the resulting number is a *bobo number*. For example, $\underbrace{111}\underbrace{222}\underbrace{3}\underbrace{11}\underbrace{22}\underbrace{33}$ becomes 123123 after merging all the consecutive equal digits, and thus is an *almost bobo number*.

Bobo has a very large number n, and he would like to know the largest *almomst bobo number* less than n.

Input

The input contains zero or more test cases, and is terminated by end-of-file. For each test case:

The first line contains an integer n without leading zeros ($1 \le n \le 10^{5\,000\,000}$).

It is guaranteed that the total length of the decimal representations of all n in the input does not exceed $5\,000\,000$.

Output

For each test case, output an integer without leading zeros denoting the largest *almomst bobo number* strictly less than n. If there is no such integer, output -1 instead.

Example

standard input	standard output
12345	12212
67890	67767
11111	11010
1000	-1
26782641	26777267