

Veci

Problem ID: veci**CPU Time limit:** 1 second**Memory limit:** 1024 MB**Difficulty:** 1.8

Your program will be given an integer X . Find the smallest number larger than X consisting of the same digits as X .

Input

The first line of input contains the integer X ($1 \leq X \leq 999\,999$). The first digit in X will not be a zero.

Output

Output the result on a single line. If there is no such number, output 0.

Sample Input 1

156

Sample Output 1

165

Sample Input 2

330

Sample Output 2

0

Sample Input 3

27711

Sample Output 3

71127

Source: Croatian Open
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