2. VECI

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 ($1 \leq X \leq 999999$).

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 test data

input	input	input
156	330	27711
output	**output**	**output**
165	0	71127