The Next Palindrome

A positive integer is called a *palindrome* if its representation in the decimal system is the same when read from left to right and from right to left. For a given positive integer K of not more than 1000000 *digits*, write the value of the smallest palindrome larger than K to output. Numbers are always displayed without leading zeros.

Input

The first line contains integer t, the number of test cases. Integers K are given in the next t lines.

Output

For each K, output the smallest palindrome larger than K.

Example

Input:
2
808
2133

Output:
818
2222

Warning: large Input/Output data, be careful with certain languages