

# Halfway Hawser

Input file:            **standard input**  
Output file:           **standard output**  
Time limit:            1 second  
Memory limit:         1024 megabytes

Mr. Nežmah found a large string of length  $n$ ; in fact, it is so large it would be more appropriate to call it a *hawser*. However, he would like to remove exactly one letter from it. From the  $n$  strings which can be obtained in such a way, he is interested in the lexicographic median.

Formally, let  $t_i$  denote the string obtained by removing the  $i$ -th letter from  $s$ . Let  $p$  be any permutation of numbers from 1 to  $n$  such that  $t_{p_i}$  is lexicographically smaller than or equal to  $t_{p_{i+1}}$ . He wants to know  $t_{p_{\lfloor \frac{n+1}{2} \rfloor}}$ .

## Input

The first line contains a single integer  $t$  ( $1 \leq t \leq 2 \cdot 10^4$ ), the number of test cases.

The only line of each test case contains a single string  $s$  ( $2 \leq |s| \leq 10^6$ ), consisting only of lowercase english characters.

The sum of  $|s|$  across all test cases is at most  $10^6$ .

## Output

For each test, in a single line, output the required string.

## Example

standard input	standard output
4	zagrb
zagreb	klokan
klokani	oblutc
oblutci	ac
abc	