

Next permutation

[Wersja polska](#)

[English version](#)

Given string **n**, your task is to print next permutation of string **n**.

Input

The first line of the standard input contains one integer **t** ($t < 101$) which is the number of test cases.

In each of the next **t** lines there is one integer **l** ($l < 20$) which is length of string **n**. Line below you will be given string **n**.

Output

For each string **n**, print the next permutation of string **n** or *ERROR* if there is no such a permutation.

Example

Input:

2

3

acb

3

cba

Output:

bac

ERROR