Poltu and Biggest Number

I feel sorry for Poltu \odot He could not manage to win the *LOVE MATRIX* game. But he was honest and didn't try to cheat Jesy. This means he really loves her. Jesy also noticed it. But you already know that she is not too easy. So she wants to give him another chance. This time if he fails there will be no way opened for him.



Poltu is given a positive integer n that contains no more than 100 digits and he is allowed to perform at most one swap operation where he can exchange the position of any two digits of the number. Now Jesy wants the biggest number that can be obtained after performing the operation.

Poltu did it on his own as soon as he heard of the challenge. But you know this is the only chance he can get her heart. So before presenting the number to Jesy, he wants to be sure that the answer is correct. So he asks your help. He will send you the number that Jesy gave him and you have to send him the correct answer so that he can be sure about his solution.

Input

Input starts with an integer T ($1 \le T \le 20$) – the number of test cases. Then each of next T lines contains a positive integer n with no more than 100 digits.

Output

For each case, print the biggest number that can be obtained after performing the operation.

Sample Input	Sample Output
2	532414
132454	55441
54541	

In the first case, biggest number can be obtained if he swaps 1 and 5.

Author: Monir