

You have been given a text message. You have to return the Run-length Encoding of the given message.

Run-length encoding is a fast and simple method of encoding strings. The basic idea is to represent repeated successive characters as the character and a single count. For example, the string "aaaabbbccdaa" would be encoded as "a4b3c2d1a2".

Input Format :

The first line contains an integer 'T' which denotes the number of test cases or queries to be run. Then the test cases follow:

The first and only line of each test case will contain a string denoting the message.

Note :

It's guaranteed that the message string will have no digits and consists solely of lowercase alphabetic characters.

Output Format :

For each test case/query, print the encoded message string.

Output for every test case will be printed in a separate line.

Note :

You do not need to print anything, it has already been taken care of.

Constraints :

$1 \leq T \leq 10$

$1 \leq N \leq 100000$

Where N is the length of the message string.

Time Limit : 1sec

Sample Input 1 :

3
aabbcc
abcd
abbdcaas

Sample Output 1 :

a2b2c1
a1b1c1d1
a1b2d1c1a2s1

Sample Input 2:

2
sadasd
adsad

Sample Output 2 :

s1a1d1a1s1d1
a1d1s1a1d1