

Counting WOW-Substrings

You are given a string. You have to **count the total lengths** of all **WOW** substrings.

WOW substrings are defined as a contiguous substring of a string

where there is no any character occurring more than one times.

That means, all the characters of substring are unique.

As answer could be very large, so print it modulo **100007**. (NOTE THAT: 100007 is not a prime number!!)

Input

Input starts with an integer **TC**(≤ 50), denoting the number of test cases. Each case starts with a string **S**.

All characters in string will consists of only lowercase letters of English alphabets.

Output

For each case, print the case number and total lengths of all WOW substrings of given string modulo **100007**.

Constraints:

$1 \leq TC \leq 50$.

$1 \leq |S| \leq 500000$. (Length of string)

Example

Input:

2

aaa

ab

Output:

Case 1: 3

Case 2: 4