

Problem: C
Palindromic Anagram

Time Limit: 1 sec

A **palindrome** is a word, phrase, number, or other sequence of characters which reads the same backward or forward, such as *madam* or *kayak*.

An **anagram** of a string is another string that contains same characters, only the order of characters can be different. For example, “abcd” and “adbc” are anagram of each other.

Your teacher taught you about palindrome and anagram. Then he gave you an easy problem to solve. Given a string, you have to tell how many anagram of this string (including given string) is palindrome.

Input

Input starts with an integer **T** (≤ 200), denoting the number of test cases.

Each case contains a string *S* consists only of lowercase alphabet.

$|S| \leq 10^4$; Here $|S|$ is the length of string *S*.

Output

For each case, print the case number and the number of palindromic anagram modulo 1000000007 ($10^9 + 7$).

Sample Input	Sample Output
2	Case 1: 0
abcd	Case 2: 2
abba	