

Round E APAC Test 2016

A. Lazy Spelling Bee

B. Robot Rock Band

C. Not So Random

D. Sums of Sums

Questions asked

Lazy Spelling Bee		
5pt	Not attempted 613/697 users correct (88%)	
8pt	Not attempted 539/608 users correct (89%)	

Submissions

Robot Rock Band

6pt	Not attempted	
	551/580 users	
	correct (95%)	

Not attempted 301/474 users correct (64%)

Not So Random

11pt	Not attempted 340/366 users correct (93%)
20pt	Not attempted 124/201 users correct (62%)

Sums of Sums

8pt	Not attempted 447/490 users correct (91%)
28pt	Not attempted 17/102 users correct (17%)

 Top Scores 	
NAFIS	100
gvaibhav21	100
codecracker4	100
shivar31	100
harshil7924	100
aniket20	100
triveni692	100
sgtlaugh	100
gsa	100
ctzsm	100

Problem A. Lazy Spelling Bee

This contest is open for practice. You can try every problem as many times as you like, though we won't keep track of which problems you solve. Read the <u>Quick-Start Guide</u> to get started.

Small input 5 points

Large input 8 points

Solve A-small Solve A-large

Problem

In the Lazy Spelling Bee, a contestant is given a target word W to spell. The contestant's answer word A is acceptable if it is the same length as the target word, and the i-th letter of A is either the i-th, (i-1)th, or (i+1)th letter of W, for all i in the range of the length of A. (The first letter of A must match either the first or second letter of W, since the 0th letter of W doesn't exist. Similarly, the last letter of A must match either the last or next-to-last letter of W.) Note that the target word itself is always an acceptable answer word.

You are preparing a Lazy Spelling Bee, and you have been asked to determine, for each target word, how many distinct acceptable answer words there are. Since this number may be very large, please output it modulo 1000000007 $(10^9 + 7)$.

Input

The first line of the input gives the number of test cases, **T**. **T** test cases follow; each consists of one line with a string consisting only of lowercase English letters (a through z).

Output

For each test case, output one line containing "Case #x: y", where x is the test case number (starting from 1) and y is the number of distinct acceptable answer words, modulo 10^9+7 .

Limits

 $1 \le T \le 100.$

Small dataset

 $1 \le \text{length of each string} \le 5$.

Large dataset

 $1 \le \text{length of each string} \le 1000.$

Sample

Input	Output
4 ag aa abcde x	Case #1: 4 Case #2: 1 Case #3: 108 Case #4: 1

In sample case #1, the acceptable answer words are aa, ag, ga, and gg.

In sample case #2, the only acceptable answer word is aa.

