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Counting Strings

Problem code: TACNTSTR

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You are given a string s consisting of upper case Latin alphabets, i.e. from 'A' to 'Z'. Your task is to find how many strings t with length equal to that of S , also consisting of upper case Latin alphabet are there satisfying the following conditions:

- String t is lexicographical larger than s
- When you write both s and t in the reverse order, t is still lexicographical larger than s .

Find out number of such strings t . As the answer could be very large, output it modulo $10^9 + 7$

Input

The only line of input contains string s .

Output

Output a single line containing an integer corresponding to the result in modulo $10^9 + 7$.

Constraints

- $1 \leq |S| \leq 10^5$

Example

Input 1:
ZAZ

Output 1:
25

Input 2:
XYZ

Output 2:
5

Explanation

Test #1: To make a valid string t , you can just replace the letter A in S by any other letter, e.g. by replacing 'A' by 'B', we get $t = \text{ZBZ}$. Note that ZBZ is lexicographically larger than ZAZ. Reverse of t (i.e. ZBZ) is also lexicographically larger than reverse of s (i.e. ZAZ).

Test #2: there are 5 valid strings: YYZ, ZYZ, XZZ, YZZ, ZZZ

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Editorial: <http://discuss.codechef.com/problems/TACNTSTR>

Tags: cook74 dynamic-prog medium tuananh93

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Time Limit: 1 sec

Source Limit: 50000 Bytes

Languages: ADA, ASM, BASH, BF, C, C99 strict, CAML, CLOJ, CLPS, CPP 4.3.2, CPP 4.9.2, CPP14, CS2, D, ERL, FORT, FS, GO, HASK, ICK, ICON, JAVA, JS, LISP clisp, LISP sbcl, LUA, NEM, NICE, NODEJS, PAS fpc, PAS gpc, PERL, PERL6, PHP, PIKE, PRLG, PYPY, PYTH, PYTH 3.4, RUBY, SCALA, SCM chicken, SCM guile, SCM qobi, ST, TCL, TEXT, WSPC

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