

Palindromic Border

A **border** of a string is a **proper** prefix of it that is also a suffix. For example:

- **a** and **abra** are borders of **abracadabra**,
- **kan** and **kankan** are borders of **kankankan**.
- **de** is a border of **decode**.

Note that **decode** is not a border of **decode** because it's not proper.

A **palindromic border** is a border that is palindromic. For example,

- **a** and **ana** are palindromic borders of **anabanana**,
- **l**, **lol** and **lolol** are palindromic borders of **lololol**.

Let's define $P(s)$ as the number of palindromic borders of string s . For example, if $s = \text{lololol}$, then $P(s) = 3$.

Now, a string of length N has exactly $N(N+1)/2$ non-empty substrings (we count substrings as distinct if they are of different lengths or are in different positions, even if they are the same string). Given a string s , consisting only of the first 8 lowercase letters of the English alphabet, your task is to find the sum of $P(s')$ for all the non-empty substrings s' of s . In other words, you need to find:

$$\sum_{1 \leq i \leq j \leq N} P(s_{i..j})$$

where $s_{i..j}$ is the substring of s starting at position i and ending at position j .

Since the answer can be very large, output the answer modulo $10^9 + 7$.

Input Format

The first line contains a string consisting of N characters.

Output Format

Print a single integer: the remainder of the division of the resulting number by $10^9 + 7$.

Constraints

$$1 \leq N \leq 10^5$$

All characters in the string can be any of the first 8 lowercase letters of the English alphabet (**abcdefgh**).

Sample Input 1

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ababa
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Sample Output 1

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5
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Sample Input 2

aaaa

Sample Output 2

10

Sample Input 3

abcacb

Sample Output 3

3

Explanation

$s = \text{ababa}$ has 15 substrings but only 4 substrings have palindromic borders.

$$s_{1..3} = \text{aba} \longrightarrow P(s_{1..3}) = 1$$

$$s_{1..5} = \text{ababa} \longrightarrow P(s_{1..5}) = 2$$

$$s_{2..4} = \text{bab} \longrightarrow P(s_{2..4}) = 1$$

$$s_{3..5} = \text{aba} \longrightarrow P(s_{3..5}) = 1$$