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 $s =$ `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:

$$\sum_{1 \le i \le j \le N} P(s_{i\ldots j})$$

where $s_{i\ldots j}$ 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

$1 \le N \le 10^5$
All characters in the string can be any of the first 8 lowercase letters of the English alphabet (`abcdefgh`).

Sample Input 1

```
ababa
```

Sample Output 1

```
5
```

Sample Input 2

```
aaaa
```

Sample Output 2

```
10
```

Sample Input 3

```
abcacb
```

Sample Output 3

```
3
```

Explanation

$s=$ ababa has 15 substrings but only 4 substrings have palindromic borders.

$s_{1...3}=$ aba $\longrightarrow P(s_{1...3})=1$
$s_{1...5}=$ ababa $\longrightarrow P(s_{1...5})=2$
$s_{2...4}=$ bab $\longrightarrow P(s_{2...4})=1$
$s_{3...5}=$ aba $\longrightarrow P(s_{3...5})=1$