

Contest Duration: 2025-09-27(Sat) 22:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250927T2100&p1=248>) - 2025-09-27(Sat) 23:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250927T2240&p1=248>) (local time) (100 minutes)

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F - Inserting Process

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Time Limit: 2.5 sec / Memory Limit: 1024 MiB

Score : 500 points

Problem Statement

You are given a string T of length N consisting of lowercase English letters.

Output, modulo 998244353, the number of sequences of strings $s = (s_0, s_1, \dots, s_N)$ that satisfy all of the following conditions.

- s_0 is an empty string.
- For $i = 1, 2, \dots, N$, the string s_i is obtained by inserting one arbitrary character at an arbitrary position (possibly beginning or end) in s_{i-1} .
- $s_N = T$

Constraints

- $1 \leq N \leq 22$
- N is an integer.
- T is a string of length N consisting of lowercase English letters.

Input

The input is given from Standard Input in the following format:

2026-01-02 (Fri)
05:30:56 +11:00

N

T

Output

Output the answer.

Sample Input 1

[Copy](#)

```
3  
aab
```

[Copy](#)

Sample Output 1

[Copy](#)

```
3
```

[Copy](#)

The sequences *s* that satisfy the conditions are the following three:

- *s* = ("", "a", "aa", "aab")
- *s* = ("", "a", "ab", "aab")
- *s* = ("", "b", "ab", "aab")

Sample Input 2

[Copy](#)

```
7  
atcoder
```

[Copy](#)

Sample Output 2

[Copy](#)

```
5040
```

[Copy](#)

Sample Input 3

[Copy](#)

```
22  
atcoderbeginnercontest
```

[Copy](#)

Sample Output 3

[Copy](#)

2026-01-02 (Fri)

05:30:56 +11:00

[Copy](#)

115732070

/#telegram)

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