Begin-End

Problem Statement

You are given a function $f(x)$, where $f(x)$ is 1 if the first and last characters of string x are equal; else it is 0.
You are given a string S and you have to find the sum of $f(x)$ for all substrings x of given string S.

Note: A substring is a contiguous slice of string S[i:j] such that $i \le j$. It is a contiguous slice of the original string.

Input Format
The first line contains an integer N, length of S.
The second line contains a string S. S will contain only lower case characters $(a-z)$.

Constraints
$1 \le |S| \le 10^6$
$1 \le |x|$

Output Format
Print the required answer.

Sample Input

```
7
ababaca
```

Sample Output

```
14
```

Explanation
$f("a")=1$, $f("aba")=1$, $f(“abaca”)=1$ but $f(“ab”)=0$, $(“bac”)=0$. Hence counting all substrings we get 14
The 14 substring are
a - 4(times)
b - 2
c - 1
aba - 2
bab - 1
aca - 1
ababa - 1
abaca - 1
ababaca - 1