Little Marin spent all his day generating test data for COCI. He simply couldn't make it work, so he had a nervous breakdown and can't even see clearly anymore. Every time he blinks while reading, the letters in a word get mixed up so that the letters from the second half of the word (the shorter half, if the length is an odd number) "jump in" between the letters from the first half in the following way:

- the last letter "jumps in" between the first and the second letter
- the penultimate letter "jumps in" between the second and the third letter
- the $\mathbf{k}^{th}$ letter from the end "jumps in" between the $\mathbf{k}^{th}$ and the $(\mathbf{k+1})^{th}$ letter from the beginning

For example, the word "abcdef" would become "afbecd" after blinking.

If Marin blinks again, the same thing happens. After two blinks, the word "abcdef" becomes "adfcbe".

Marin has decided to write a program to help him determine what's exactly written on the screen. Unfortunately, after a day's work, he's simply too tired and he needs your help. You are given **X**, the number of blinks, and the word Marin sees on the screen. Write a program to solve the mystery for Marin and determine what was actually the word before he blinked **X** times.

INPUT

The first line of input contains a positive integer **X** ($1 \leq \mathbf{X} \leq 1\ 000\ 000\ 000$), the number of times Marin blinked.

The second line of input contains the word from the screen, its length being from the interval [3, 1000]. The word will consist only from small letters of English alphabet.

OUTPUT

The first and only line of output must contain the original word, before Marin blinked **X** times.

SCORING

In test data worth 50 points, **X** will be smaller than or equal to 100.

SAMPLE TESTS

ulaz	**ulaz**	**ulaz**
4 acefdb	1000 aaaaaa	11 srama
izlaz	**izlaz**	**izlaz**
abcdef	aaaaaa	sarma

Clarification of the first example: The word gets altered in the following order: abcdef, afbecd, adfcbe, aedbfc, acefdb.