

# Caesar Cipher

Julius Caesar protected his confidential information by encrypting it using a cipher. [Caesar's cipher](#) shifts each letter by a number of letters. If the shift takes you past the end of the alphabet, just rotate back to the front of the alphabet. In the case of a rotation by 3, w, x, y and z would map to z, a, b and c.

Original alphabet:

abcdefghijklmnopqrstuvwxyz

Alphabet rotated +3:

defghijklmnopqrstuvwxyzabc

### Example

*s* = There's-a-starman-waiting-in-the-sky  
*k* = 3

The alphabet is rotated by 3, matching the mapping above. The encrypted string is Wkhuh'v-d-vwdupdq-zdlwlqj-lq-wkh-vnb.

**Note:** The cipher *only* encrypts letters; symbols, such as -, remain unencrypted.

### Function Description

Complete the *caesarCipher* function in the editor below.

caesarCipher has the following parameter(s):

- string s*: cleartext
- int k*: the alphabet rotation factor

### Returns

- string*: the encrypted string

### Input Format

The first line contains the integer, *n*, the length of the unencrypted string.  
The second line contains the unencrypted string, *s*.  
The third line contains *k*, the number of letters to rotate the alphabet by.

### Constraints

$1 \leq n \leq 100$   
 $0 \leq k \leq 100$   
*s* is a valid ASCII string without any spaces.

### Sample Input

11  
middle-Outz  
2

### Sample Output

## Explanation

Original alphabet:	abcdefghijklmnopqrstuvwxyz
Alphabet rotated +2:	cdefghijklmnopqrstuvwxyzab

m -> o  
i -> k  
d -> f  
d -> f  
l -> n  
e -> g  
- -  
O -> Q  
u -> w  
t -> v  
z -> b