

## Problem F

# Drunk Vigenère

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One of the most well-known and classic methods of encryption is the Vigenère cipher. Given a message and key of equal length, all you need to do to encrypt the message is shift each character forward by a certain number of characters in the alphabet.

For example, if your string is `CALGARY` and key is `ALBERTA`, the number of letters to shift the  $i$ -th letter in the message is given by the position in the alphabet of the  $i$ -th letter in the key, using 0-based indexing. So the first character in our message `c` is shifted 0 letters forward since the first character in our key is `A`. Likewise, `A` is shifted 11 characters since `L` is the 11-th letter in the alphabet. Repeating for each character, we'll find the encrypted message ends up being `CLMKRKY`.

Of course since this is such a well known encryption method, it isn't very safe so your friend Yraglac has come up with a brilliant idea: for each even-indexed character in your message, you do the usual encryption as described above, but for the odd-indexed characters, instead of shifting forwards by the key, you actually shift backwards. Thus, our example above would actually be encrypted as `CPMCRY`. That'll throw off any pesky hackers trying to read your secrets!

Of course Yraglac has left the implementation up to you. Given an encrypted message and the key, can you write a program to decrypt it? Don't forget that everything is using 0-based indexing.

### Input

Input consists of two lines. The first contains the encrypted message  $C$  and the second contains the key  $K$ .  $C$  and  $K$  are always of equal length between 1 and 200 characters long and consists only of uppercase alphabetic letters.

# Output

Output the decrypted message.

## Sample Input 1

CPMCRYY  
ALBERTA

## Sample Output 1

CALGARY

## Sample Input 2

TDLIVA  
OILERS

## Sample Output 2

FLAMES