Problem 2 – Detective Boev

Detective Boev is very good with decrypting messages. One day he got a message sent by general Ivanov. Knowing the decrypting algorithm he asked his secret agent, who is learning C# in SoftUni, to write a console application for decrypting general's messages. Help him.

You will be given an **encrypted message** and a **secret word.**

You need to take the secret word and sum all of it's symbols ASCII code. After that you must sum all digits until the result is only one digit.
For example if the word is **code** (c + o + d + e => 99 + 111 + 100 + 101 => 411 => 4 + 1 +1 => **6**). The **mask** is **6**.

You must decrypt all symbols in the message. Loop over the message and check if the ASCII code of the symbol can be **devided by the mask** without reminder. If so, **add the mask** to the simbol's ASCII code. Otherwise, **subtract** it. Finally you must **reverse** the message and print the result on the console.

Input

The input data should be read from the console. The input will contain exactly two lines.

- The first line will hold the **secret word.**
- The second line will hold the **encrypted message.**

The input data will always be valid and in the format described. There is no need to check it explicitly.

Output

The output data must be printed on the console.

On the only output line you must print the decrypted message.

Constraints

- The **message** and the **secret word** will contain only characters from the ASCII table.
- Allowed working time for your program: 0.1 seconds.
- Allowed memory: 16 MB.

Examples

Input	Output	Mask
C# |wfvohyfqX#hodzwclV	Software University	C# => 67 + 35 => 102 => 1 + 0 + 2 = 3

Input	Output	Input	Output
abc ;7*8&yioyg<&mtossglmulV	Programming Basics 2015	0.5 dofe	bira