Problem 1 - The Imitation Game

Problem for exam preparation for the Programming Fundamentals Course @SoftUni.
Submit your solutions in the SoftUni judge system at https://judge.softuni.org/Contests/Practice/Index/2525#0.

During World War 2, you are a mathematician who has joined the cryptography team to decipher the enemy's enigma code. Your job is to create a program to crack the codes.

On the first line of the input, you will receive the **encrypted message**. After that, until the **"Decode"** command is given, **you will be receiving strings** with **instructions** for different **operations** that need to be performed upon the **concealed message** to **interpret it** and reveal its true content. There are several types of instructions, split by **'|'**

- **"Move {number of letters}"**:
  - **Moves** the **first n letters** to the **back** of the string
- **"Insert {index} {value}"**:
  - **Inserts** the given value **before the given index** in the string
- **"ChangeAll {substring} {replacement}"**:
  - **Changes all occurrences** of the given substring with the replacement text

Input / Constraints

- On the first line, you will receive a string with a message.
- On the following lines, you will be receiving commands, split by **'|'.**

Output

- After the **"Decode"** command is received, print this message:
  "The decrypted message is: {message}"

Examples

Input	Output
zzHe ChangeAll|z|l Insert|2|o Move|3 Decode	The decrypted message is: Hello
Comments	
ChangeAll|z|l zzHe → llHe (We replace all occurrences of 'z' with 'l') **Insert|2|o** llHe → lloHe (We add an 'o' before the character on index 2) Move|3	

lloHe → Hello (We take the first three characters and move them to the end of the string) Finally, after receiving the **"Decode"** command, we print the resulting message.

Input	Output
owyouh Move|2 Move|3 Insert|3|are Insert|9|? Decode	The decrypted message is: howareyou?

JS Examples

Input	Output
['zzHe', 'ChangeAll|z|l', 'Insert|2|o', 'Move|3', 'Decode',]	The decrypted message is: Hello

Comments
ChangeAll|z|l zzHe → llHe (We replace all occurrences of 'z' with 'l') **Insert|2|o** llHe → lloHe (We add an 'o' before the character on index 2) Move|3 lloHe → Hello (We take the first three characters and move them to the end of the string) Finally, after receiving the **"Decode"** command, we print the resulting message.

Input	Output
['owyouh', 'Move|2', 'Move|3',	The decrypted message is: howareyou?

'Insert|3|are', 'Insert|9|?' 'Decode',]	