Problem 1 - Secret Chat

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/2307#0.

You have plenty of free time, so you decide to write a program that conceals and reveals your received messages. Go ahead and type it in!

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

- **"InsertSpace:|:{index}"**:
  - o Inserts a single **space at the given index**. The given index will always be valid.
- **"Reverse:|:{substring}"**:
  - o If the message contains the given **substring**, **cut it out**, **reverse** it and **add** it at the **end** of the message.
  - o If not, print **"error"**.
  - o This operation should replace only the first occurrence of the given **substring if there are two or more occurrences**.
- **"ChangeAll:|:{substring}:|:{replacement}"**:
  - o 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.
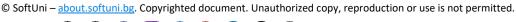- On the following lines, you will be receiving commands, split by **":|:"**.

Output

- After each set of instructions, print the resulting string.
- After the **"Reveal"** command is received, print this message:
  "You have a new text message: {message}"

Examples

Input	Output
heVVodar!gniV	hellodar!gnil
ChangeAll:|:V:|:l	hellodarling!
Reverse:|:!gnil	hello darling!
InsertSpace:|:5	You have a new text message: hello darling!
Reveal	
Comments	

ChangeAll:|:V:|:l

he**VV**odar!gni**V** -> he**ll**odar!gni**l** (We replace all occurrences of "V" with "l")

Reverse:|:!gnil

hellodar!gnil -> !gnil -> ling! -> hellodar**ling!** (We reverse **!gnil** to **ling!** And put it at the end of the string)

InsertSpace:|:5

hellodarling! -> hello darling! (We insert a space at index 5)

Finally, after receiving the **"Reveal"** command, we print the resulting message.

Input	Output
Hiware?uiy	Howare?uoy
ChangeAll:|:i:|:o	Howareyou?
Reverse:|:?uoy	error
Reverse:|:jd	How areyou?
InsertSpace:|:3	How are you?
InsertSpace:|:7	You have a new text message: How are you?
Reveal	

JS Examples

Input	Output

[
  'heVVodar!gniV',
  'ChangeAll:|:V:|:l',
  'Reverse:|:!gnil',
  'InsertSpace:|:5',
  'Reveal'
]
	hellodar!gnil
	hellodarling!
	hello darling!
	You have a new text message: hello darling!

Comments	

ChangeAll:|:V:|:l

he**VV**odar!gni**V** -> he**ll**odar!gni**l** (We replace all occurrences of "V" with "l")

Reverse:|:!gnil

hellodar!gnil -> !gnil -> ling! -> hellodar**ling!** (We reverse **!gnil** to **ling!** And put it in the end of the string)

InsertSpace:|:5

hellodarling! -> hello darling! (We insert a space at index 5)

Finally, after receiving the **"Reveal"** command, we print the resulting message.

Input	Output

[
 	
  'Hiware?uiy',
 	
  'ChangeAll:|:i:|:o',
 	
  'Reverse:|:?uoy',
 	
  'Reverse:|:jd',
 	
  'InsertSpace:|:3',
 	
  'InsertSpace:|:7',
 	
  'Reveal'
 	
]
	Howare?uoy
	
	Howareyou?
	
	error
	
	How areyou?
	
	How are you?
	
	You have a new text message: How are you?