# Regular Extensions

You’ve heard about Regular Expressions, but have you heard about Regular Extensions of Regular Expressions? Well, today you’ll be doing them.

You will be **given** a **text**, which may contain **any ASCII characters**. After that you will receive several input lines containing **patterns**. When you receive a **pattern**, you must find **all its matches**, in the **text** and **reverse** them.

**NOTE**: The pattern is **NOT** a **regex pattern**, it is a sequence of characters, which you must match **literally**. For example, if you have the **pattern** "a-z." you must **literally** **match** the string "a-z.".

There is just a slight detail – the given pattern **might contain** the character '%'. This character means – match   
**ANY character**, **EXCEPT whitespace** characters, **ANY amount** of **times**. For example, if you have the pattern "a%b", you will match strings like: "ab", "acxz\czxcb", "aabb".

The input sequence ends when you receive the command "Print". Then you must **print** the resulting text.

### Input

* On the **first line** of **input** you will **receive** the **text**.
* On the **next several lines** of input you will **receive** the **patterns**.
* The **input ends** when you **receive** the **command** "**Print**".

### Output

* As output you must print the resulting text, after all the manipulations you’ve done on it, on a **single line**.

### Constrains

* The **text** **MAY** contain **ANY ASCII** character.
* The **text** will **NOT** have **MORE** than **100000 characters**.
* The **patterns** **MAY** contain **ANY ASCII** character and **MAY** have **ANY length**.
* Allowed working time/memory: **200ms / 16MB**.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| The quick brown fox jumps over the lazy dog.  qu  dog.  br%  Print | The uqick nworb fox jumps over the lazy .god |
| The five boxing wizards last words were left unspoken.  f%e  %box  w%rd%  Print | The evif xobing sdraziw last sdrow were left unspoken. |
| ab.dc  a%.  .dc  Print | .badc |