# Problem 1 – Regeh

You need to read a line from the console and **match everything** that is in **square brackets**. However, there are some rules that you need to follow:

* You must have **no whitespaces** inside the match.
* Inside the match you must have **[**(ASCII Symbols)**<**(Some digits)**REGEH**(Some digits)**>**(ASCII Symbols)**]**
* If you have **nested brackets** you need to **match the inner most**.

[asdSd**[asdasd<4REGEH23>asdUsd]**

After you find a match you must **extract the numbers** between the “**<**”, “**>**” brackets. Then use this **number like index** to get character from input. Every **index** is the sum of all **previous indexes**. When the index is **larger** than the string length **start from the beginning** of the string. Continue that process until you traverse the string **enough times** for the index to fit.

### Input

* On the first line you will receive input that may contain any character.

### Output

* You must print on the console a **single line with characters**, that you find in the string

### Constraints

* The line may **contain any character**
* Line length will be **1 < n < 1000000**
* Time limit: 0.3 sec. Memory limit: 16 MB.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| [atdSd[asdasd<4REGEH22>asdosy] \*\*\*oopprefs[ew<16REGEH30>rdtr]pppp555b | Soft |
| [aаdSd[[asdasd<4REGEH22>asdosy] \*\*\*oopprefs[ew<16REGEH30>rdtr]ppp555b [tU<1REGEH15>s]trneti!t[dsaf<3REGEH1>fdwss] | SoftUni! |
| [atdSd[<4REGEH22>asdosy] \*\*\*oopprefs[ew<16REGEH>rdtr]pppp555b |  |
| [atdSd[<422>asdosy] \*\*\*oopprefs[ew<16REGEH>]pppp |  |