

Problem 12 – Phone Numbers

You are given a string, holding ASCII characters. Find all **name -> phone number** pairs, format them and print them in an **ordered list** as list items.

The **name** should be at least **one letter long**, can contain only **letters** and should **always start with an uppercase letter**.

The **phone number** should be at least **two digits long**, should **start and end with a digit** (might also **start with “+”**) and might **contain** the following symbols in it: “(”, “)”, “/”, “.”, “-”, “ ” (left and right bracket, slash, dot, dash and whitespace).

Between a name and the phone number there might be **any number of symbols, other than letters and “+”**.

Between the name -> phone number pairs there might be **any number of ASCII symbols**.

The output format should be **[name]: [phone number]** (there is **one space between** the name and the phone number). Clear any characters other than digits and “+” from the number when printing the output.

Input

The input will be read from the console. It will consist of several lines holding the input string. The command **"END"** denotes the end of input.

Output

The output should hold the **resulting ordered list (on a single line)**, or a single **paragraph**, holding **“No matches!”**

Constraints

- The **numbers string** will hold only **ASCII** characters (no Unicode).
- Allowed working time: 0.1 seconds. Allowed memory: 16 MB.

Examples

Input
Angel\$(^*#029661234!@#Pesho , . ' +3592/9653241; '":{ }, . Ivan 0888 123 456 John-=_555.123.4567 Stoian!@#\$\$#@ Gosho)=_* Steven #\$(*&+1-(800)-555-2468 END
Output (li items are separated on new lines for convenience)
Angel: 029661234 Pesho: +35929653241 Ivan: 0888123456 John: 5551234567 Steven: +18005552468
Input
There are no phone numbers here!!! END
Output
<p>No matches!</p>