## Problem 4 – Query Mess

**Ivancho** participates in a team **project** with colleagues at **SoftUni**. They have to develop **an application**, but something *mysterious* happened – at the last moment all team members… disappeared! And guess what? He is left **alone** to finish the project. All that is left to do is to parse the input data and store it in a special way, but Ivancho has no idea how to do that! Can you help him?

### Input The input comes from the console on a variable number of lines and ends when the keyword "END" is received.

### For each row of the input, the query string contains pairs field=value. Within each pair, the field name and value are separated by an equals sign, '='. The series of pairs are separated by an ampersand, '&'. The question mark is used as a separator and is not part of the query string. A URL query string may contain another URL as value. The input data will always be valid and in the format described. There is no need to check it explicitly.

### Output For each input line, print on the console a line containing the processed string as follows: key=[value]nextkey=[another value] … etc. Multiple whitespace characters should be reduced to one inside value/key names, but there shouldn’t be any whitespaces before/after extracted keys and values. If a key already exists, the value is added with comma and space after other values of the existing key in the current string. See the examples below.

### Constraints

* SPACE is encoded as '+' or "%20". Letters (A-Z and a-z), numbers (0-9), the characters '\*', '-', '.', '\_' and *other non-special symbols* are left as-is.
* Allowed working time: 0.1 seconds. Allowed memory: 16 MB.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| login=student&password=student  END | login=[student]password=[student] |
| **Input** | |
| field=value1&field=value2&field=value3  <http://example.com/over/there?name=ferret>  END | |
| **Output** | |
| field=[value1, value2, value3]  name=[ferret] | |
| **Input** | |
| foo=%20foo&value=+val&foo+=5+%20+203  foo=poo%20&value=valley&dog=wow+  url=https://softuni.bg/trainings/coursesinstances/details/1070  <https://softuni.bg/trainings.asp?trainer=nakov&course=oop&course=php>  END | |
| **Output** | |
| foo=[foo, 5 203]value=[val]  foo=[poo]value=[valley]dog=[wow]  url=[https://softuni.bg/trainings/coursesinstances/details/1070]  trainer=[nakov]course=[oop, php] | |