## Problem 3 – Goshko the rabbit

Goshko is a small rabbit that really likes to eat all kind of vegetables. One day Goshko manages to sneak into a fertile garden. He starts to move along a path and eat all vegetables he sees. Help Goshko count all the stuff he ate.

### Input The input is passed to the first JavaScript function found in your code as array of strings. The first string of the input is representing a set of directions describing the path Goshko moved on. It will be in the format:

**'direction, direction, direction, direction,…'**

### The next n strings from the input represent a rectangular matrix describing the garden. Each cell of the matrix will contain a string representing the vegetables and the other items that are in this cell. Every matrix cell is separated from the others by a ', ' (a comma and an interval). The vegetables will be in following format: carrots – {!}, cabbage – {\*}, lettuce – {&}, turnip – {#}. All other strings are non-vegetable items (example: 'askjd{!}mnci{\*}aiwj!nw#id').

The matrix input is in the following format:

**'matrixCell, matrixCell, matrixCell, matrixCell,…'**

See the examples below for more clarity.

Goshko is jumping one cell at a time depending on the direction. **At the beginning he is at the first row and the first column of the matrix.** The garden is surrounded by walls so if a direction leads Goshko out of the garden’s bounds **he hits the wall and remains at the same position**. You must count how many times Goshko hits the walls. After Goshko jumps in a cell he eats **all the vegetables** there and leaves **@** at their places. **If Goshko stays at the same position** because he hits a wall he doesn’t eat from the same cell again. The input data will always be valid and in the format described. There is no need to check it explicitly.

### Output On the first line print the vegetables Goshko ate and the count of wall hits in the following format:

### {"&": countOfLettuce,"\*": countOfCabbage,"#": countOfTurnip,"!": countOfCarrots,"wall hits": countOfWallHits}.

On the second line print all cells Goshko passed, divided by pipes '**|**'. If no cells are passed by Goshko, **print 'no'**. See the given examples below.

### Constraints

* The **starting position** of the rabbit will always be: [**0, 0**].
* The **string's characters**, **row count**, **column count** and **direction** **count** will be between [**1…20**].

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| right, up, up, down  asdf, as{#}aj{g}dasd, kjldk{}fdffd, jdflk{#}jdfj  tr{X}yrty, zxx{\*}zxc, mncvnvcn, popipoip  poiopipo, nmf{X}d{X}ei, mzoijwq, omcxzne | {"&":0,"\*":1,"#":1,"!":0,"wall hits":2}  as@aj{g}dasd|zxx@zxc |
| up, right, left, down  as{!}xnk | {"&":0,"\*":0,"#":0,"!":0,"wall hits":4}  no |