# Problem 2

*Alice is going to the mad tea party to see her friends. On the way to the party she need to collect bags of tea.*

You will be given an integer **n** for the **size** of the Wonderland theritory with **square** shape. On the next **n** lines, you will receive the **rows** of the territory:

* Alice will be placed on a **random position**, marked with the letter '**A**'.
* On the territory there will be bags of tea, represented as numbers. If Alice **step on a number position**, she collects the tea bags and **increases the quantity with the corresponding number**.
* There will **always** be **one** **rabbit hole** on the territory **marked** with the **letter** '**R**'.
* **All of the empty positions** will be marked with **'.'**.

After the field state you will be given **commands** for the **Alice's movement**. Move commands can be: "**up**", "**down**", "**left**" or "**right**".

When Alice collects **at least** **10 bags of tea she is ready to go to the tea party** and she does **not need** to continue collecting. Otherwise, **if she** **steps on** **the rabbit hole** or she **goes out of the territory**, she **can't return back** and the program **ends**.

At the end, all her path she walked has to be marked with **'\*'**.

For more clarifications see the examples below.

### Input

* On the first line, you will be given the integer **n** – the size of the **square** matrix
* On the next n lines **- matrix** representing the field (each position **separated by single space**)
* On each of the next lines you will be given a move command

### Output

* On the first line:
  + If Alice steps on the rabbit hole or she goes out of the territory, print:

"**Alice didn't make it to the tea party."**

* + If she collected at least 10 bags of tea, print:

"**She did it! She went to the party.**"

* On the next lines print the matrix.

### Constraints

* Alice will **always** either **go outside the Wonderland** or **collect 10 bags of tea**
* All the commands will be valid
* All of the given **numbers** will be valid **integers** in the range [0, 10]

### Examples

|  |  |
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| **Input** | **Output** |
| 5  . A . . 1  R . 2 . .  4 7 . 1 .  . . . 2 .  . 3 . . .  down  right  left  down  up  left | Alice didn't make it to the tea party.  . \* . . 1  \* \* \* . .  4 \* . 1 .  . . . 2 .  . 3 . . . |
| 7  . A . 1 1 . .  9 . . . 6 . 5  . 6 . R . . .  . 3 . . 1 . .  . . . 2 . . 2  . 3 . . 1 . .  . 8 3 . . . 2  left  down  down  right | She did it! She went to the party.  \* \* . 1 1 . .  \* . . . 6 . 5  \* \* . R . . .  . 3 . . 1 . .  . . . 2 . . 2  . 3 . . 1 . .  . 8 3 . . . 2 |

*Life is like a cup of tea – it is all in how you make it.*