# 02. Wall Destroyer

*Now that Victoria and Vanko have managed to put the tiles in the correct order, it's time to install shelves and hang paintings on one of the walls. In order to do that, Vanko will have to make a few holes in the wall. But he has to be extra careful, because there are cables and steel rods in the wall, that must not be destroyed. You have to guide him, so that he doesn't hit a cable or a rod.*

You will be given an integer **n** for the size of the wall (square shape). On the next **n** lines, you will receive the rows of the wall. Vanko will start at a **random** position, marked with the letter '**V**'. After he makes his **first** **move**, his **initial** position will be **considered a successfully created hole** and you must **mark his starting position with a '\*'**. The **steel rods** and the **cables** will also be on **random** positions. The **rods** will be marked with the letter '**R**' and the **cables** will be marked with '**C**'. All of the **other** positions will be marked with '**-**' (dash).

Until you receive the "**End**" command, on each turn you will be guiding Vanko and telling him the **direction**, which he should move to and make a hole at. The commands will be "**up**", "**down**", "**left**" and "**right**".

If Vanko **manages to create a hole** at the desired location, mark the position with a '**\***'.

If he **hits a rod**, Vanko **returns to his previous** position and **continues** with the **next** directions. Print "**Vanko hit a rod!**" and consider that he did **not** make a **hole**.

If he **hits a cable**, he gets **electrocuted**, the position is marked with an '**E**' and the program **ends**. The **position** that holds the '**E**' letter is **considered a successfully created hole**.

If Vanko lands on a position that **already has a hole on it**, print "**The wall is already destroyed at position [row, col]!**". In case the directions lead Vanko outside of the wall, Vanko **doesn't move at all** and you must **do nothing.**

Keep track of the holes that Vanko manages to create and of the times that he has hit a steel rod.

**The program will end when Vanko gets electrocuted оr the "End" command is given.**

### Input

* On the first line, you are given the integer **n** – the size of the matrix (wall).
* The **next n lines** hold the values for every **row**.
* On each of the next lines, until you receive the "**End**" command, you will get a move command.

### Output

* On the first line:
  + If Vanko manages to make all of the holes, print "**Vanko managed to make {countOfHoles} hole(s) and he hit only {countOfRods} rod(s).**" .
  + If Vanko gets electrocuted, print "**Vanko got electrocuted, but he managed to make** **{countOfHoles} hole(s).**"
* If Vanko lands on a position that already has a hole on it, print "**The wall is already destroyed at position [row, col]!**"
* If Vanko hits a rod, print "**Vanko hit a rod!**".
* At the end, print the **final state** of the matrix (wall) **with Vanko's position on it**.

### Constraints

* The size of the **square** matrix (wall) will be between **[2…10].**
* Vanko's starting position will always be marked with '**V**'.
* There may be cases where the given directions will be outside of the wall.
* There will be always two output scenarios:
  + Vanko manages to make all of the holes, until the "**End**" command;
  + Vanko gets electrocuted.

### Examples

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Comments** |
| 5  ---C-  -C-R-  -----  -V---  R----  down  left  right  up  left  up  up  right  down  End | Vanko hit a rod! The wall is already destroyed at position [3, 1]! Vanko got electrocuted, but he managed to make 6 hole(s).  ---C-  -E-R-  -\*---  -\*\*--  R\*\*-- | The first command is "**down**". Vanko moves to the position, its value is '**-**', so he makes a hole there and increases the counter.  ---C-  -C-R-  -----  -\*---  RV---  **Next command** is "**left**", but there is a rod there, so we only print the corresponding message.  Next command is "**right**" and this position holds a '**-**', so Vanko makes a hole there and we increase the counter.  ---C-  -C-R-  -----  -\*---  R\*V--  The next command is "**up**". Vanko moves to the position and we increase the counter.  Next command us "**left**", but **there's already a hole there**, so we print the corresponding message, without increasing the counter.  The next command is "**up**". Vanko moves to the position and we increase the counter.  Next command is "**up**" again and the position holds a cable, so Vanko gets electrocuted. We increase the counter of the created holes and we print the corresponding message and the final state of the wall, before ending the program. |
| 5  --V--  ---R-  CC---  -----  -----  up  down  right  down  right  right  End | Vanko hit a rod!  Vanko managed to make 5 hole(s) and he hit only 1 rod(s).  --\*--  --\*R-  CC\*\*V  -----  ----- | The first command is "**up**", but that means that Vanko will go out of the wall, so we do nothing.  Next command is "**down**" and we increase the counter.  Next command is "**right**", but there is a rod, so Vanko doesn't change his position and we only print the corresponding message and increase the rod hits counter.  Next command is "**down**" and we increase the counter.  Next command is "**right**" and we increase the counter.  Next command is "**right**" and we increase the counter again.  The last command is "**End**", so we end the program and print the corresponing message and the final state of the wall. |
| 4  ----  C--R  -V--  ----  up  right  End | Vanko managed to make 3 hole(s) and he hit only 0 rod(s).  ----  C\*VR  -\*--  ---- |  |