**Problem 2**

*You are participating in a Firearm course. It is a training* *day at the shooting range.*

You will be given a **matrix with 5 rows and 5 columns**. It is a **shotgun range** represented as some **symbols** separated by a **single space**:

* **Your position is** marked with the symbol "**A**"
* **Targets** marked withsymbol "**x**"
* **All of the empty positions** will be marked with "**.**"

After the field state you will be given an integer representing the **number of commands** you are going to receive. The possible commands are:

* **"move {right/left/up/down} {steps}"** – you should **move** in the given **direction** with the given **steps**. **You can move** **only** if the field you want to **step on** **is marked with** **"."**.
* **"shoot {right/left/up/down}"** – you should **shoot** in the given direction (from your **current position without moving**). Beware that there might be targets that **stand in the way** of other targets and you **cannot reach** them - you **can shoot** only **the** **nearest** target. **When you have shot a target, the field become empty position (".").**

**Validate** the positions since they can be **outside** the field.

Keep track of all the **shot targets**:

* If at any point there are **no targets left**, **end** the program and print: **"Training completed! All {count\_targets} targets hit."**.
* If, after you perform all **the commands,** there are some **targets left** print: **"Training not completed! {count\_left\_targets} targets left."**.

Finally, print the **index** **positions** of the **targets that you hit** as shown in the examples.

### Input

* **5 lines** representing the field (symbols, **separated by a single space**)
* **N** - count of **commands**
* On the next **N lines** - the commands in the format described above

### Output

* On the **first line,** print one of the following:
  + If all the **targets** were **shot**

**"Training completed! All {count\_targets} targets hit."**

* + Otherwise:

**"Training not completed! {count\_left\_targets} targets left."**

* Finally, print the **index** **positions "[{row}, {column}]"** of the **targets that you hit** as shown in the examples.

### Constrains

* All the **commands** will be **valid**
* There will **always be at least one target**

### Examples

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Comment** |
| . . . . .  x . . . .  . A . . .  . . . x .  . x . . x  3  shoot down  move right 4  move left 1 | Training not completed! 3 targets left.  [4, 1] | You shoot below your position and hit the first target.  You cannot move right with step 4 and you stay at the same position.  You move left with step 1. |
| . . . . .  . . . . .  . A x . .  . . . . .  . x . . .  2  shoot down  shoot right | Training completed! All 2 targets hit.  [4, 1]  [2, 2] |  |
| . . . . .  . . . . .  . . x . .  . . . . .  . x . . A  3  shoot down  move right 2  shoot left | Training not completed! 1 targets left.  [4, 1] |  |