# Survivor

*Welcome to the new elimination Wednesday in Survivor. Your task today is to find all the tokens from the surrounding beach. But better do it before the other contestants can, you don’t want to risk getting eliminated.*

Write a program, that collects tokens from the beach. First, you will be given the number of **rows** of the beach – an **integer n**. On the next **n** lines, you will receive the **available tokens** to **collect** for **each row**, **separated by a single space** in the format:  
**"{token1} {token2} … {tokenn}"**  
The **positions** (cells) **without tokens** in them are considered **empty** and they will be **marked** with a **dash ('-').**

After that, you will start receiving **commands**. There are **three** possibilities:

* **"Find {row} {col}"**:
  + You have to go to the given place **if it is valid** and collect the token **if** there is one.
  + When you **collect** it, you have to mark the place as **empty**, using the **dash** symbol.
* **"Opponent {row} {col} {direction}"**:
  + One of your opponents **is searching for a token** at the given coordinates **if they exist**.
  + After **going** at the given **coordinates** (**if they exist**) and **collecting** the **token** (**if there is such**), **the opponent** begins a **movement** in the **given direction** in **3 steps**. He **collects** all the **tokens** that are **placed on his way**.
  + If the **opponent's movement** is going to **step outside of the field**, he is **stepping only** on **the possible indexes**.
  + When he **finds** tokens, he **marks the cells as** **empty**.
  + There are four possible directions, in which he can go: **"up", "down", "left", "right".**
* **"Gong"** - the gong rings and the challenge is over.

In the end, print on the console the **last condition of the beach**. The cells, containing a token or not, should be **separated by a single space**. After that print the **count** of the tokens you've collected:  
"**Collected tokens: {countOfCollected}**"

The last step is to print the number of **found by your opponent tokens** in the format:  
"**Opponent's tokens: {countOfOpponentsTokens}**"

## Input

* On the first line, you will receive the number of beach **rows** - **integer n.**
* On the next **n** lines, for each row, the situation of the **seashells** at the beach is the described **format** above.
* Next, until you receive **"Gong"**, you will get the **commands** in the specified format.

## Output

* Print the **resulting** beach - each cell separated **by a single space.**
* On the next output line - print information for **tokens** you've **collected** in the **described** format.
* On the last line - print the **number** of tokens found by the opponent.

## Constraints

* The number of **rows** will be a **positive** **integer** between **[1, 10].**
* Not all **rows** will have **the same length.**
* The **tokens** be marked with **'T'.**
* Move commands will be: "**up**", "**down**", "**left**", "**right**".

## Examples

|  |  |  |
| --- | --- | --- |
| ****Input**** | ****Output**** | ****Comment**** |
| **6**  **T T - T T - T**  **- T - -**  **T - T - T T - -**  **- T - T - T**  **T T**  **T T T - T**  **Find 2 2**  **Find 4 1**  **Opponent 3 1 up**  **Find 4 3**  **Find 5 0**  **Find 4 0**  **Opponent 2 0 down**  **Gong** | **T - - T T - T**  **- - - -**  **- - - - T T - -**  **- - - T - T**  **- -**  **- T T - T**  **Collected tokens: 4**  **Opponent's tokens: 4** | First, we receive two **"Find"** commands, we go to the given coordinates, collect the **'T'** and leave its cells **empty ('-')**. After that there is the **"Opponent"** command – your opponent **goes** at coordinates **3 1**, first collects **'T'**, then takes **3 steps up** - the first cell is **empty**, so he continues up, on the **second** step he steals **'T'** and on the **third** - **'T'** and sets their cells as **empty**. The **"Find"** command is next, but we **don't do** anything, because the coordinates are **invalid**. We execute the last commands in the same way. In the end, we print the beach. We've collected **4** tokens. Your opponent managed to **find** **4** tokens. |
| 4  - T T  T  T - - -  T  Find 9 0  Find 1 4  Opponent 0 2 right  Opponent 5 5 up  Gong | **- T -**  **T**  **T - - -**  **T**  **Collected tokens: 0**  **Opponent's tokens: 1** |  |