# 02. CRUD

*The abbreviation CRUD expands to Create, Read, Update and Delete.*

*These are the four fundamental operations in a database.*

In the beginning, you will be given a **matrix** with **6 rows and 6 columns** representing a table with information.

It consists of:

* **Letters** - on one or many positions in the table
* **Numbers** - on one or many positions in the table
* **Empty positions** - marked with **"."**

Next, you will receive your **first position** on the table in the format **"({row}, {column})"**

On the following lines, until you receive **"Stop"** you will be receiving **commands** in the format:

* **"Create, {direction}, {value}"**
  + The direction could be **"up"**, **"down"**, **"left"** or **"right"**
  + If you **step in an** **empty position**, **create** the given **value** on that position. E.g., if the given value is **"A"**, and the position is empty **(".")** - change it to **"A"**
  + If the position is **NOT** **empty**, do **NOT create** a value on that position
* **"Update, {direction}, {value}"**
  + The direction could be **"up"**, **"down"**, **"left"** or **"right"**
  + If you **step on a** **letter** **or** **number, update** the position with the given **value**. E.g., if the given value is **"h"**, and the position's value is **"12"** - change it to **"h"**
  + If the position is **empty**, do **NOT update** the value on that position
* **"Delete, {direction}"**
  + The direction could be **"up"**, **"down"**, **"left"** or **"right"**
* If you **step on a** **letter** **or** **number**, **delete** it,and **empty** the position. E.g., if the given position's value is **"h"** - change it to **"."**
* If the position is **already empty**, do **NOT delete** it
* **"Read, {direction}"**
  + The direction could be **"up"**, **"down"**, **"left"** or **"right"**
  + If you **step on a** **letter** **or** **number**, **print** **it** on the console
  + If the position is **empty**, do **NOT read** it

You can make **only ONE move at a time in the given direction** for each command given.

In the end, **print the** **final matrix**.

### Input

* **On the first 6 lines** - a **matrix** with positions **separated by a single space**
  + **Letters** are in the range **[a-zA-Z]**
  + **Numbers** are in the range **[-100, 100]**
* On the next line - your **first position** in the format: **"({row}, {column})"**
* On the following lines until you receive the command "Stop" - commands in the format shown above

### Output

* In the end, **print the** **final matrix**, each row on a new line, each position separated by a single space.

### Constraints

* You will **always** receive **valid** **coordinates**
* You will **always** receive **directions in the range of the table**
* You will **always** receive **letters** or **numbers**

### Examples

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Comment** |
| . . . . . .  . 6 . . . .  G . S . t S  . . 10 . . .  . 95 . . 8 .  . . P . . .  (1, 1)  Create, down, r  Update, right, e  Create, right, a  Read, right  Delete, right  Stop | t  . . . . . .  . 6 . . . .  G r e a t .  . . 10 . . .  . 95 . . 8 .  . . P . . . | Start from the position (1, 1).  1) The first command is "Create", the direction is "down" and the value is "r". Create the value "r" on the empty position (2, 1).  2) The next command is "Update", the direction is "right" and the value is "e". We change the old value "S" on position (2, 2) with the value "e".  3) The next command is "Create", the direction is "right" and the value is "a". Create the value "a" on the empty position (2, 3).  4) The next command is "Read", the direction is "right". Print the value "t" on position (2, 4).  5) The next command is "Delete", the direction is "right". Delete the value "S" on position (2, 5).  6) Receive the command "Stop", print the final matrix, and end the program. |
| . . . . . .  . 6 . . . .  . T . D . O  . . 10 A . .  . 95 . 80 5 .  . . P . t .  (2, 3)  Create, down, o  Delete, right  Read, up  Create, left, 20  Update, up, P  Stop | . . . . . .  . 6 . . . .  . T . D . O  . . 10 A . .  . 95 . 80 5 .  . . P . t . |  |
| H 8 . . . .  70 i . . . .  t . . . B .  50 . 16 . C .  . . . t . .  . 25 . . . .  (0, 0)  Read, right  Read, down  Read, left  Delete, down  Create, right, 10  Read, left  Stop | 8  i  70  H 8 . . . .  70 i . . . .  . 10 . . B .  50 . 16 . C .  . . . t . .  . 25 . . . . |  |