# Problem 3 - School Library



*Your task is to do an online book library.*

On the first line, you will receive a **string** representing a **shelf with books** in the library. Every book is separated with "**&**".

On the next lines until the "**Done**" command, you will be receiving the commands separated with **" | "**:

* **"Add Book | {book name}"**:
* **Add** the book in the **first place** on the shelf.
* If the book is **already present** on the shelf, **ignore the command**.
* **"Take Book | {book name}"**:
* **Remove** the book with the given name only **if the book is on the shelf**.
* Otherwise, **ignore this command**.
* **"Swap Books | {book1} | {book2}"**:
* If both books **are on the shelf**, swap their places.
* If at least one is **missing**, **ignore** the command.
* **"Insert Book | {book name}"**:
* **Add** the given book at the **end of the shelf**.
* If the book is **already present** on the shelf, **ignore the command**.
* **"Check Book | {index}"**:
* **Print** the **name** **of the book**, which is **at the given index**.
* If the index is **invalid**, **ignore** the command.

### Input

* **On the 1st line**, you will receive a **string** representing a **shelf with books** in the library, separated by "**&**".
* On the **following lines**, until you receive "**Done**", you will be receiving **commands** in the **format described** above.

### Output

* Print the **collection** of books joined by **", "**:

**"{firstBook}, {secondBook}, … {lastBook}"**

### Constraints

* You won't receive duplicate book names in the initial list of books.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| Don Quixote&The Great Gatsby&Moby Dick  Add Book | Ulysses  Take Book | Don Quixote  Insert Book | Alice's Adventures in Wonderland  Done | Ulysses, The Great Gatsby, Moby Dick, Alice's Adventures in Wonderland |
| Anna Karenina&Heart of Darkness&Catch-22&The Stranger  Add Book | Catch-22  Swap Books | Anna Karenina | Catch-22  Take Book | David Copperfield  Done | Catch-22, Heart of Darkness, Anna Karenina, The Stranger |
| War and Peace&Hamlet&Ulysses&Madame Bovary  Check Book | 2  Swap Books | Don Quixote | Ulysses  Done | Ulysses  War and Peace, Hamlet, Ulysses, Madame Bovary |

### JS Examples

The input will be provided as an array of strings.

|  |  |
| --- | --- |
| **Input** | **Output** |
| (["Don Quixote&The Great Gatsby&Moby Dick",  "Add Book | Ulysses",  "Take Book | Don Quixote",  "Insert Book | Alice's Adventures in Wonderland",  "Done"]) | Ulysses, The Great Gatsby, Moby Dick, Alice's Adventures in Wonderland |
| (["Anna Karenina&Heart of Darkness&Catch-22&The Stranger",  "Add Book | Catch-22",  "Swap Books | Anna Karenina | Catch-22",  "Take Book | David Copperfield",  "Done"]) | Catch-22, Heart of Darkness, Anna Karenina, The Stranger |
| (["War and Peace&Hamlet&Ulysses&Madame Bovary",  "Check Book | 2",  "Swap Books | Don Quixote | Ulysses",  "Done"]) | Ulysses  War and Peace, Hamlet, Ulysses, Madame Bovary |