# Problem 2. Santa's List

*Its Christmas time and Santa needs your help with creating the list of noisy kids.*

## Input

You will receive the **initial list** with noisy kids each of them separated with **"&"**.

After that you will receive **4 types** of commands until you receive **"Finished!"**

* **Bad {kidName} -** **adds** a kid at the **start** of the list. If the kid **already exists** skip this line.
* **Good {kidName} - removes** the kid with the given name only **if he exists** in the list, otherwise skip this line.
* **Rename {oldName} {newName} –** if the kid with the given **old name** exists **change** his name with the **newer** one. If he **doesn't exist** skip this line.
* **Rearrange {kidName} -** If the kid exists in the list **remove** him from his **current position** and **add** him at the **end** of the list.

## Constraints

* You won't receive duplicate names in the initial list

## Output

Print the **list** of all noisy kids joined by **", ".**

* **"{firstKid}, {secondKid}, …{nthKid}"**

## Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| Peter&George&Mike  Bad Joshua  Good Peter  Finished! | Joshua, George, Mike |
| **Input** | **Output** |
| Joshua&Aaron&Walt&Dustin&William  Good Walt  Bad Jon  Rename Aaron Paul  Rearrange Jon  Rename Peter George  Finished! | Joshua, Paul, Dustin, William, Jon |