# Nascar Qualifications

The Nascar Qualifications are about to begin. You are tasked with creating a program that outputs **the results from the race**. On the **first** line you will be given **the names of the racers on their positions in the beginning of the race**. On the **next** line, you will be given the **following pairs** – **“{command} {racer}|{command} {racer}……”.**

You may receive the following types of commands:

* Race {racer} – add the pilot on the last position, if he isn’t in the race.
* Accident {racer} – remove the racer from the race.
* Box {racer} – move the racer one position back, if he is in the race and he is not already last.
* Overtake {racer} {racersCount} – move the racer the given count of positions forward, if he is in the race and the position is valid.

Read commands until you receive “end”.

## Input / Consrtaints

* On the **first line**, you will be given **the names of the racers on their positions**.
* On the second line, you will be given the pairs – {command} {racer} in the format described above.
* There will always be at least one racer in the race.
* The commands will always be valid.

## Output

* At the end of the race, print the list with the names of the racers, separated by **“~”**.

## Examples

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| **Input** | **Output** |
| Vetel Hamilton Raikonnen Botas Slavi  Box Hamilton  Overtake LeClerc 2  Race Ricardo  Accident Botas  Overtake Ricardo 1  Accident Slavi  end | Vetel ~ Raikonnen ~ Hamilton ~ Ricardo |
| **Comments** | |
| First, we receive the command “Box” and we need to move Hamilton a position back in the list. Currently, **he is 2nd in the list**, and **he has to become 3rd**, respectively, **the racer behind him**, **moves in front of him** and **becomes 2nd**. After, that we receive a command about a racer, who is not in the race and we **skip** that command. Next, Ricardo begins the race **at the last position**. Botas has an accident and is **removed** from the race. Ricardo overtakes 1 racer, which means he **overtakes** Slavi, and moves **in from of him**. At last, Slavi undergoes through an **accident** and is **removed** from the race. | |
| Vetel Hamilton Slavi  Box Hamilton  Overtake Hamilton 2  Accident Slavi  end | Hamilton ~ Vetel |