### Problem 2 – Coffee Lover

*John is a lover of expensive and luxurious coffees.*

Create a program that helps John keep track of the coffee he has. You will receive a list of the coffees that John has In stock, on a single line separated by a single space in the following format:

“{coffee1} {coffee2} {coffee3} … {coffeeN}”.

Then you will receive a number – n – a count of commands you need to execute over your list. There are four possible commands:

* “Include {coffee}”:
* Add the coffee at the end of your list.
* “Remove {first/last} {numberOfCoffees}”:”:
* Depending on the input, remove either the “first” or the “last” number of coffees from your list
* If you have fewer coffees in your list than the given number, skip this command
* “Prefer {coffeeIndex1} { coffeeIndex2}”:”:
* If both coffee indexes exist in your list, take the two coffees and change their places
* Otherwise, skip this command
* “Reverse
* Reverse the order of the coffees

In the end print the manipulated list in the following format:

“Coffees

{coffee1} {coffee2} {coffee3} … {coffeeN}”.

### Input/ Constraints

* On the 1st line you will receive the starting list with the names of the coffees separated by a “ “ (empty space)
* On the 2nd line you will receive the number of commands n – an integer in the range [1…100]
* On the following n lines you will be receiving commands in the format described above

### Output

* Pring the list after the manipulation in the format described above

### Examples

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| --- | --- |
| **Input** | **Output** |
| Arabica Liberica Charrieriana Magnistipula Robusta BulkCoffee StrongCoffee  5  Include TurkishCoffee  Remove first 2  Remove last 1  Prefer 3 1  Reverse | Coffees:  StrongCoffee Magnistipula Robusta BulkCoffe Charrieriana |
| **Comments** | |
| First, we receive the "**Include**" and the name of the coffee: we **add** the coffee to our **list**. The collection should look like this: **Arabica Liberica Charrieriana Magnistipula Robusta BulkCoffee StrongCoffee TurkishCoffee**  Next, we receive the "**Remove**" command and the keyword "**first**": we take **the first 2 coffees** and **remove** them. The collection should look like this: **Charrieriana Magnistipula Robusta BulkCoffee StrongCoffee TurkishCoffee**.  After that, we receive the "**Remove**" command and the keyword "**last**": we **remove the last 1 coffee**. The collection should look like this: **Charrieriana Magnistipula Robusta BulkCoffee StrongCoffee**.  Next, we receive the "**Prefer**" command: we find the coffee at index 3 and replace it with the coffee at index 1. The collection should look like this: **Charrieriana BulkCoffee Robusta Magnistipula StrongCoffee**.  At last, we receive the "**Reverse**" command: we make a **reverse** list. Our final collection looks like this: **StrongCoffee Magnistipula Robusta BulkCoffe Charrieriana**. | |
|  | |
| Arabica Robusta BulkCoffee StrongCoffee TurkishCoffee  5  Include OrdinaryCoffee  Remove first 1  Prefer 0 1  Prefer 3 1  Reverse | Coffees:  OrdinaryCoffee Robusta StrongCoffee TurkishCoffee BulkCoffee |
| Robusta StrongCoffee BulkCoffee TurkishCoffee Arabica  3  Include OrdinaryCoffee  Remove first 1  Prefer 4 1 | Coffees:  StrongCoffee OrdinaryCoffee TurkishCoffee Arabica BulkCoffee |

JS Examples  
The input will be provided as an array of strings.

|  |  |
| --- | --- |
| **Input** | **Output** |
| (["Arabica Liberica Charrieriana Magnistipula Robusta BulkCoffee StrongCoffee",  "5",  "Include TurkishCoffee",  "Remove first 2",  "Remove last 1",  "Prefer 3 1",  "Reverse"]) | Coffees:  StrongCoffee Magnistipula Robusta BulkCoffe Charrieriana |
| **Comments** | |
| First, we receive the "**Include**" and the name of the coffee: we **add** the coffee to our **list**. The collection should look like this: **Arabica Liberica Charrieriana Magnistipula Robusta BulkCoffee StrongCoffee TurkishCoffee**  Next, we receive the "**Remove**" command and the keyword "**first**": we take **the first 2 coffees** and **remove** them. The collection should look like this: **Charrieriana Magnistipula Robusta BulkCoffee StrongCoffee TurkishCoffee**.  After that, we receive the "**Remove**" command and the keyword "**last**": we **remove the last 1 coffee**. The collection should look like this: **Charrieriana Magnistipula Robusta BulkCoffee StrongCoffee**.  Next, we receive the "**Prefer**" command: we find the coffee at index 3 and replace it with the coffee at index 1. The collection should look like this: **Charrieriana BulkCoffee Robusta Magnistipula StrongCoffee**.  At last, we receive the "**Reverse**" command: we make a **reverse** list. Our final collection looks like this: **StrongCoffee Magnistipula Robusta BulkCoffe Charrieriana**. | |
|  | |
| (["Arabica Robusta BulkCoffee StrongCoffee TurkishCoffee",  "5",  "Include OrdinaryCoffee",  "Remove first 1",  "Prefer 0 1",  "Prefer 3 1",  "Reverse"]) | Coffees:  OrdinaryCoffee Robusta StrongCoffee TurkishCoffee BulkCoffee |
| (["Robusta StrongCoffee BulkCoffee TurkishCoffee Arabica",  "3",  "Include OrdinaryCoffee",  "Remove first 1",  "Prefer 4 1"]) | Coffees:  StrongCoffee OrdinaryCoffee TurkishCoffee Arabica BulkCoffee |