# 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} ... {coffeeNn}".**

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** the command.
* **"Reverse"**:
  + **Reverse** the order of the coffees.

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

**"Coffees:**

**{coffee1} {coffee2} … {coffeeNn}"**

### 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

* Print the **list after** the **manipulations** in the **format** **described** above.

### Examples

|  |  |
| --- | --- |
| **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 |