# Problem 3 - Music Playlist



*You are managing a music playlist and need a program to help keep track of the songs in the playlist.*

You will **receive** the **list** of **songs** on a **single line,** **separated** by a **single** **space** in the following format:

**"{song1} {song2} {song3} … {songn}"**

Then you will receive a number – **n** – a count of commands you need to execute over your list. There are six possible commands separated with **" \* "**:

* **"Add Song \* {song}":**
  + **Add** a **song** at the **last position** of the playlist and **print**: **"{song} successfully added"**
  + If the song is **already present** on the list, **ignore the command**.
* **"Delete Song \* {number of songs}"**
  + Remove the **given number of songs** from the **beginning** of the list and **print**:  
    **"{song1}, … {songn} deleted"**
  + If you have **fewer songs** on your list **than the given number**, **skip this command**.
* **"Shuffle Songs \* {song index1} \* {song index2}":**
  + If both of the song indexes exist in your list, swap the songs that are on those indexes. Print:   
    **"{new first song} is swapped with {new second song}"**
    - Make sure to print the names of the songs **after the songs are swapped**.
  + If one or both indexes are **out of range**, **ignore** the command.
* **"Insert \* {song} \* {song index}"**
  + Insert the song at the **given index**, only if the resulting index exists, and **print**: **"{song} successfully inserted"**
  + If the **index is out of range**, **print:   
    "Index out of range"**
  + If the **index is in range,** but the **song is already in the list**, **print:   
    "Song is already in the playlist"**
* **"**Sort**"**
  + **Order** the songs **alphabetically in descending** order.
* **"**Play**"**
  + **Print** the **playlist** in the following format:  
    **"** **Songs to Play:  
    {song1}  
    {song2}  
    …  
    {songn}"**

## Input / Constraints

* On the **1st line**, you will receive the **starting list** with the **names of the songs** **separated** by a **single space**.
* On the **2nd line**, you will receive the number of commands – **n** – **an integer in the range [1…100].**
* On the next **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** |
| Imagine BadGuy BohemianRhapsody BlindingLights  6  Add Song \* ShapeOfYou  Delete Song \* 2  Shuffle Songs \* 0 \* 3  Insert \* RollingInTheDeep \* 1  Sort  Play | ShapeOfYou successfully added  Imagine, BadGuy deleted  RollingInTheDeep successfully inserted  Songs to Play:  ShapeOfYou  RollingInTheDeep  BohemianRhapsody  BlindingLights |
| **Comments** | |
| First, we receive the **"Add Song"** command with the **name of the song**, and we **add it to our playlist**. The list should look like this:  **Imagine BadGuy BohemianRhapsody BlindingLights ShapeOfYou**  After that, we receive the **"Delete Song"** command with the **given number of 2**, which means we have to **delete the first two songs**, so we remove them from our list, and the collection should look like this:  **BohemianRhapsody BlindingLights ShapeOfYou** Then, we receive the **"Shuffle Songs"** command, which means we need to **find the song at the first given** **index** – **0** and swap it with the one at **index** – **3**. Index **3** is **out of range**; therefore, the **command is ignored**. Next, we receive the **"Insert"** command, which means we need to **insert the given song** at the **position before index 1**, and the collection should look like this:  **BohemianRhapsody RollingInTheDeep BlindingLights ShapeOfYou** Then, we receive the **"Sort"** command, and we need to **sort the playlist in descending order**. Our final list looks like this:  **ShapeOfYou RollingInTheDeep BohemianRhapsody BlindingLights**  Finally, we receive the "Play" command, and we need to print the manipulated playlist. | |
|  | |
| **Input** | **Output** |
| BlindingLights RollingInTheDeep ShapeOfYou  7  Add Song \* LetItBe  Delete Song \* 1  Shuffle Songs \* 1 \* 2  Insert \* BohemianRhapsody \* 0  Add Song \* BohemianRhapsody  Sort  Play | LetItBe successfully added  BlindingLights deleted  LetItBe is swapped with ShapeOfYou  BohemianRhapsody successfully inserted  Songs to Play:  ShapeOfYou  RollingInTheDeep  LetItBe  BohemianRhapsody |

## JS Examples

The input will be an array of strings.

|  |  |
| --- | --- |
| **Input** | **Output** |
| (["Imagine BadGuy BohemianRhapsody BlindingLights",  "6",  "Add Song \* ShapeOfYou",  "Delete Song \* 2",  "Shuffle Songs \* 0 \* 3",  "Insert \* RollingInTheDeep \* 1",  "Sort",  "Play"]) | ShapeOfYou successfully added  Imagine, BadGuy deleted  RollingInTheDeep successfully inserted  Songs to Play:  ShapeOfYou  RollingInTheDeep  BohemianRhapsody  BlindingLights |
| **Comments** | |
| First, we receive the **"Add Song"** command with the **name of the song**, and we **add it to our playlist**. The list should look like this:  **Imagine BadGuy BohemianRhapsody BlindingLights ShapeOfYou**  After that, we receive the **"Delete Song"** command with the **given number of 2**, which means we have to **delete the first two songs**, so we remove them from our list, and the collection should look like this:  **BohemianRhapsody BlindingLights ShapeOfYou** Then, we receive the **"Shuffle Songs"** command, which means we need to **find the song at the first given** **index** – **0** and swap it with the one at **index** – **3**. Index **3** is **out of range**; therefore, the **command is ignored**. Next, we receive the **"Insert"** command, which means we need to **insert the given song** at the **position before index 1**, and the collection should look like this:  **BohemianRhapsody RollingInTheDeep BlindingLights ShapeOfYou** Then, we receive the **"Sort"** command, and we need to **sort the playlist in descending order**. Our final list looks like this:  **ShapeOfYou RollingInTheDeep BohemianRhapsody BlindingLights**  Finally, we receive the "Play" command, and we need to print the manipulated playlist. | |
| **Input** | **Output** |
| (["BlindingLights RollingInTheDeep ShapeOfYou",  "7",  "Add Song \* LetItBe",  "Delete Song \* 1",  "Shuffle Songs \* 1 \* 2",  "Insert \* BohemianRhapsody \* 0",  "Add Song \* BohemianRhapsody",  "Sort",  "Play"]) | LetItBe successfully added  BlindingLights deleted  LetItBe is swapped with ShapeOfYou  BohemianRhapsody successfully inserted  Songs to Play:  ShapeOfYou  RollingInTheDeep  LetItBe  BohemianRhapsody |