

## Problem 3 - Deck of Cards



You will **receive a list of Cards on a single line separated by ", "**. On the **next line**, you will receive a number **n**. On the next **n** lines, you will receive commands that could be:

- **"Add, {CardName}":**
  - **Add** the given **card** to the card deck and **print: "Card successfully added"**
  - If it is **already in the deck**, print: **"Card is already in the deck"**
- **"Remove, {CardName}":**
  - **Remove** the given **card** from the card deck and print: **"Card successfully removed"**
  - If it is **not in the deck**, print: **"Card not found"**
- **"Remove At, {index}":**
  - **Remove** the **card** at the given **index** and **print: "Card successfully removed"**
  - If the **index is not in the range** of the list, print: **"Index out of range"**
- **"Insert, {index}, {CardName}":**
  - **Add** the **card** at the given **index** and **print: "Card successfully added"**
  - If the **index is out of range**, print: **"Index out of range"**
  - If the **index is in range**, but the **card is already in the deck**, print: **"Card is already added"**

### Input

- The **first input line** will contain the **list of cards**.
- The **second input** will be the **number of commands** – an **integer number** in the range [0...50].
- On the **following input lines**, you will be receiving commands.

### Output

- After going through all the commands, you need to **print** all cards **on a single line separated by ", "**.

### Examples

Input	Output
Ace of Diamonds, Queen of Hearts, King of Clubs 3 Add, King of Diamonds Insert, 2, Jack of Spades Remove, Ace of Diamonds	Card successfully added Card successfully added Card successfully removed Queen of Hearts, Jack of Spades, King of Clubs, King of Diamonds
Two of Clubs, King of Spades, Five of Spades, Jack of Hearts 2 Add, Two of Clubs Remove, Five of Hearts	Card is already in the deck Card not found Two of Clubs, King of Spades, Five of Spades, Jack of Hearts

Jack of Spades, Ace of Clubs, Jack of Clubs 2 Insert, -1, Queen of Spades Remove At, 1	Index out of range Card successfully removed Jack of Spades, Jack of Clubs
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## JS Examples

The input will be provided as an array of strings.

Input	Output
(["Ace of Diamonds, Queen of Hearts, King of Clubs", "3", "Add, King of Diamonds", "Insert, 2, Jack of Spades", "Remove, Ace of Diamonds"])	Card successfully added Card successfully added Card successfully removed Queen of Hearts, Jack of Spades, King of Clubs, King of Diamonds
(["Two of Clubs, King of Spades, Five of Spades, Jack of Hearts", "2", "Add, Two of Clubs", "Remove, Five of Hearts"])	Card is already in the deck Card not found Two of Clubs, King of Spades, Five of Spades, Jack of Hearts
(["Jack of Spades, Ace of Clubs, Jack of Clubs", "2", "Insert, -1, Queen of Spades", "Remove At, 1"])	Index out of range Card successfully removed Jack of Spades, Jack of Clubs