# Tanks Collector

Mitko is a world of tanks player and he likes to collect premium tanks. You will **receive a list** of Mitko’s already owned premium vehicles **on a single line divided by “, “.** After that in **n** lines you will receive commands to help Mitko track the tanks he have in his garage. The commands could be:

* **Add** command **{Add, {tankName}}**: After you receive **“Add”** you will need to check if he already owns the wanted tank.
  + If he owns it **print on console:** 
    - **”Tank is already bought”**
  + If not **print on console:** 
    - **“Tank successfully bought”** and **add it** to the tank list.
* **Remove** command **{Remove, {tankName}}**: After you receive **“Remove”** you will need to check if he owns the tank.
  + If he owns it **print on console:** 
    - **“Tank successfully sold”** and **remove it** from the tank list.
  + If not **print on console:**
    - **“Tank not found”**
* **Remove At** command **{Remove At, {index}}**: After you receive **“Remove At”** you need to check if the **index** is in the range of the list.
  + If not **print on console: “Index out of range”** and continue.
  + If it’s in range than **remove at the given index** and **print on console:**
    - **“Tank successfully sold”.**
* **Insert** command **{Insert, {index}, {tankName}}**: After you receive **“Insert”** you need to check if the **index** is in range of the list and **check if he already owns the tank**.
  + If not **print on console:**
    - **“Index out of range”** and continue.
  + If it’s in range and he doesn’t own the tank then **add the tank at the given index** and **print on** **console:**
    - **“Tank successfully bought”**
  + If the tank is in range and he owns it already than **print on console:**
    - **”Tank is already bought”**

After you go through all the commands you need to **sort the list** and **print it on a single line separated by “, “.**

### Input

* The **first input line** will contain the **list** of **already owned tanks**.
* The **second** **input line** will be the **number of commands** – an **integer number** in range [0…50].
* On the **next input lines** you will be receiving commands.

### Output

* As output you must print a single line containing the elements of the list, **joined** by **“, “**.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| T-34-85 Rudy, SU-100Y, STG  3  Add, King Tiger(C)  Insert, 2, IS-2M  Remove, T-34-85 Rudy | Tank successfully bought  Tank successfully bought  Tank successfully sold  IS-2M, King Tiger(C), STG, SU-100Y |
| **Comments** | |
| The first command gives the tank list so its splitted and added into a list.  **“T-34-85 Rudy, SU-100Y, STG”**  The second commands gives the number of commands that will be received.  **“3”**  The Add command adds the tank to the list after the necessary checks.  **“Add, King Tiger(C)” - “Tank successfully bought”**  The Insert commands also adds the tank at the given spot after the necessary checks.  **“Insert, 2, IS-2M” – “Tank successfully bought”**  The Remove command is the last one and after the checks the tank is sold.  **“Remove, T-34-85 Rudy” – “Tank successfully sold”**  After that the list is sorted and printer on the console.  **“IS-2M, King Tiger(C), STG, SU-100Y”** | |
| T 34, T 34 B, T92, AMX 13 57  4  Add, T 34  Remove, AMX CDC  Insert, 10 , M60  Remove At, 1 | Tank is already bought  Tank not found  Index out of range  Tank successfully sold  AMX 13 57, T 34, T92 |