Problem 2 – Gladiator Inventory

As a gladiator, Pesho has cool Inventory. He loves to buy new equipment. You are given Pesho's inventory with all of his equipment -> strings, separated by whitespace. Until you receive "Fight!" you will be receiving commands which Pesho does with his inventory.

You may receive the following commands:

- Buy {equipment}
- Trash {equipment}
- Repair {equipment}
- Upgrade {equipment}-{upgrade}

If you receive Buy command, you should add the equipment at last position in the inventory, but only if it isn't bought already.

If you receive **Trash command**, **delete** the equipment if it exists.

If you receive **Repair command**, you should **Repair** the equipment if it exists and place it on **last position**.

If you receive **Upgrade command**, you should check if the equipment exists and **insert** after it the upgrade in the following format: "{equipment}:{upgrade}";

Input / Consrtaints

You will receive an array of strings. Each element of the array is a command.

- In the first input element, you will receive Pesho's inventory sequence of equipment names, separated by
- Each following element, until you receive "Fight!" will be a command.

Output

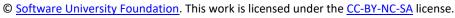
• As output you must print Pesho's **inventory**.

Constraints

- The command will always be valid.
- The equipment and Upgrade will be strings and will contain any character, except '-'.
- Allowed working time / memory: 100ms / 16MB.

Scroll down to see examples.



















Examples

Input	Output	Comment
SWORD Shield Spear Buy Bag Trash Shield Repair Spear Upgrade SWORD-Steel Fight!	SWORD SWORD:Steel Bag Spear	We receive the inventory => SWORD, Shield, Spear We Buy Bag => SWORD, Shield, Spear, Bag Trash Shield => SWORD, Spear, Bag Repair Spear => SWORD, Bag, Spear We add Upgrade => SWORD, SWORD:Steel, Bag,Spear We print the inventory.
SWORD Shield Spear Trash Bow Repair Shield Upgrade Helmet-V Fight!	SWORD Spear Shield	













