## Easter Gifts

*As a good friend, you decide to buy presents for your friends.*

Create a program that helps you plan the gifts for your friends and family. First, you are going to **receive** **the gifts** you plan on buying on a **single line,** **separated** **by** **space**, in the following **format**:

**"{gift1} {gift2} {gift3}… {giftn}"**

Then you will start receiving **commands** until you read the "**No Money**" message. There are **three** possible commands:

* **"OutOfStock {gift}"**
  + Find **the gifts** with **this name** in your collection, **if there are any**, and change their values to "**None**".
* "**Required {gift} {index}**"
  + **Replace** the value of the **current gift** on the given index **with this** **gift** if the **index** is **valid**.
* "**JustInCase {gift}"**
  + **Replace** the value of your **last** gift **with this** **one**.

In the end, print the **gifts** on a **single** **line**, **except the ones** with value **"None",** separated by a **single** **space** in the following format:

**"{gift1} {gift2} {gift3} … {giftn}"**

### Input / Constraints

* On the **1st line** you are going to receive the **names of the gifts**, separated by a single space.
* On the next **lines**, until the **"No Money"** command is received, you will be receiving commands.
* The **input** will **always** be **valid**.
* Index is **valid** when it is between **0** and **length of the list – 1**.

### Output

* Print the gifts in the **format** **described** **above**.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| Eggs StuffedAnimal Cozonac Sweets EasterBunny Eggs Clothes  OutOfStock Eggs  Required Spoon 2  JustInCase ChocolateEgg  No Money | StuffedAnimal Spoon Sweets EasterBunny ChocolateEgg |
| **Comments** | |
| First, we receive the command "**OutOfStock**" and we need to replace the values of "**Eggs**" with "**None**". After this command the list should look like this:  **None StuffedAnimal Cozonac Sweets EasterBunny None Clothes**  Afterwards, we receive the "**Required**" command and we need to replace the value on the 2nd index of our list with the value "**Spoon**". The list should looks like this:  **None StuffedAnimal Spoon Sweets EasterBunny None Clothes**  After, we receive the "**JustInCase**" command, which means we need to replace the last value in our list with "**ChocolateEggs**". The list should look like this:  **None StuffedAnimal Spoon Sweets EasterBunny None ChocolateEggs**  In the end, we print all of the gifts, except the ones with values **"None"**. This is the result list:  **StuffedAnimal Spoon Sweets EasterBunny ChocolateEggs** | |
|  | |
| Sweets Cozonac Clothes Flowers Wine Clothes Eggs Clothes  Required Paper 8  OutOfStock Clothes  Required Chocolate 2  JustInCase Hat  OutOfStock Cable  No Money | Sweets Cozonac Chocolate Flowers Wine Eggs Hat |