# The Final Quest

*After walking through fire, the group has reached the final step of the quest. They have received a list with instructions that will help them resolve the last riddle that will lead them to the truth about the Hunting Games.*

Create a program that **follows** given **instructions**.

You will receive a **collection of words on a single line**, split by a **single space**. They are not what they are supposed to be, so you have to **follow the instructions** in order to find the **real message**. You will be receiving commands. Here are the possible ones:

* Delete {index} – removes the word **after** the given index **if it is valid**.
* Swap {word1} {word2} – find the given words in the collections **if they exist** and **swap** their places.
* Put {word} {index} – **add** a word at the **previous place {index} before** the   
  given one, **if it is valid**. Note: putting at the last index simply appends the word to the end of the list.
* Sort – you must **sort** the words in descending order.
* Replace {word1} {word2}– find the **second word** **{word2}** in the collection (**if it exists**) and **replace** it with the **first word – {word1}**.

Follow them until you receive the "**Stop**" command.

After you have successfully **followed the instructions**, you must print the words on a single line, split by a space.

## Input / Constraints

* **On the 1st line**, you are going to receive the collection of words, split by a single space – **strings**
* **On the next lines**, you are going to receive **commands**, until you receive the "**Stop**" command

## Output

* Print the words you have gathered on a single line, split by a single space

## Examples

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| **Input** | **Output** |
| Congratulations! You last also through the have challenge!  Sort  Stop | Congratulations! You made it through the last challenge! |
| **Comments** | |
| First, we receive the command **“Swap”,** so we change the positions of the words **have** and **last**. The text at this point should look like this:  **Congratulations! You have also through the last challenge!**  After that, we receive **“Replace”** and we have to replace the **second word** – “have” **with the first** – “made”.  Afterwards we have to **delete** the **word**, which is **after the second index**.  And finally, we have to put a word on the **previous** position **before** **4**. | |

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| **Input** | **Output** |
| This the my quest! final  Put is 2  Swap final quest!  Delete 2  Stop | This is the final quest! |