# QA Back-End Technologies Basics

# Regular Exam I – 25.02.2024

## Library

Danny mixed up the order of the books in the library and now the readers are annoyed. In order to lend the books correctly, you need to manage them. Write a function library(books) that solves this problem.

The function receives an array.

As the first element of the input array, you will have an integer **n** – the number of books.

On the next **n** elements of the input array are the books' names.

After you have successfully extracted the books, you will be navigating through a series of commands, each as element of the input array.

The commands will be as follows:

* "**Lend**" command – you must remove the book at the first position in the array and print: "**{book title} book lent!**"
* "**Return {book title}**" – place the given book title at the start of the array
* "**Exchange {start index} {end index}**" – exchange the books in the given index range and print: "**Exchanged!**"
* "**Stop**" – the arraging is finished, and print book titles left if there are any: "**Books left: {book1}, {book2}, {book3}, …**"

In case there are no books left, print: "**The library is empty**".

The program ends when there are no more commands or you receive a command "**Stop**".

If a command does not match the pattern (unrecognized keyword, missing argument, etc.) it should be ignored.

Check if given **indexes** are **valid**.

### Input

* As first element of the input array, you will have an integer **n.**
* On the following **n** elements, the books themselves.
* You will be receiving different **commands**, each as following element of the input array, until the "**Stop**" command element.

### Output

On the first line print the remaining books in the array in the following format: "Books left: {book1}, {book2}, {book3}, …"

In case there are no books left, print "**The library is empty**".

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| library(['3', 'Harry Potter', 'The Lord of the Rings', 'The Hunger Games', 'Lend', 'Stop', 'Exchange 0 1']) | Harry Potter book lent!  Books left: The Lord of the Rings, The Hunger Games |
| library(['5', 'The Catcher in the Rye', 'To Kill a Mockingbird', 'The Great Gatsby', '1984', 'Animal Farm', 'Return Brave New World', 'Exchange 1 4', 'Stop']) | Exchanged!  Books left: Brave New World, 1984, To Kill a Mockingbird, The Great Gatsby, The Catcher in the Rye, Animal Farm |
| library(['3', 'The Da Vinci Code', 'The Girl with the Dragon Tattoo', 'The Kite Runner', 'Lend', 'Lend', 'Lend', 'Stop']) | The Da Vinci Code book lent!  The Girl with the Dragon Tattoo book lent!  The Kite Runner book lent!  The library is empty |