

02. Library

You're writing a library management system. Each book has the following data:

- **Book number:** a whole number without a sign
- **Author**
- **Title**
- **Status** (**borrowed** or **available**)

Input

Each book element comes on a separate row, with the command **"end"** indicating there are no more data. Each book is considered **available** in the beginning of the program execution.

After that, you start reading commands. After each command, you print the status of the book:

- **1**, followed by a **book ID** just prints the status of the book as follows: **book 1 "Robinson Crusoe" by "Daniel Defoe" is "available"**
- **2**, followed by a **book ID** and a username (no spaces, e.g. **ivan**) "borrows" that book to the given username, and then prints the status;
- **3**, followed by a **book ID** indicates that the book is being returned back to the library, and then prints the status;
- **0** means the program ends.

Output

With the end, the program prints out the status of the whole library like this:

```
"-----  
total books: {numberOfBook}  
book {number} "{bookName}" by "{author}" is "{status}"  
book {number} "{bookName}" by "{author}" is "{status}"  
...  
"
```

Your task is to study the code and implement the methods. As usual, you're not allowed to change anything in the program's skeleton. All your code must reside in the file **"input.h"**.

Examples

Input	Output
1 Daniel Defoe Robinson Crusoe 2 Jules Verne Journey to the Center of the Earth end 1 2 2 1 ivan 3 1 2 1 dragan 0	book 2 "Journey to the Center of the Earth" by "Jules Verne" is "available" book 1 "Robinson Crusoe" by "Daniel Defoe" is "borrowed by ivan" book 1 "Robinson Crusoe" by "Daniel Defoe" is "available" book 1 "Robinson Crusoe" by "Daniel Defoe" is "borrowed by dragan" ----- total books: 2 book 1 "Robinson Crusoe" by "Daniel Defoe" is "borrowed by dragan" book 2 "Journey to the Center of the Earth" by "Jules Verne" is "available"
1 Daniel Defoe Robinson Crusoe 2 Jules Verne Journey to the Center of the Earth 3 Dahlia Lithwick Lady Justice end 1 2 2 1 stanka 3 1 2 2 dragan 2 3 draganka 2 1 petkan 0	book 2 "Journey to the Center of the Earth" by "Jules Verne" is "available" book 1 "Robinson Crusoe" by "Daniel Defoe" is "borrowed by stanka" book 1 "Robinson Crusoe" by "Daniel Defoe" is "available" book 2 "Journey to the Center of the Earth" by "Jules Verne" is "borrowed by dragan" book 3 "Lady Justice" by "Dahlia Lithwick" is "borrowed by draganka" book 1 "Robinson Crusoe" by "Daniel Defoe" is "borrowed by petkan" ----- total books: 3 book 1 "Robinson Crusoe" by "Daniel Defoe" is "borrowed by petkan" book 2 "Journey to the Center of the Earth" by "Jules Verne" is "borrowed by dragan" book 3 "Lady Justice" by "Dahlia Lithwick" is "borrowed by draganka"