

MidtermExam_spec

Input:

```
[number_of_book] //following #number_of_book rows

[book_author] [book_subject]

...

[number_of_user] //following #number_of_user rows

[user_type] [user_name] [predefined_borrow_book_number]/*There will be a
predefined number if user_type is borrower.*/

...

//command loop

[Function]
```

Function and Output:

```
/**
 * DO NOT enter “input:” or print “output:” String
 ***/

1. [user_name1] addBook

input: [book_author] [book_subject]

output: Borrower can not add book//if [user_name1] is a borrower

2. [user_name1] removeBook [book_id]
```

output: Borrower can not remove book//if [user_name1] is a borrower

3. [user_name1] checkout [user_name2]

input: [book1_id] [book2_id]...

output: Borrower can not check out the books //if [user_name1] is a borrower

output: Can not check out since the number of books exceed the limitation of user can check-out /*if amount of books more than[predefined_borrow_book_number]of [user_name2]*/

output: Can not check out since the book is checked out /*if the book is checked out*/

4. [user_name1] return [book_id]

output: Borrower can not return book// if [user_name1] is a borrower

output: Can not return since the book isn't checked out /*if the book is checked out

5. [user_name1] listAuthor [book_author]

output: ID: [book_id] Author: [book_author] Subject: [book_subject]

...

6. [user_name1] listSubject [book_subject]

output: ID: [book_id] Author: [book_author] Subject: [book_subject]

...

7. [user_name1] findChecked [user_name2]

output: Borrower can not find books checked out by other users /*if [user_name1] is a borrower and [user_name1] is not [user_name2]*/

output: ID: [book_id] Author: [book_author] Subject: [book_subject]//else

...

8. [user_name1] Borrower [book_id]

output: User: [user_name]

output: Borrower can not find borrower //if [user_name1] is a borrower

Comment:

[user_type] must be one of following:

Staff

Borrower

[book_id] is integer and increases from 0 with sequential order form input.

[predefined_borrow_book_number] limit amount of books user can borrower at one time, not total.

You are asked to write a main function in Class MidtermExam

We'll test your program through "*java MidtermExam inputFile*"

e.g *java MidtermExam sampleInput*

And show output to standard output.

Sample input and output are in the folder.

There should be access modifier in your design.

Group design must be submitted and the design file name should be groupNumber.pdf

Please zip your source code with class diagram and upload it.

The file name should be groupNumber.zip. e.g. group0.zip

The folder structure should be:

unzip group0.zip

=> [dir] group0

=> group0/*.java and

=> group0.pdf (Class Diagram)

And good luck with your exam 😊