Object-Oriented Programming Final Project on

LIBRARY MANAGEMENT SYSTEM

Section : c1
Group 4

Afsana Siddika Esha – 21201122
Srijony Mohonto -21201101
Md. Ekramul Hoque – 21201106

System Requirements of the project

Software used:

IDE : IntelliJ IDEA Community Edition 2022.3.1
JDK : jdk-19_windows-x64_bin

Coding Language: Java

Explanation of the project:

Library management system is a project which aims in developing a computerized system to maintain all the daily work of a library. The system helps both students and library manager to keep a constant track of all the books available in the library. It allows both the admin and the student to search for the desired book.
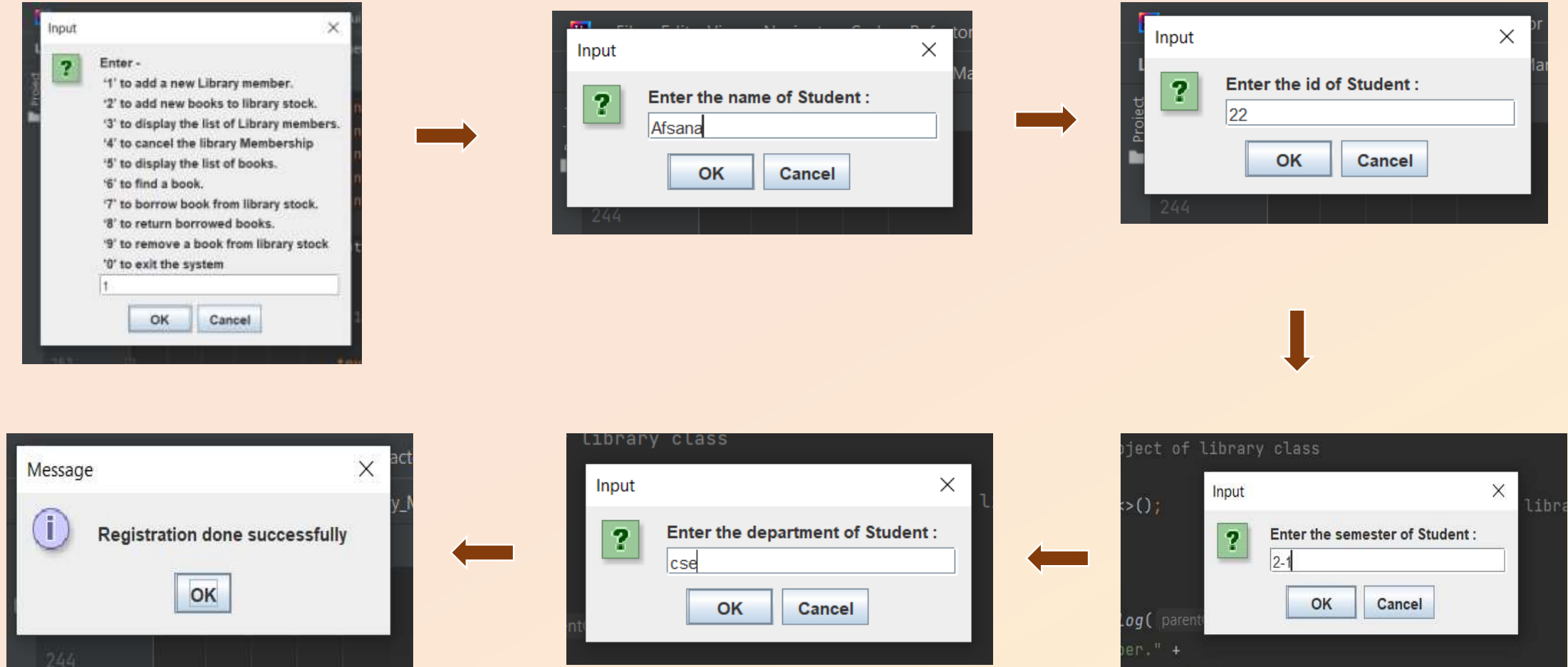
The main feature of this system is that all the books available in the library can be displayed in a list so that students need not roam through the entire library to find a book. Additionally, the application effectively maintains the details of users/students to whom books have been issued; it also records the issued date and return date.
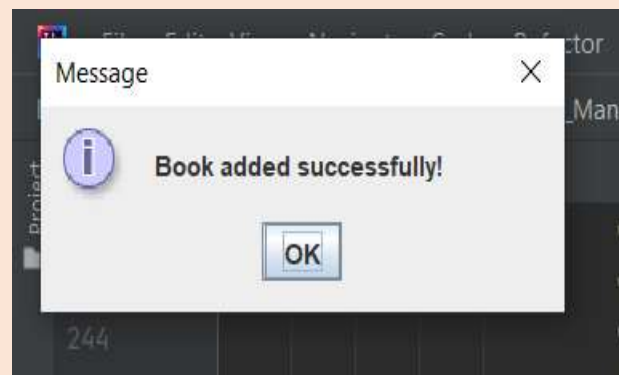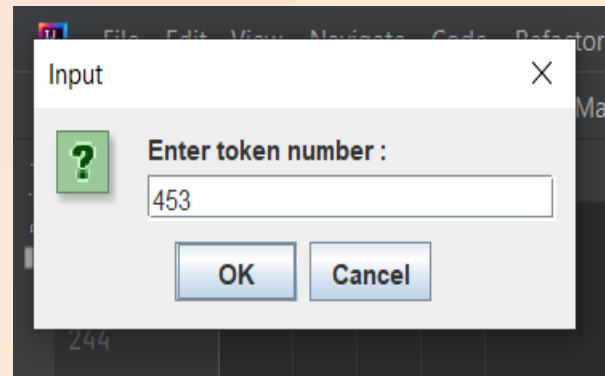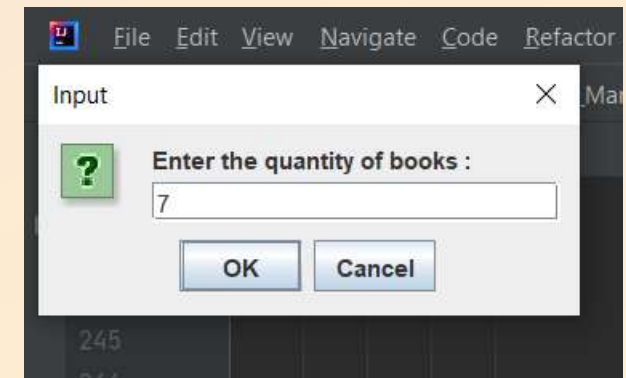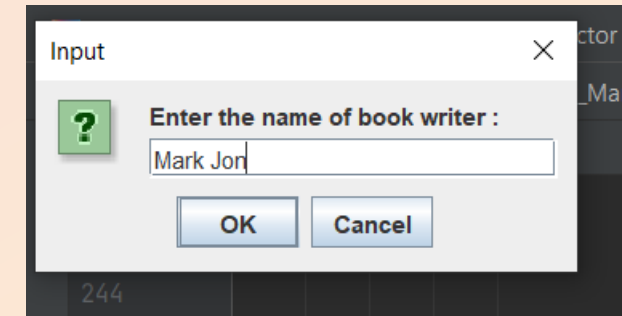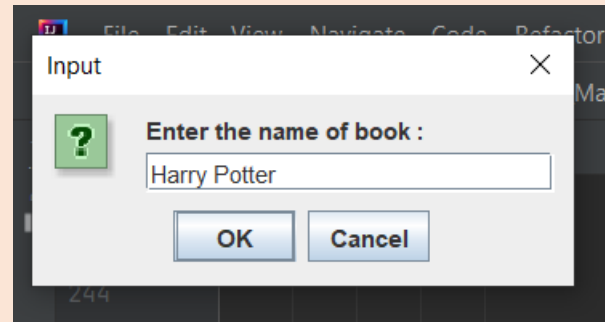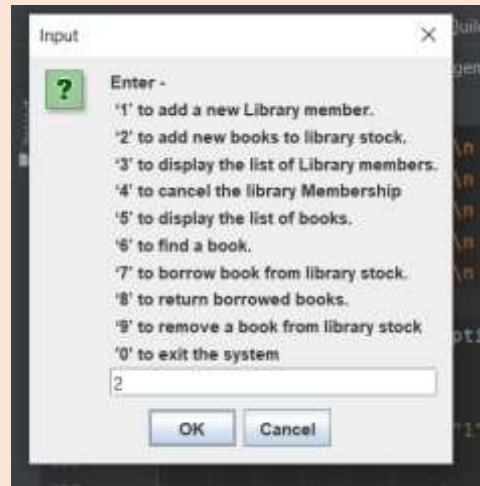
Features :

- Add, modify and delete book details from library stock.

- Search feature for finding book availability in library stock.

- Borrow and return books.

- Add a student in the library membership list.

- Cancel library membership of a student.

Registration for library membership :

Input

Enter -
- '1' to add a new Library member.
- '2' to add new books to library stock.
- '3' to display the list of Library members.
- '4' to cancel the library Membership
- '5' to display the list of books.
- '6' to find a book.
- '7' to borrow book from library stock.
- '8' to return borrowed books.
- '9' to remove a book from library stock.
- '0' to exit the system

`1`

OK   Cancel

Input

Enter the name of Student :

`Afsana`

OK   Cancel

Input

Enter the id of Student :

`22`

OK   Cancel

Input

Enter the semester of Student :

`2-1`

OK   Cancel

Input

Enter the department of Student :

`cse`

OK   Cancel

Message

Registration done successfully

OK

Adding books to the library stock :

Input

Enter -
'1' to add a new Library member.
'2' to add new books to library stock.
'3' to display the list of Library members.
'4' to cancel the library Membership
'5' to display the list of books.
'6' to find a book.
'7' to borrow book from library stock.
'8' to return borrowed books.
'9' to remove a book from library stock
'0' to exit the system

2

OK   Cancel

Input

Enter the name of book :

Harry Potter

OK   Cancel

Input

Enter the name of book writer :

Mark Jon

OK   Cancel

Input

Enter the quantity of books :

7

OK   Cancel

Input

Enter token number :

453

OK   Cancel

Message

Book added successfully!

OK

Displaying book list and library memberlist:

Input

? Enter -
'1' to add a new Library member.
'2' to add new books to library stock.
'3' to display the list of Library members.
'4' to cancel the library Membership
'5' to display the list of books.
'6' to find a book.
'7' to borrow book from library stock.
'8' to return borrowed books.
'9' to remove a book from library stock
'0' to exit the system

5

OK   Cancel

Run: Library_Management_System

"C:\Program Files\Java\jdk-19\bin\java.exe" "-ja
List of books available in the library:
Title :Harry Potter
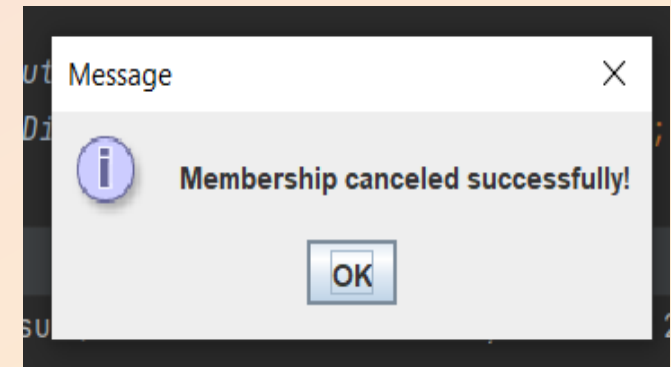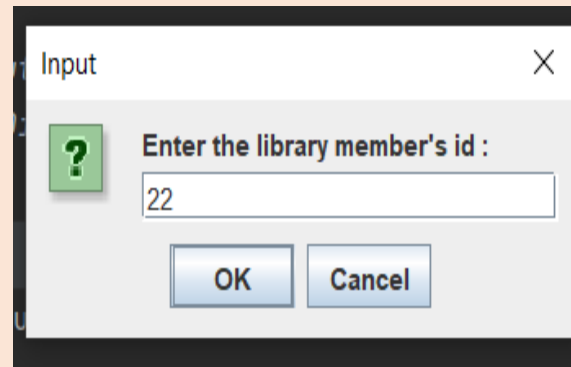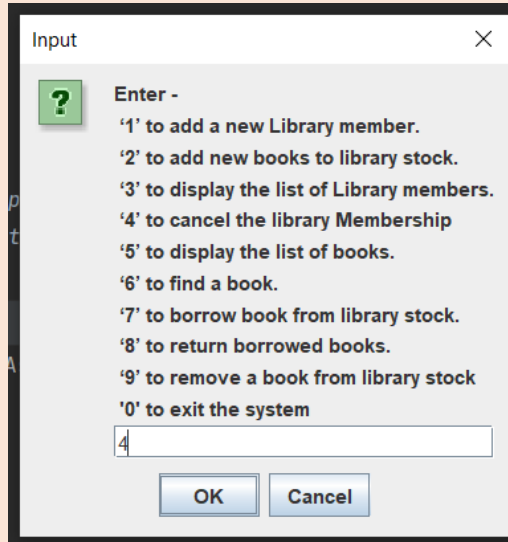Author :Mark Jon
Quantity :7
  Token number :345

Input

? Enter -
'1' to add a new Library member.
'2' to add new books to library stock.
'3' to display the list of Library members.
'4' to cancel the library Membership
'5' to display the list of books.
'6' to find a book.
'7' to borrow book from library stock.
'8' to return borrowed books.
'9' to remove a book from library stock
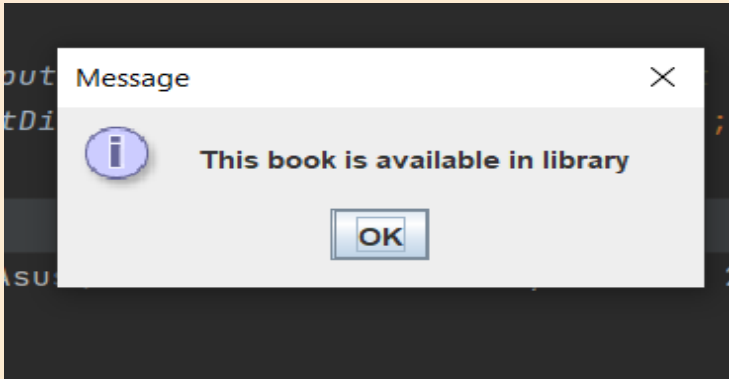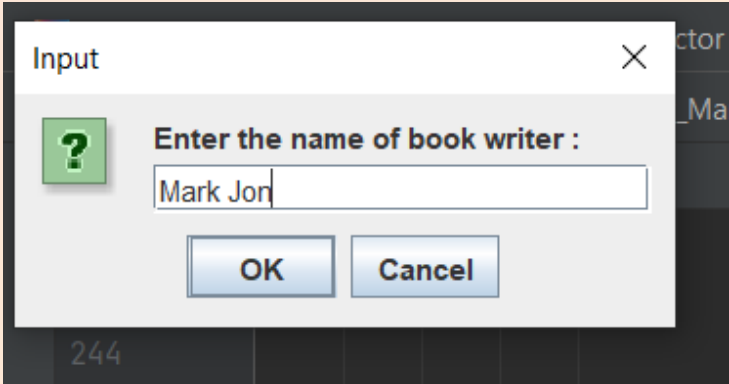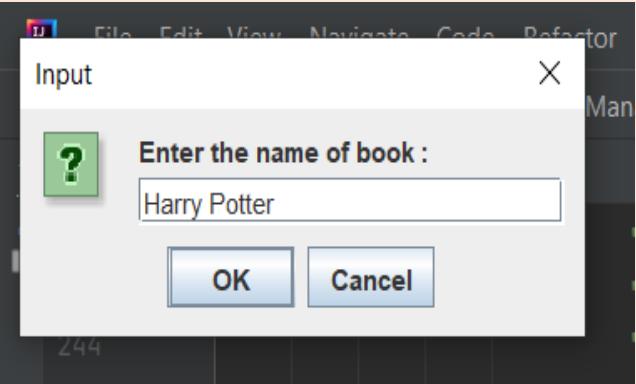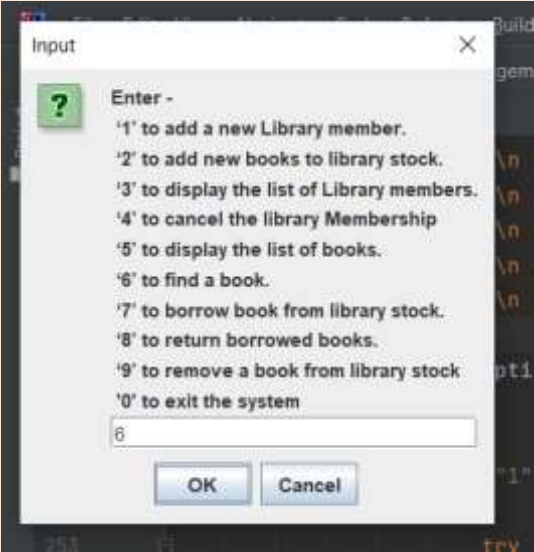'0' to exit the system

3

OK   Cancel

Run: Library_Management_System

"C:\Program Files\Java\jdk-19\bin\jav
Student name :afsana
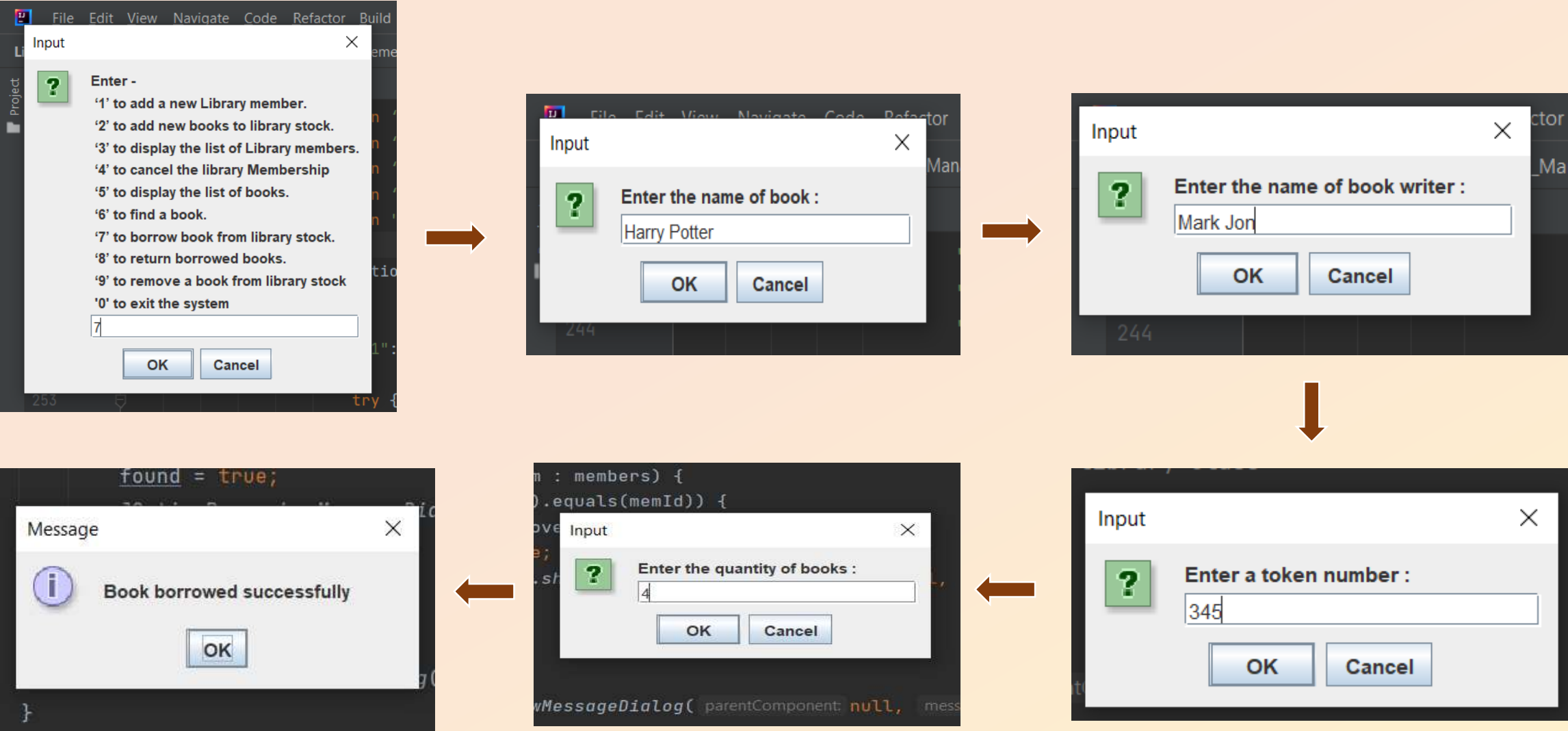Student ID :22
Department name :cse
Semester :2-1

Cancel the library membership :

Find your required book :

Input

? Enter -
'1' to add a new Library member.
'2' to add new books to library stock.
'3' to display the list of Library members.
'4' to cancel the library Membership
'5' to display the list of books.
'6' to find a book.
'7' to borrow book from library stock.
'8' to return borrowed books.
'9' to remove a book from library stock
'0' to exit the system

6

OK   Cancel

Input

? Enter the name of book :

Harry Potter

OK   Cancel

Input

? Enter the name of book writer :

Mark Jon

OK   Cancel

Message

ⓘ This book is available in library

OK

Borrow your required books :

Input

Enter -
'1' to add a new Library member.
'2' to add new books to library stock.
'3' to display the list of Library members.
'4' to cancel the library Membership
'5' to display the list of books.
'6' to find a book.
'7' to borrow book from library stock.
'8' to return borrowed books.
'9' to remove a book from library stock
'0' to exit the system

7

OK   Cancel

Input

Enter the name of book :

Harry Potter

OK   Cancel

Input

Enter the name of book writer :

Mark Jon

OK   Cancel

Input

Enter a token number :

345

OK   Cancel

Input

Enter the quantity of books :

4

OK   Cancel

Message

Book borrowed successfully

OK

Return the borrowed :

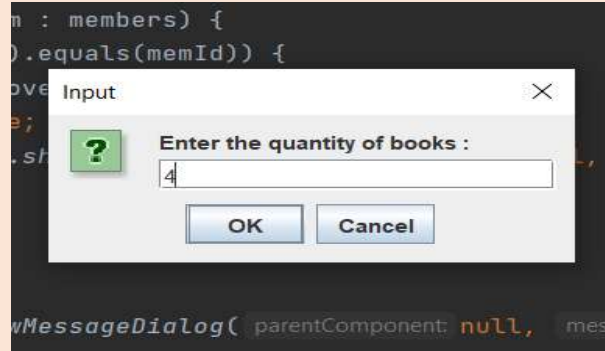**Input**

Enter -
'1' to add a new Library member.
'2' to add new books to library stock.
'3' to display the list of Library members.
'4' to cancel the library Membership
'5' to display the list of books.
'6' to find a book.
'7' to borrow book from library stock.
'8' to return borrowed books.
'9' to remove a book from library stock
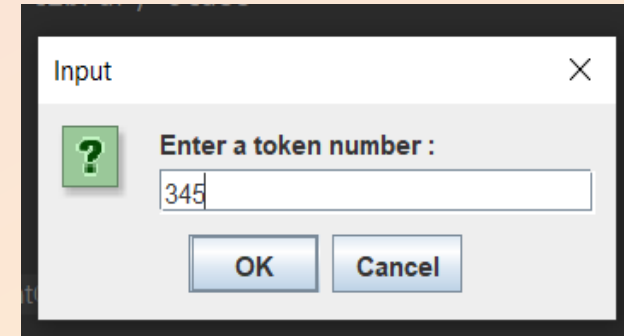'0' to exit the system

8

OK   Cancel

Input
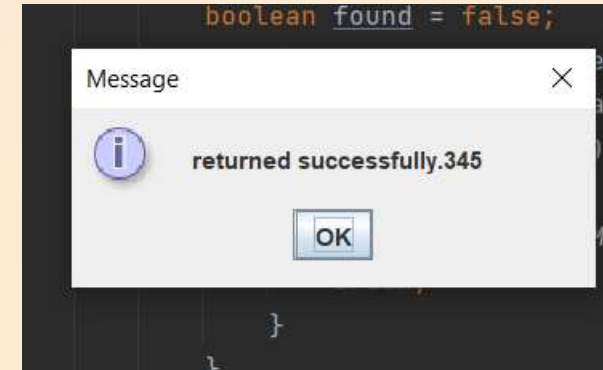
Enter the quantity of books :

4

OK   Cancel
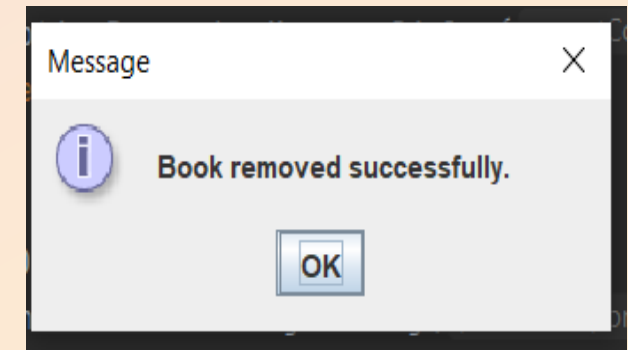
Input

Enter a token number :

345

OK   Cancel

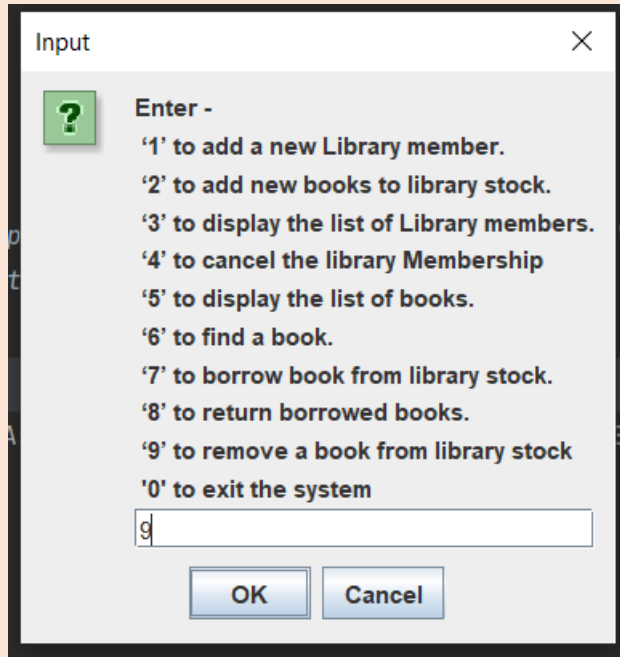**Message**

returned successfully.345

OK

Remove books from the collection:

Input

? Enter -
'1' to add a new Library member.
'2' to add new books to library stock.
'3' to display the list of Library members.
'4' to cancel the library Membership
'5' to display the list of books.
'6' to find a book.
'7' to borrow book from library stock.
'8' to return borrowed books.
'9' to remove a book from library stock
'0' to exit the system

9

OK   Cancel

if (m.getStuId().equals(memId)) {

Input

? Enter tokenNum of the book to remove the collection

345

OK   Cancel

Message

ⓘ Book removed successfully.

OK

Exiting the library management system: