

Library Management System

Gaurav Singh Painkara (IIT2022028)

Trilok Meena (IIT2022038)

Goransh Barde (IIT2022027)

Tools to be used

1. Use any IDE to develop the project. It may be Eclipse / Myeclipse / Netbeans etc.
2. MySQL for the database.

Front End and Back End

1. **Front End:** Java Swing
2. **Back End:** MySQL

How to run this project:


1. Import **sql** files to create tables in MySQL using MySQL workbench
2. Import the project on the NetBeans/Eclipse IDE and run it
3. add extention like MySQL connector and Jcalendar

MySQL: <https://dev.mysql.com/downloads/connector/j/>

Jcalender: <http://www.java2s.com/Code/Jar/j/Downloadjcalendar14jar.htm>



Click on **admin** to login as admin

A screenshot of a web application window titled "ADMIN LOGIN". The background is the same blurred library image with the stack of books. On the left side, there are two input fields: "Enter Name:" and "Enter Password:". Below these fields is a blue button with white text that says "LOGIN".

Write name and password: It must be **admin** for name and **admin123** for password



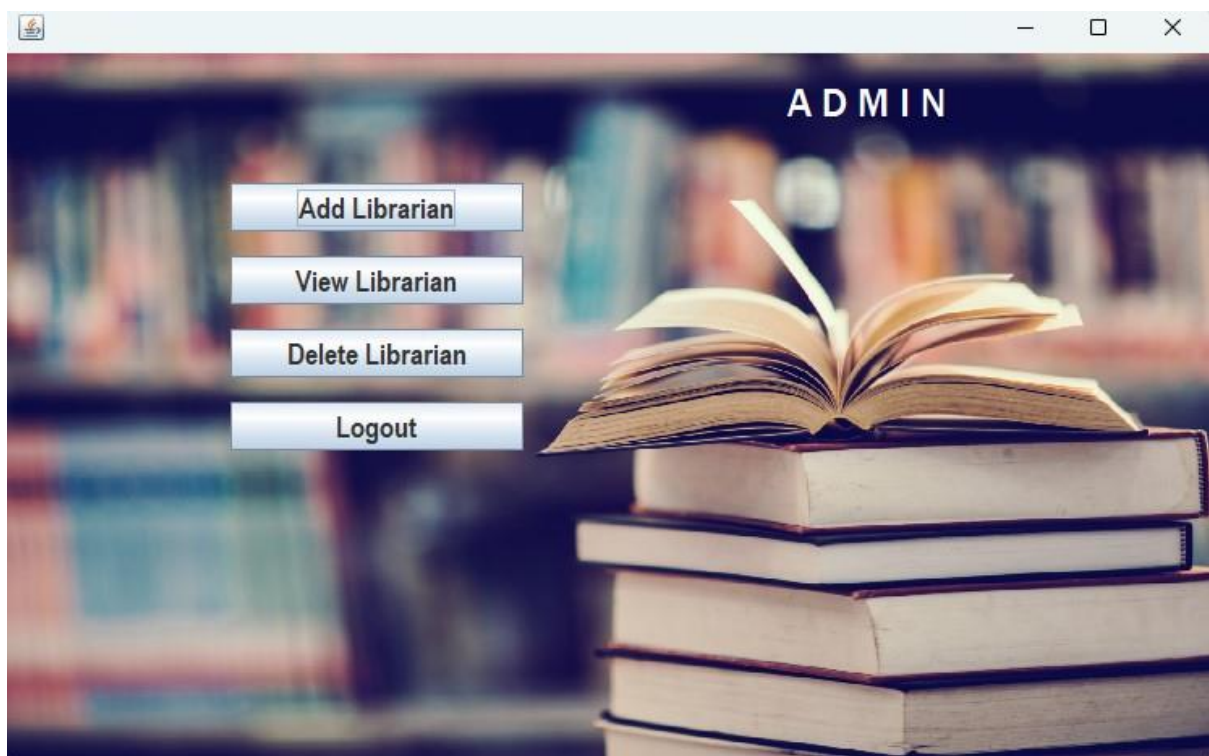
A screenshot of a web application window titled "ADMIN LOGIN". The window has a light blue header bar with standard window controls (minimize, maximize, close). The background of the window is a blurred image of a library with bookshelves and a stack of books in the foreground. The login form consists of two input fields: "Enter Name:" with the text "admin" entered, and "Enter Password:" with masked characters ".....". Below the password field is a blue "LOGIN" button.

ADMIN LOGIN

Enter Name:

Enter Password:

LOGIN



A screenshot of a web application window titled "ADMIN". The window has a light blue header bar with standard window controls (minimize, maximize, close). The background is the same blurred library image as the previous window. On the left side, there is a vertical menu with four blue buttons: "Add Librarian", "View Librarian", "Delete Librarian", and "Logout".

ADMIN

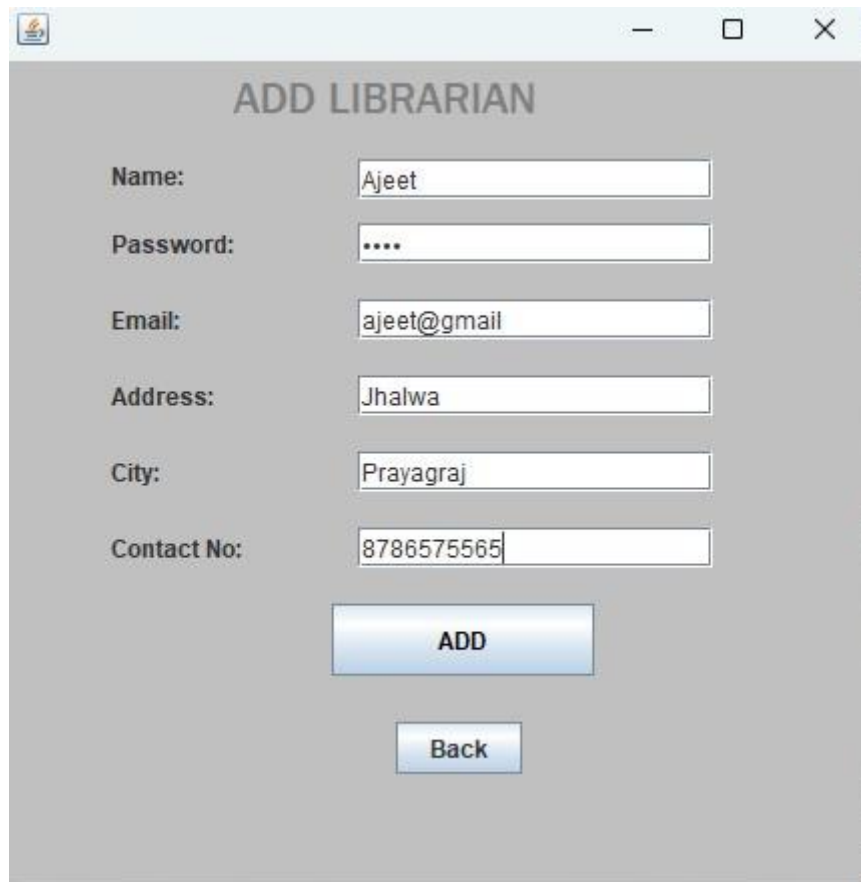
Add Librarian

View Librarian

Delete Librarian

Logout

Add librarian: to add librarian



A screenshot of a software window titled "ADD LIBRARIAN". The window has a standard Windows-style title bar with a minimize button, a maximize button, and a close button. The main area of the window is a light gray color. It contains several text input fields, each preceded by a label: "Name:" with the value "Ajeet", "Password:" with four dots, "Email:" with the value "ajeet@gmail", "Address:" with the value "Jhalwa", "City:" with the value "Prayagraj", and "Contact No:" with the value "8786575565". Below the input fields are two buttons: a larger "ADD" button and a smaller "Back" button.

ADD LIBRARIAN

Name: Ajeet

Password:

Email: ajeet@gmail

Address: Jhalwa

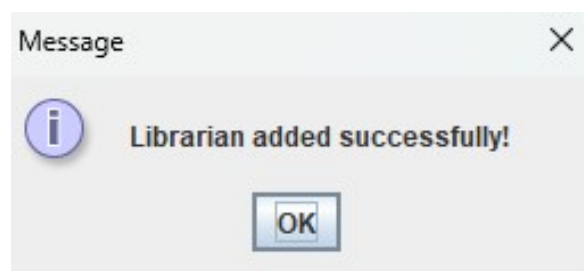
City: Prayagraj

Contact No: 8786575565

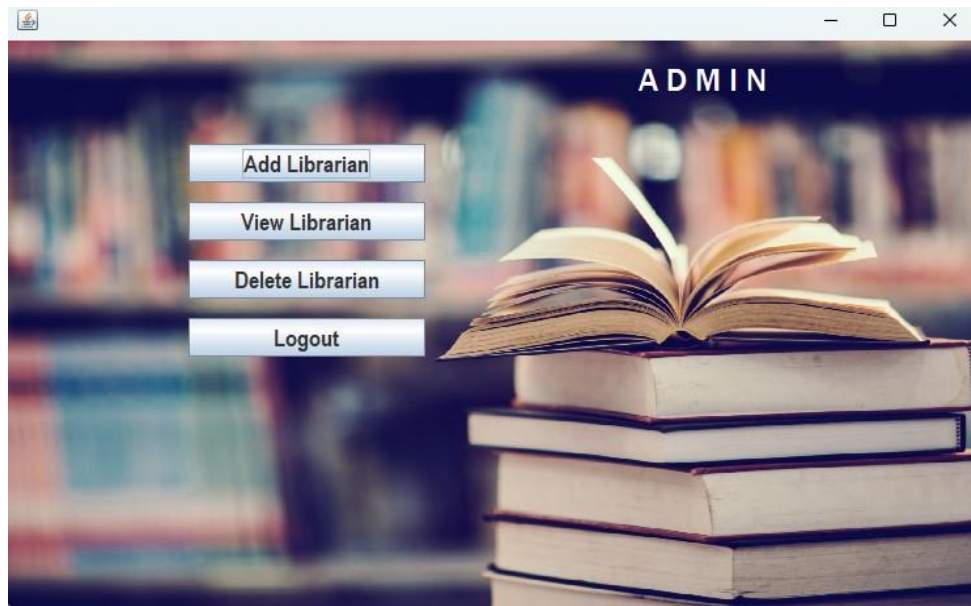
ADD

Back

Click **ADD** to add a Librarian.



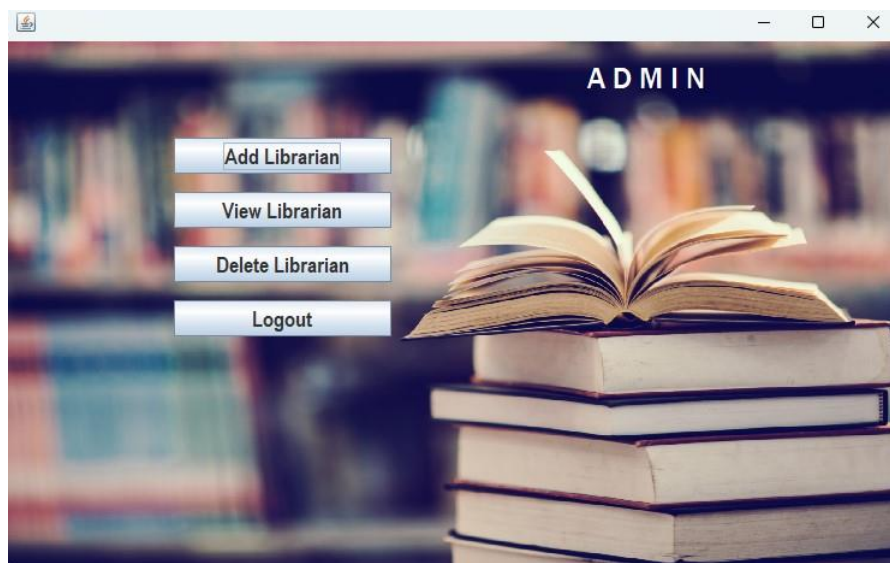
Click **ok**.



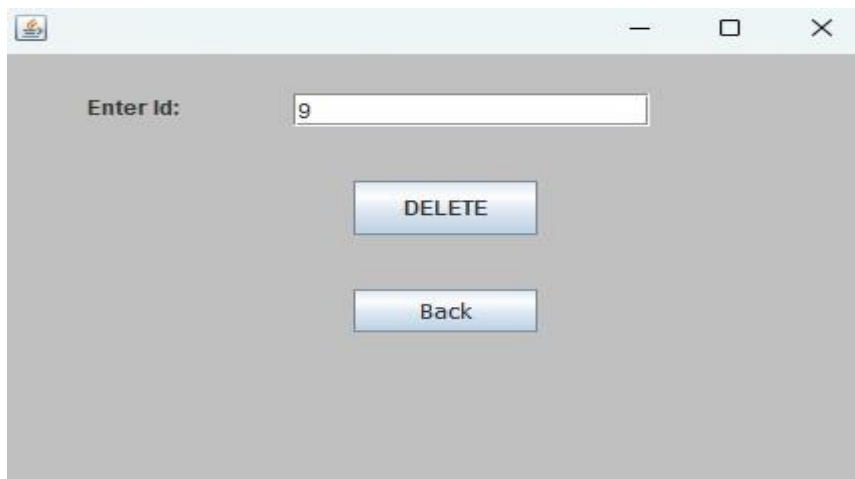
Now click on **view librarian** to see records of librarian.

| id | name | password | email | address | city | contact |
|----|-----------|----------|-----------------|------------|-----------|-------------|
| 1 | Prabhakar | ppp | prabhakar@g... | javatpoint | noida | 9998328238 |
| 4 | sumedh | sumesh | sumesh@gm... | Kuch Bhi | noida | 93823932823 |
| 6 | abhi | abhi | abhi@gmail.c... | javatpoint | noida | 92393282323 |
| 8 | asdf | 1234 | qwer@gmail.... | dfghjkgjhg | fghj | 8765444567 |
| 9 | Ajeet | 1234 | ajeet@gmail | Jhalwa | Prayagraj | 8786575565 |

Now close the table.



Now click on **Delete Librarian**.



A screenshot of a web application window. At the top, there is a label "Enter Id:" followed by a text input field containing the number "9". Below the input field, there are two buttons: "DELETE" and "Back".

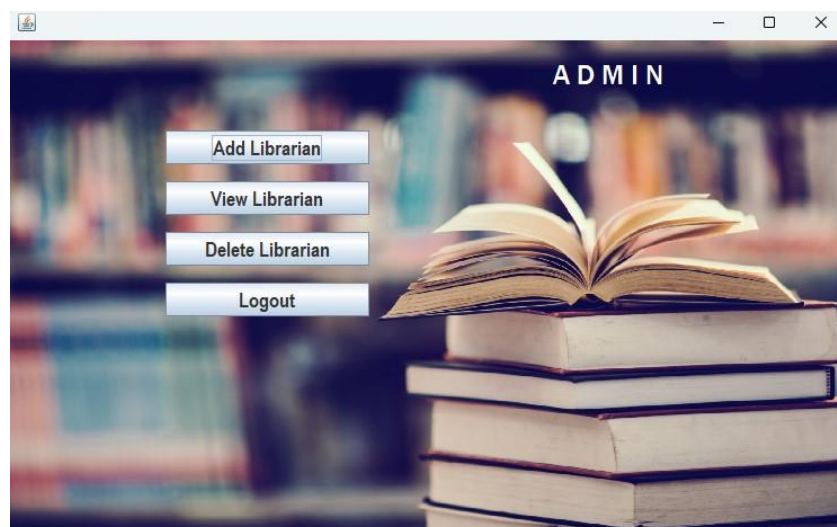
Again click on the **View Librarian** button. You can see librarian is deleted successfully.



A screenshot of a web application window displaying a table of librarians. The table has seven columns: id, name, password, email, address, city, and contact. There are four rows of data. Below the table, there is a large empty rectangular area.

| id | name | password | email | address | city | contact |
|----|-----------|----------|-----------------|------------|-------|-------------|
| 1 | Prabhakar | ppp | prabhakar@g... | javatpoint | noida | 9998328238 |
| 4 | sumedh | sumesh | sumesh@gm... | Kuch Bhi | noida | 93823932823 |
| 6 | abhi | abhi | abhi@gmail.c... | javatpoint | noida | 92393282323 |
| 8 | asdf | 1234 | qwer@gmail.... | dfghjkjhgf | fghj | 8765444567 |

Now close the table.

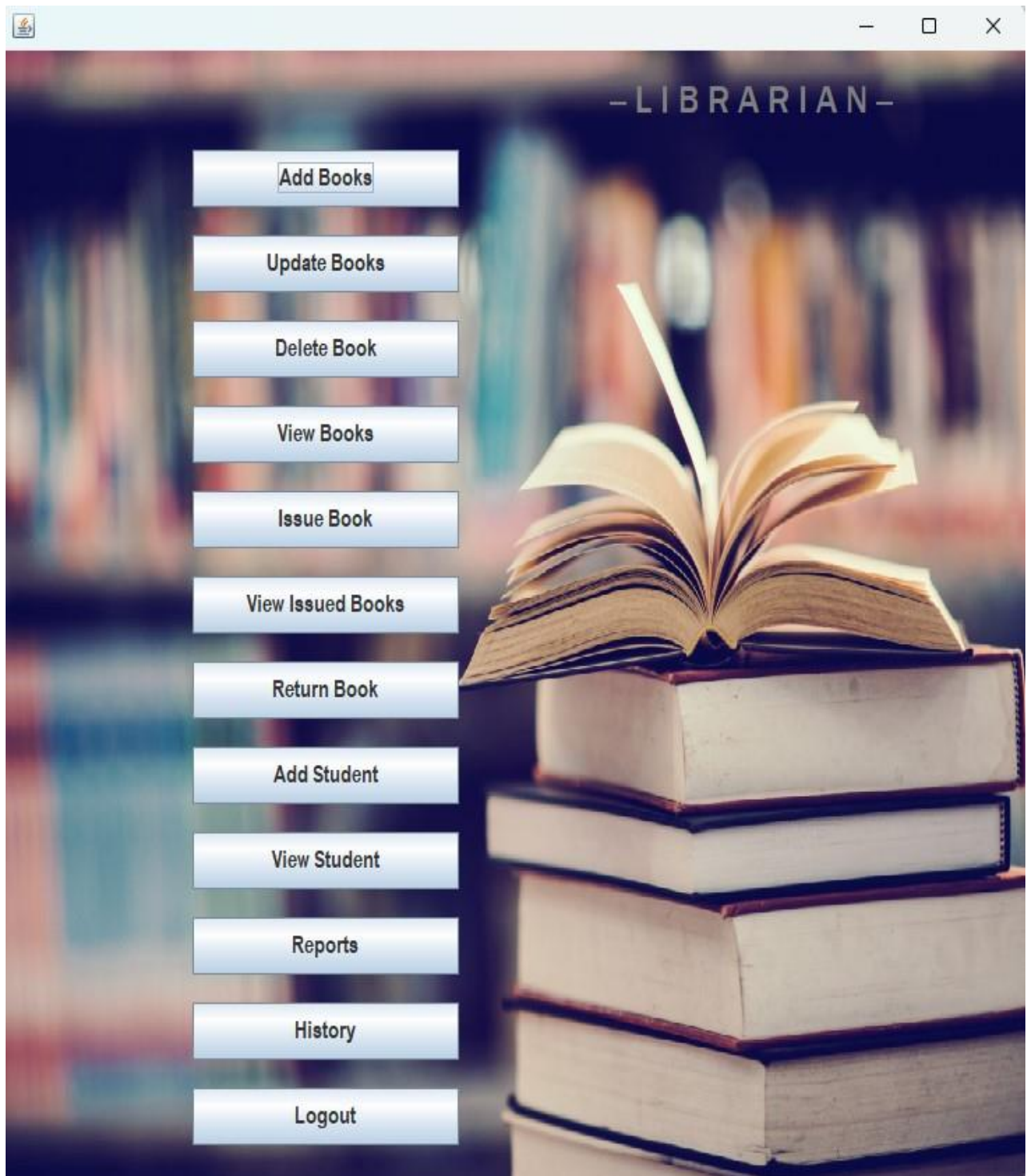


Now click on the **Logout** button.



Click on **librarian** to login as librarian

A screenshot of a web application window titled "LIBRARIAN LOGIN". The background is the same as the previous image. The form contains two input fields: "Enter Name:" with the text "abhi" and "Enter Password:" with four dots. Below the input fields is a blue button with white text labeled "LOGIN".



Click on **Add Book** to add new book to library

ADD BOOK

Call No:

Name:

Author:

Publisher:

Quantity:

ADD

BACK

Message

Books added successfully!

OK

Click OK.

-LIBRARIAN-

Add Books

Update Books

Delete Book

View Books

Issue Book

View Issued Books

Return Book

Add Student

View Student

Reports

History

Logout

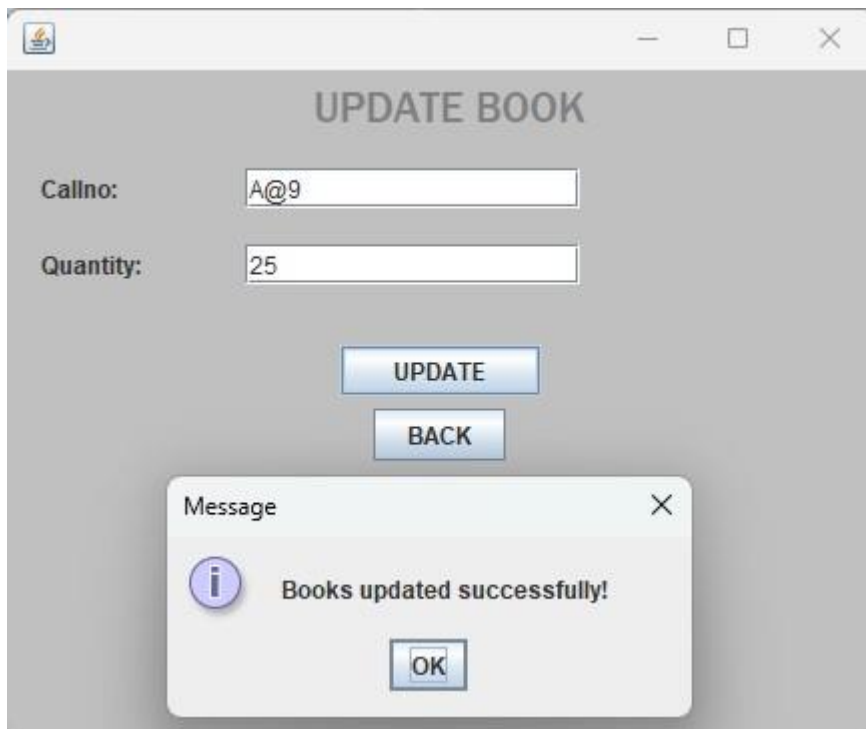
Now click on the **View Books** button. You can see record is added successfully.



A screenshot of a Java Swing window with a title bar containing a small icon and standard window controls (minimize, maximize, close). The window displays a table with 8 columns: id, callno, name, author, publisher, quantity, issued, and added_date. The table contains 7 rows of data. Below the table is a large, empty rectangular area.

| id | callno | name | author | publisher | quantity | issued | added_date |
|----|--------|-----------------|-----------------|------------------|----------|--------|-----------------|
| 1 | A@4 | C In Depth | Shrivastav | BPB | 3 | 1 | 2023-11-19 2... |
| 2 | B@1 | DBMS | Korth | Pearson | 3 | 0 | 2016-07-19 0... |
| 3 | G@12 | Let's see | Yashwant Ka... | BPB | 10 | 0 | 2016-07-19 0... |
| 4 | A1 | Hamlet | William Shak... | guyhgtrfukg | 16 | 0 | 2023-11-20 1... |
| 5 | A6 | htdgh | bcjfc | hgfhfvjh | 30 | 0 | 2023-11-20 1... |
| 6 | K@8 | Networking | Forouzan | Tata Mc Graw ... | 5 | 0 | 2023-11-20 1... |
| 7 | A@9 | The Indian W... | Vinayak Dam... | Reprint,India | 44 | 0 | 2023-11-20 1... |

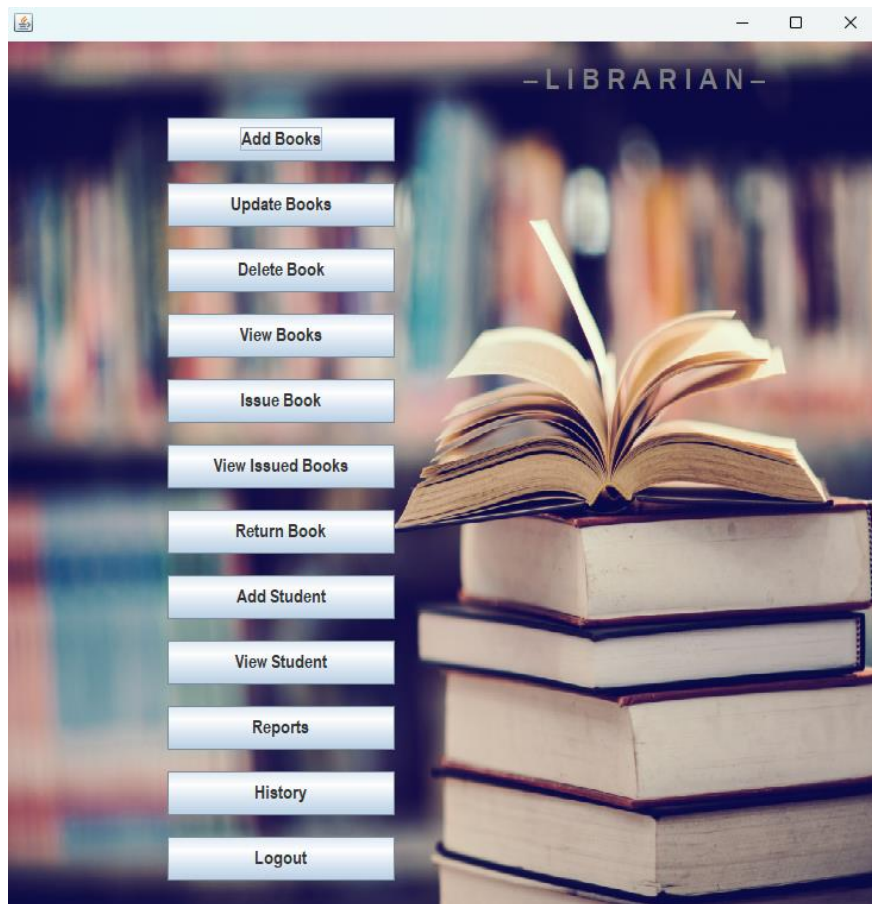
Now close the table and click on **Update Book** button.



A screenshot of a Java Swing window titled "UPDATE BOOK". It features two input fields: "Callno:" with the value "A@9" and "Quantity:" with the value "25". Below these fields are two buttons: "UPDATE" and "BACK". A modal message dialog box is open in the foreground, displaying an information icon, the text "Books updated successfully!", and an "OK" button.

Click OK.

It will help to change the quantity of books if some books got damaged or lost or some more books of same type are bought.



Now click on the **View Books** button. You can see record is updated successfully.

| id | callno | name | author | publisher | quantity | issued | added_date |
|----|--------|-----------------|-----------------|------------------|----------|--------|-----------------|
| 1 | A@4 | C In Depth | Shrivastav | BPB | 3 | 1 | 2023-11-19 2... |
| 2 | B@1 | DBMS | Korth | Pearson | 3 | 0 | 2016-07-19 0... |
| 3 | G@12 | Let's see | Yashwant Ka... | BPB | 10 | 0 | 2016-07-19 0... |
| 4 | A1 | Hamlet | William Shak... | guyhgtrfukg | 16 | 0 | 2023-11-20 1... |
| 5 | A6 | htdgh | bcjfc | hgfhfvjh | 30 | 0 | 2023-11-20 1... |
| 6 | K@8 | Networking | Forouzan | Tata Mc Graw ... | 5 | 0 | 2023-11-20 1... |
| 7 | A@9 | The Indian W... | Vinayak Dam... | Reprint,India | 25 | 0 | 2023-11-20 1... |

Now close the table and click on **Issue Book** button.


ISSUE BOOK


Book Callno:

Student Id:

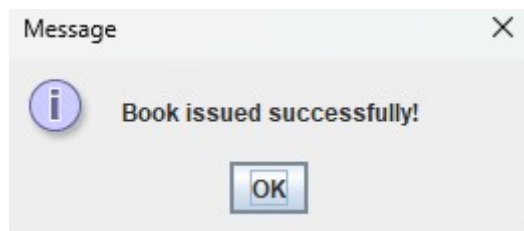
Student Name:

Student Contact:

Issue Date: 

Return Date: 

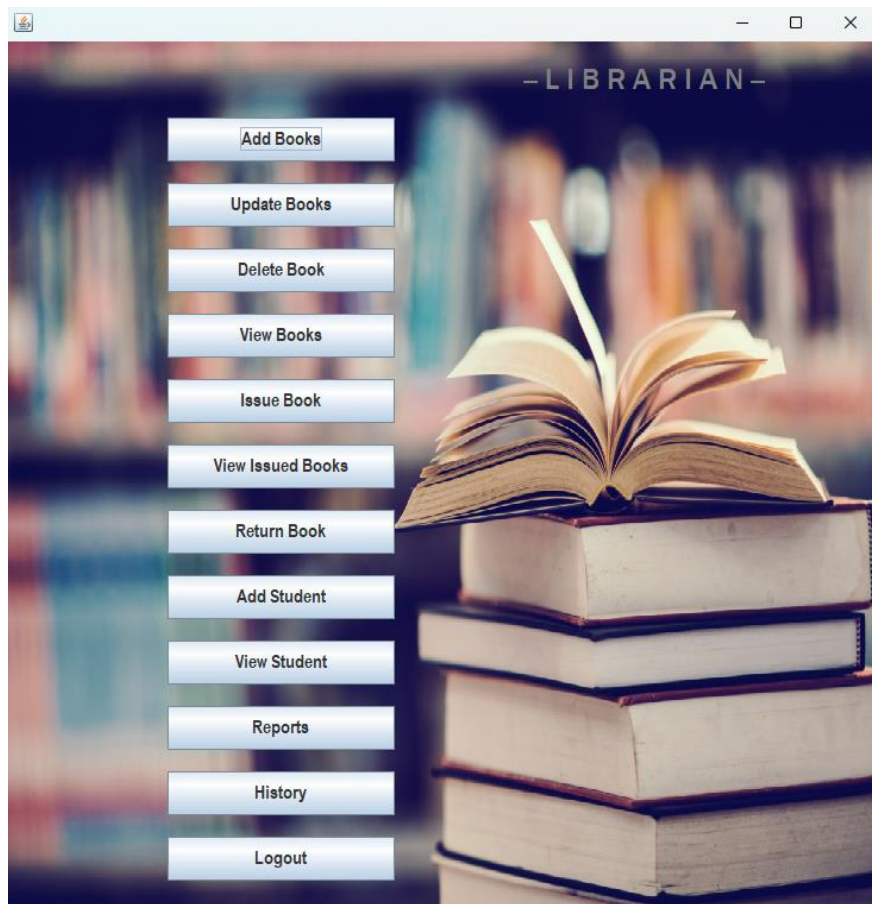
Note: Please check Student ID Carefully before issuing book!



Now click on the **view issued books** button.

| id | bookcallno | studentid | studentname | studentcontact | issueddate | returndate | duedays |
|----|------------|-----------|-------------|----------------|------------|------------|---------|
| 7 | A@4 | 87 | abhishek | 9329882382 | 2016-07-19 | 2016-07-25 | 0 |
| 10 | A@9 | 1 | abc | 9875678777 | 2023-11-20 | 2023-12-05 | 0 |

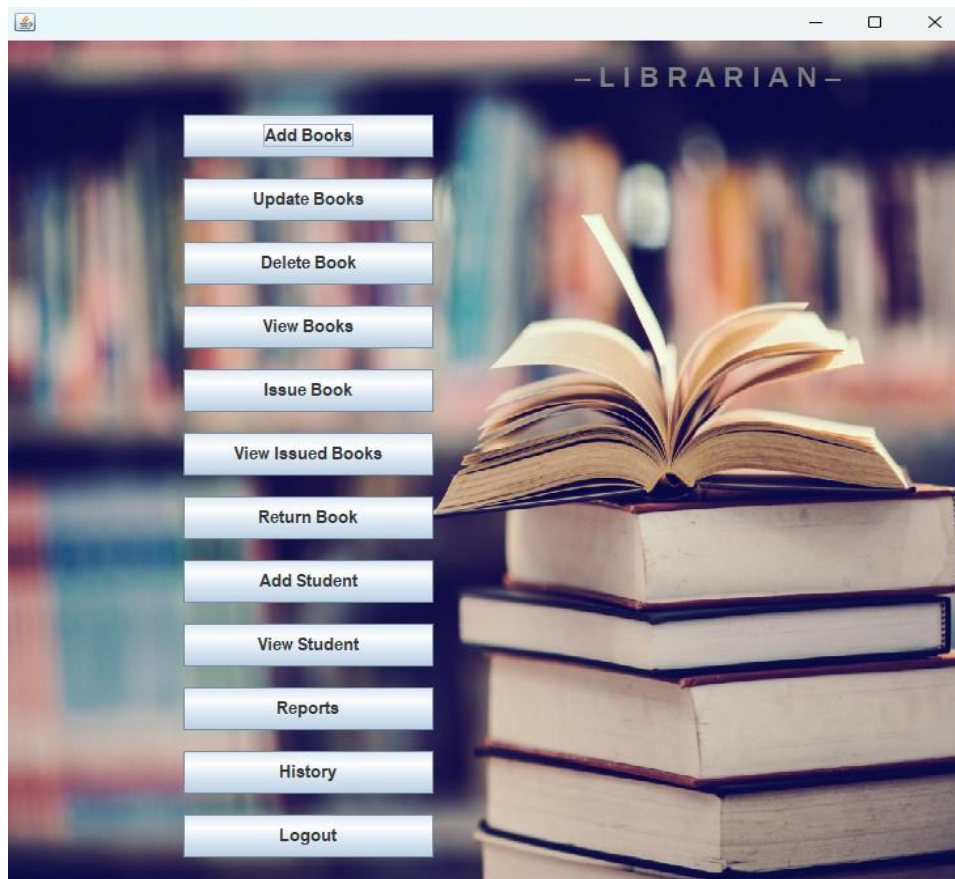
Close the table.



Click on the **View Books** and see **quantity is decremented** and **issued is incremented**.

| id | callno | name | author | publisher | quantity | issued | added_date |
|----|--------|-----------------|-----------------|------------------|----------|--------|-----------------|
| 1 | A@4 | C In Depth | Shrivastav | BPB | 3 | 1 | 2023-11-19 2... |
| 2 | B@1 | DBMS | Korth | Pearson | 3 | 0 | 2016-07-19 0... |
| 4 | A1 | Hamlet | William Shak... | guyhgtrfukg | 16 | 0 | 2023-11-20 1... |
| 5 | A6 | htdgh | bcjfc | hgjhfvjh | 30 | 0 | 2023-11-20 1... |
| 6 | K@8 | Networking | Forouzan | Tata Mc Graw ... | 5 | 0 | 2023-11-20 1... |
| 7 | A@9 | The Indian W... | Vinayak Dam... | Reprint,India | 24 | 1 | 2023-11-20 2... |

Close the table



Now click on the **Return Book** button.

A screenshot of a web application interface for returning a book. The title is "RETURN BOOK". There are three input fields: "Book Callno:" with the value "A@9", "Student Id:" with the value "1", and "Return Date:" with the value "10-Dec-2023". Below the input fields are three buttons: "RETURN", "Check Fine", and "pa". A message box is displayed over the "Check Fine" button, showing an information icon, the text "Book returned successfully!", and an "OK" button. At the bottom left, there is a red note: "Note: Check the book properly!".

Write the correct Call no and Student Id:

Click Check Fine to view the fine after return.

| id | fine |
|----|------|
| 7 | 25 |

Click Pay fine to pay.(Pay fine button actually does not work it is just for representation).

Payment Form

Enter Payment Amount:

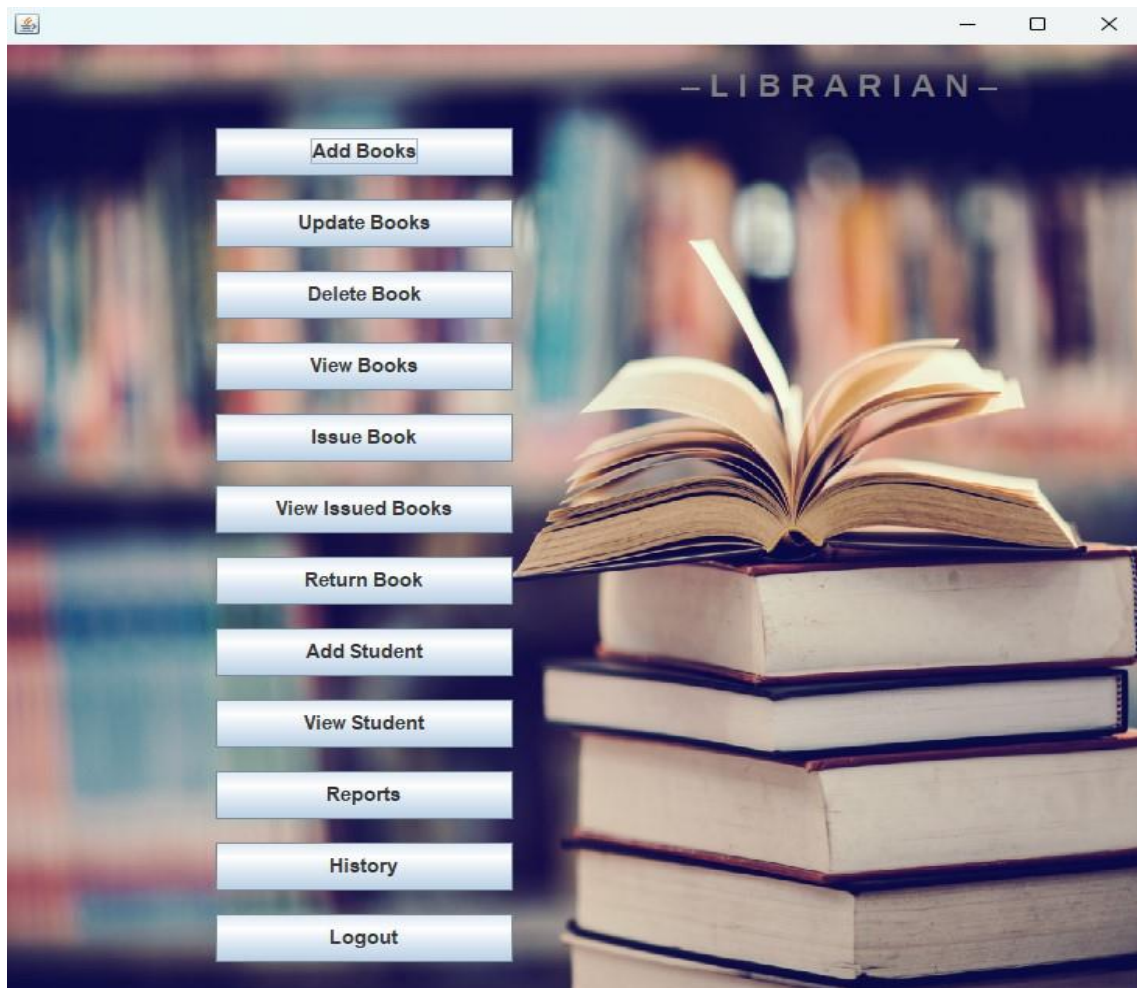
Select Payment Method:

UPI
UPI
Debit Card
Credit Card

Now close it and go to Librarian Section again click on the **view issued book** button, record is deleted.

| id | bookcallno | studentid | studentname | studentcontact | issueddate | returndate | duedays |
|----|------------|-----------|-------------|----------------|------------|------------|---------|
| 7 | A@4 | 87 | abhishek | 9329882382 | 2016-07-19 | 2016-07-25 | 0 |

Now close the table.



Now click on **Add student** to add Student.

ADD STUDENT

Name:

Password:

ID:

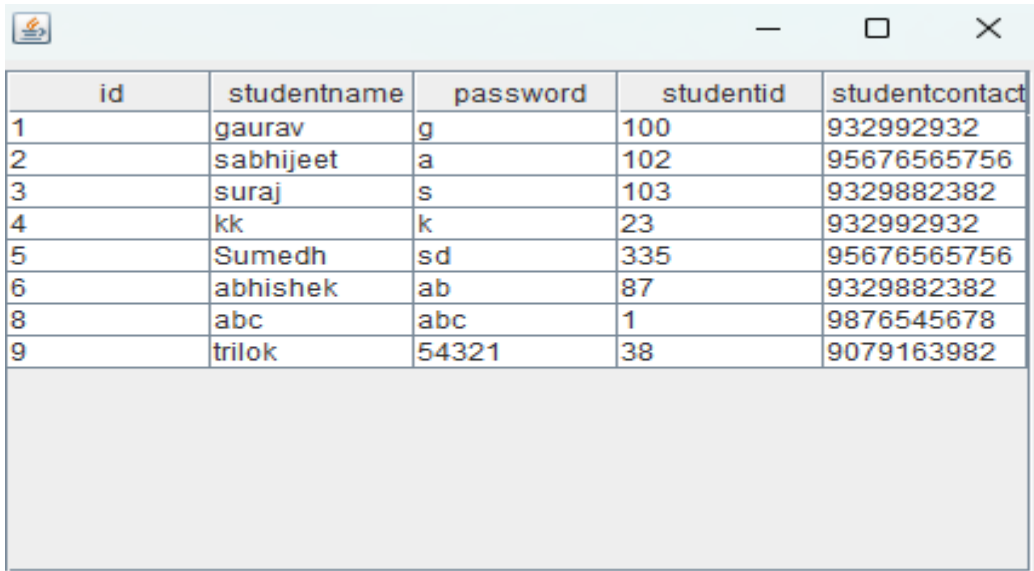
Contact No:

Message

Student added successfully!

Write details of student and click add and now student will get registered in database. You can then check that using view student feature.

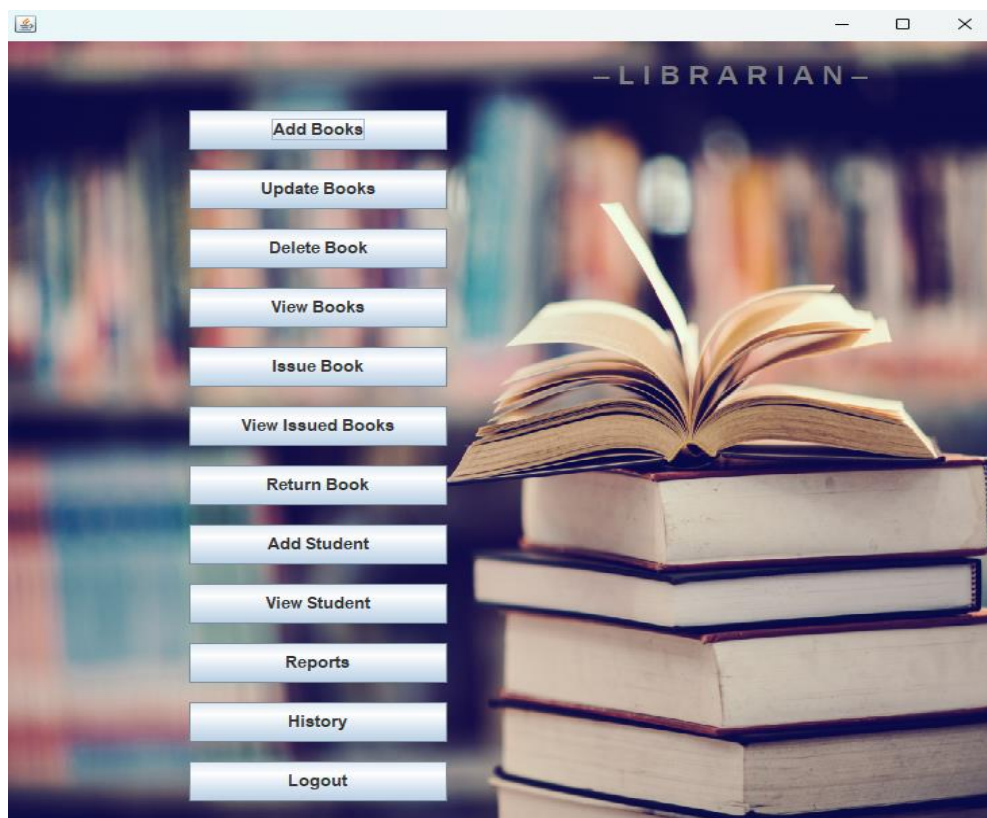
Now click on **View student** to view list of student registered in library.



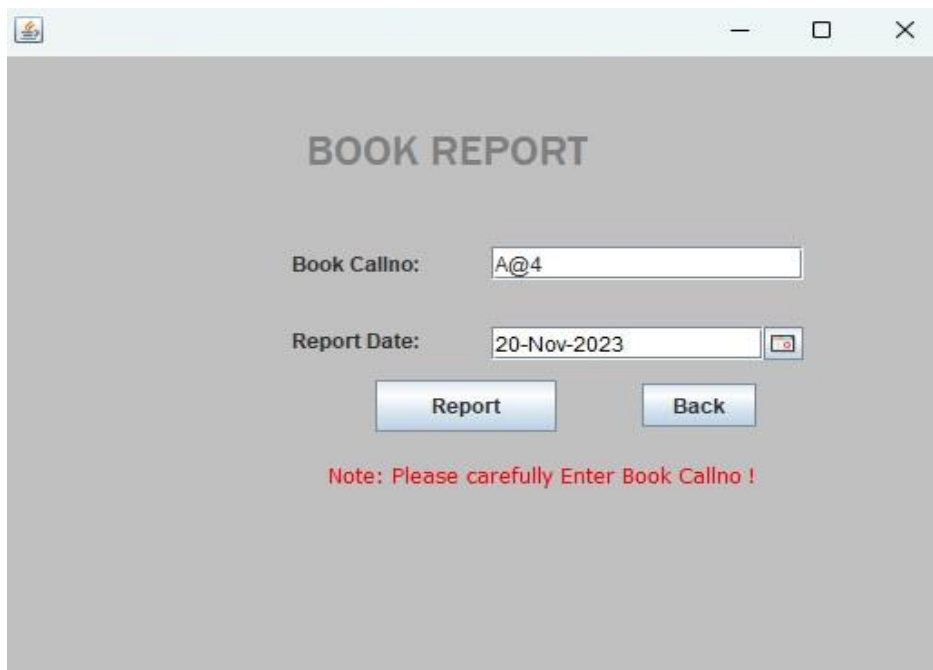
A screenshot of a web application window with a title bar containing a small icon and standard window controls (minimize, maximize, close). The main content area displays a table with five columns: 'id', 'studentname', 'password', 'studentid', and 'studentcontact'. The table contains nine rows of student data. Below the table is a large, empty rectangular area.

| id | studentname | password | studentid | studentcontact |
|----|-------------|----------|-----------|----------------|
| 1 | gaurav | g | 100 | 932992932 |
| 2 | sabhijeet | a | 102 | 95676565756 |
| 3 | suraj | s | 103 | 9329882382 |
| 4 | kk | k | 23 | 932992932 |
| 5 | Sumedh | sd | 335 | 95676565756 |
| 6 | abhishek | ab | 87 | 9329882382 |
| 8 | abc | abc | 1 | 9876545678 |
| 9 | trilok | 54321 | 38 | 9079163982 |

Now close the table. And go to Librarian section.

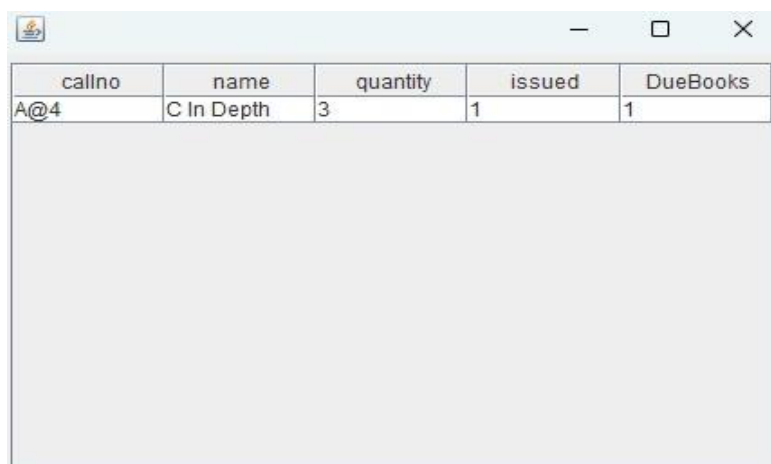


Now click on **Report**.



A screenshot of a web application window titled "BOOK REPORT". The window has a light blue header bar with standard window controls (minimize, maximize, close). The main content area is gray. At the top, the title "BOOK REPORT" is centered in a large, bold, gray font. Below the title, there are two input fields. The first is labeled "Book Callno:" and contains the text "A@4". The second is labeled "Report Date:" and contains the text "20-Nov-2023", with a small calendar icon to its right. Below these fields are two blue buttons with white text: "Report" and "Back". At the bottom, there is a red text note that says "Note: Please carefully Enter Book Callno !".

Write details of book and click **report** to View report.



A screenshot of a web application window showing a table of book reports. The window has a light blue header bar with standard window controls. The table has five columns: "callno", "name", "quantity", "issued", and "DueBooks". The first row of data shows "A@4" for callno, "C In Depth" for name, "3" for quantity, "1" for issued, and "1" for DueBooks. Below the table is a large, empty gray rectangular area.

| callno | name | quantity | issued | DueBooks |
|--------|------------|----------|--------|----------|
| A@4 | C In Depth | 3 | 1 | 1 |

Come back to Librarian and click on **history** .



A screenshot of a web application window titled "HISTORY". The window has a light blue header bar with standard window controls. The main content area is gray. At the top, the title "HISTORY" is centered in a large, bold, gray font. Below the title, there is an input field labeled "Student ID:" containing the number "1". Below the input field are two blue buttons with white text: "Show" and "Back".

Click Show.

| id | bookca... | studentid | student... | student... | issued... | returnd... | duedays |
|----|-----------|-----------|------------|------------|-----------|------------|---------|
| 9 | A1 | 1 | abc | abc | 2023-1... | 2023-1... | 5 |
| 10 | A@9 | 1 | abc | 98756... | 2023-1... | 2023-1... | 0 |

Now Close the Table and Logout from Librarian section And go to Home page.



Click on Student.



A screenshot of a web browser window displaying a login form titled "STUDENT LOGIN". The background is a blurred image of a library with bookshelves and a stack of books in the foreground. The form includes two input fields: "Enter Name:" with the text "abc" and "Enter Password:" with a masked password "...". A "LOGIN" button is positioned below the password field.

STUDENT LOGIN

Enter Name:

Enter Password:

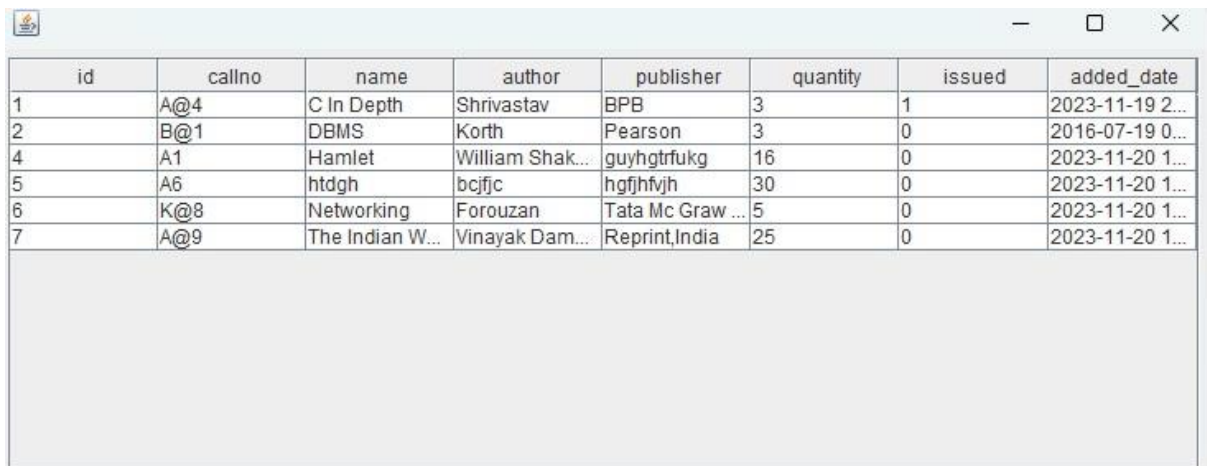
Now enter Name And Password to login.



A screenshot of a web browser window displaying a dashboard titled "STUDENT". The background is the same library image as the login page. On the left side, there are three stacked buttons: "View Books", "History", and "Logout".

STUDENT

Click view book to see booklist.

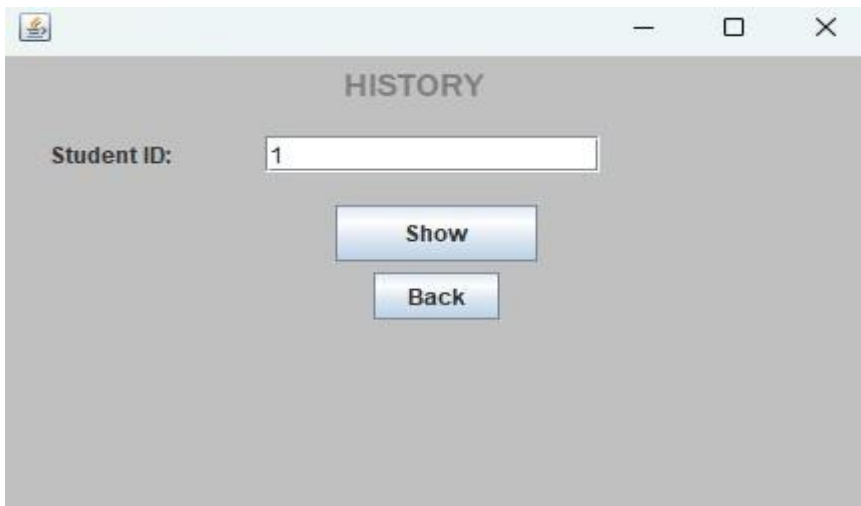


A screenshot of a window displaying a table with 8 columns: id, callno, name, author, publisher, quantity, issued, and added_date. The table contains 7 rows of book data. Below the table is a large empty rectangular area.

| id | callno | name | author | publisher | quantity | issued | added_date |
|----|--------|-----------------|-----------------|------------------|----------|--------|-----------------|
| 1 | A@4 | C In Depth | Shrivastav | BPB | 3 | 1 | 2023-11-19 2... |
| 2 | B@1 | DBMS | Korth | Pearson | 3 | 0 | 2016-07-19 0... |
| 4 | A1 | Hamlet | William Shak... | guyhgtrfukg | 16 | 0 | 2023-11-20 1... |
| 5 | A6 | htdgh | bcjfc | hgfhfvjh | 30 | 0 | 2023-11-20 1... |
| 6 | K@8 | Networking | Forouzan | Tata Mc Graw ... | 5 | 0 | 2023-11-20 1... |
| 7 | A@9 | The Indian W... | Vinayak Dam... | Reprint,India | 25 | 0 | 2023-11-20 1... |

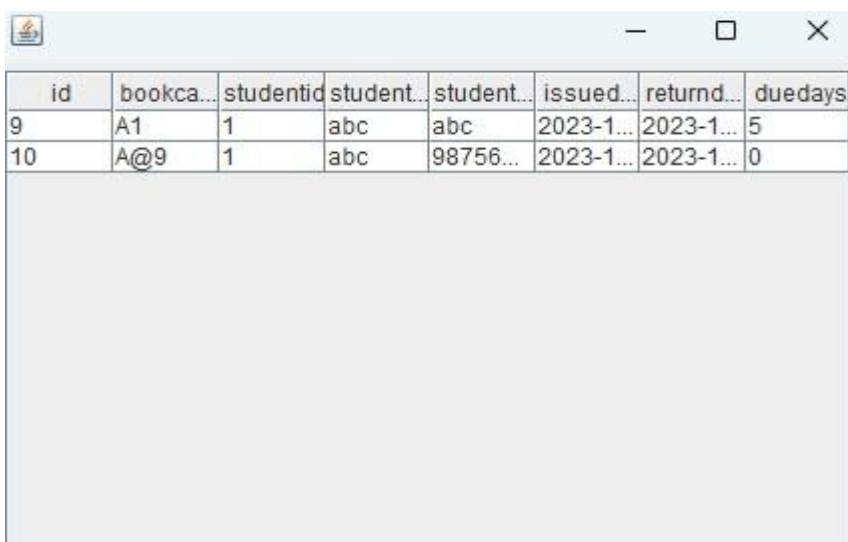
Close table.

Write student id and click show to get student history.



A screenshot of a window titled 'HISTORY'. It contains a label 'Student ID:' followed by a text input field containing the number '1'. Below the input field are two buttons: 'Show' and 'Back'.

Click Show.



A screenshot of a window displaying a table with 8 columns: id, bookca..., studentid, student..., student..., issued..., returnd..., and duedays. The table contains 2 rows of student history data. Below the table is a large empty rectangular area.

| id | bookca... | studentid | student... | student... | issued... | returnd... | duedays |
|----|-----------|-----------|------------|------------|-----------|------------|---------|
| 9 | A1 | 1 | abc | abc | 2023-1... | 2023-1... | 5 |
| 10 | A@9 | 1 | abc | 98756... | 2023-1... | 2023-1... | 0 |

Close the table and click on **logout**.



THANK YOU