

A Project Report on
BOOK LENDING APPLICATION

by

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BOOK LENDING APPLICATION

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ACKNOWLEDGEMENT

It brings me immense pleasure to put forth my project report. It is a great pleasure and a great opportunity for me to express my deep sense of gratitude to all who have made it possible for me to accomplish my project.

Firstly, I would like to thank my project guide **Dr. Carl Eckberg, Graduate Advisor**, for his stimulating guidance and profuse assistance. I shall always cherish my association with him for his guidance, encouragement and valuable suggestions throughout the progress of this work. I consider it a great privilege to work under his guidance and constant support.

I thank the staff of our department for their good wishes, help and constructive criticism which led to the successful completion of our project.

Finally, I deem it a great pleasure to thank one and all who helped us directly and indirectly while I am through this project.

ABSTRACT

Project goal is to introduce internal book lending system for San Diego State University, which enables the student to share a book for shorter periods of time. Main purpose of this project is to increase the efficiency of book lending system that is currently followed by our library lending system. Even though Current Library system serves very well for the student's book lending needs, but I observed that, when a student lends a book from the library he/she generally lends it for maximum periods even though student doesn't need for such longer periods. This is because they are afraid that book may not be available when they need it. It reduces the availability of books to the other students.

This project addresses this particular problem and allows a book sharing system to be more efficient. Main idea behind this is to allow a student who lends the book from library to sub-lend the book to another student for shorter periods of time. This project provides a complete sub-lending platform. Student within our university will have secure access to the website, where a student can post the available books to the catalog and any student who has access can browse through the catalog and request those books for the available dates. This website will keep track of every book lend or lent by a student in his/her 'my books' portal. In addition to this, a student can also post his/her private collection of books if they want to share them.

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1. INTRODUCTION

Lending a book from the library may not be as easy as it seems to be, especially during the examination times. Most of the students like to use library resources either for the academic text books or for the general purposes.

The availability of a book at a right time when a student needs it can become a nightmare. That's the reason why students lend the book for longer period of times, even though they don't use the book for all the time they borrowed. This reduces both availability and efficiency of the book sharing system. University cannot constantly supply for the demand if a student lends the book for longer periods without utilizing it.

Book Lending Application is a project mainly concentrated on providing a solution for this problem. This application enables friendly sharing system among the students and increases the availability of the book and reduces the pressure among the students. This system creates a platform among the students to sub-lend their books lent from the library for shorter periods of time. This assures the efficiency of the book sharing among the students. This can also help students who want to share their private collection of books to other students.

2. SYSTEM ANALYSIS

2.1 SOFTWARE REQUIREMENT SPECIFICATION

A Software Requirements Specification (SRS) is a complete description of the behavior of the system to be developed.

PURPOSE: The purpose of the system is to enable effective book lending. This system enables the students to lend their books for very brief period of time. This helps the students in need of the book to lend this book for the short period of time. This system is very useful when the library don't have a particular book, but a student is willing to lend it for short period.

SCOPE: To ensure security we are limiting the scope to the university. This helps us to ensure the authenticity of the book lender and the borrower. Since, the book lending and borrowing is no profit the lender and borrower needs to have authentic information

about each other. Limiting the scope to university helps to achieve better security. More research has to be done to increase scope.

2.2 FUNCTIONAL REQUIREMENTS

2.2.1 LENDER CAN ADD THEIR BOOKS

A lender can add their book to the catalog by filling all the required information including available dates of the book in the 'Add Book' page. Once lender submits the correct information of the book, it is added to the catalog page and lender can edit the information or delete it before someone borrows that book.

2.2.2 BORROWER CAN BROWSE THROUGH BOOKS AVAILABLE

Typically, every user is redirected to the home page first. Where they can browse through the catalog of books with all the information including the available dates of the book.

2.2.3 BORROWER CAN REQUEST BOOK FROM LENDER

Once decided to borrow a book, user should select the book and click 'Request to lend' to send a request to the book lender. A borrower should wait for the approval of his/her request from the lender.

2.2.4 LENDER CAN ACCEPT OR REJECT REQUEST FROM LENDER

Lender receives all the requests placed on his/her books. A lender can either accept or reject the request. Once accepted lender cannot edit or remove the book from the catalog until it is returned.

2.2.5 BORROWER CAN WITHDRAW REQUEST

A borrower can withdraw the request any time before a lender accepts the request. Once the request is accepted, borrower cannot withdraw the request. He can only return the book back to the lender.

2.2.6 LENDER CAN UPDATE WHEN THE BOOK IS RETURNED

Once the book is returned, lender can update the status of the book. Lender can again edit the book details or change the available dates of the book.

2.3 HARDWARE REQUIREMENTS

1. Input Devices: Keyboard and Mouse

2. RAM: 512 MB
3. Processor: P4 or above
4. Storage: Less than 100 MB of HDD space.

2.4 SOFTWARE REQUIREMENTS

1. Operating System: Windows XP SP2 or above
2. Run-Time: Java Virtual Machine (JDK 1.8)
3. Tomcat Server
4. MySQL
5. Eclipse J2EE Development Editor
6. JQuery, AJAX, HTML, CSS
7. JSP, JSTL, Servlets
8. JDBC
9. Bootstrap

2.5 EXISTING SYSTEM

Existing System is a regular library system where a student must physically go to the library to check whether a book is available or not. Even though this system is very successful in fulfilling the student needs, it is tough for a regular library system to constantly supply for the student's demand in the university at peak times like during examination.

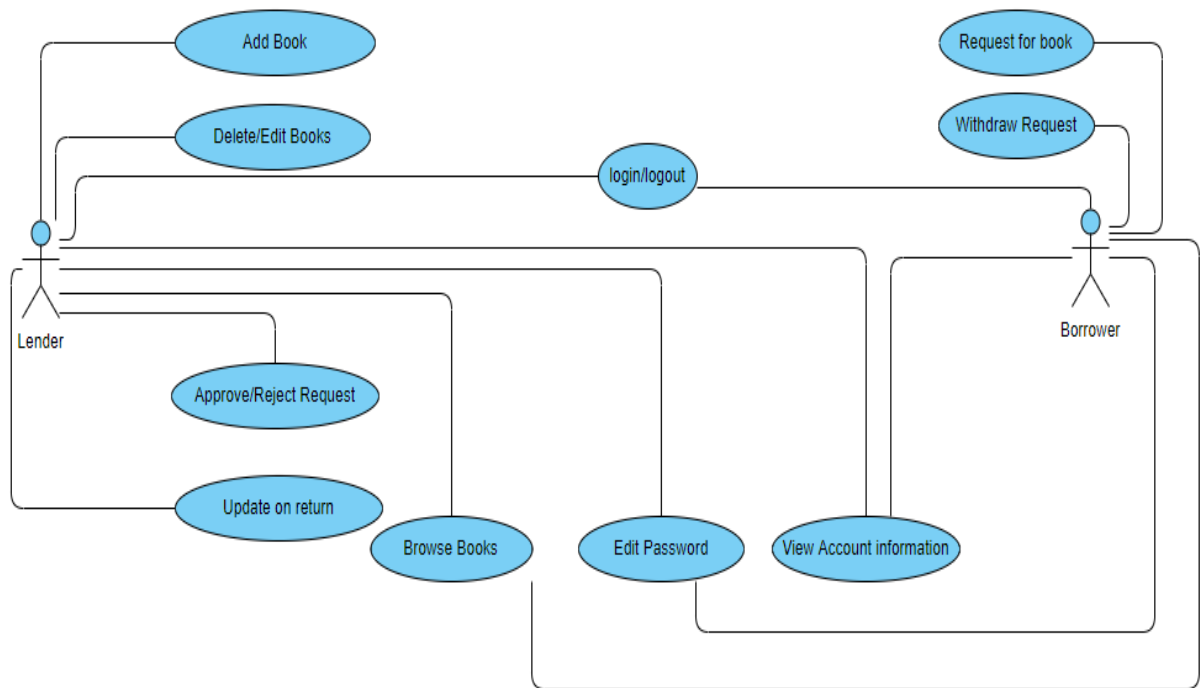
2.6 PROPOSED SYSTEM

Proposed System is a Book Lending Application, which increases the efficiency of the book sharing. This application provides a platform for the students to share their private books or books lent from the library. This web application provides an ease of checking the availability of a book without physically going to the library.

3. SYSTEM DESIGN

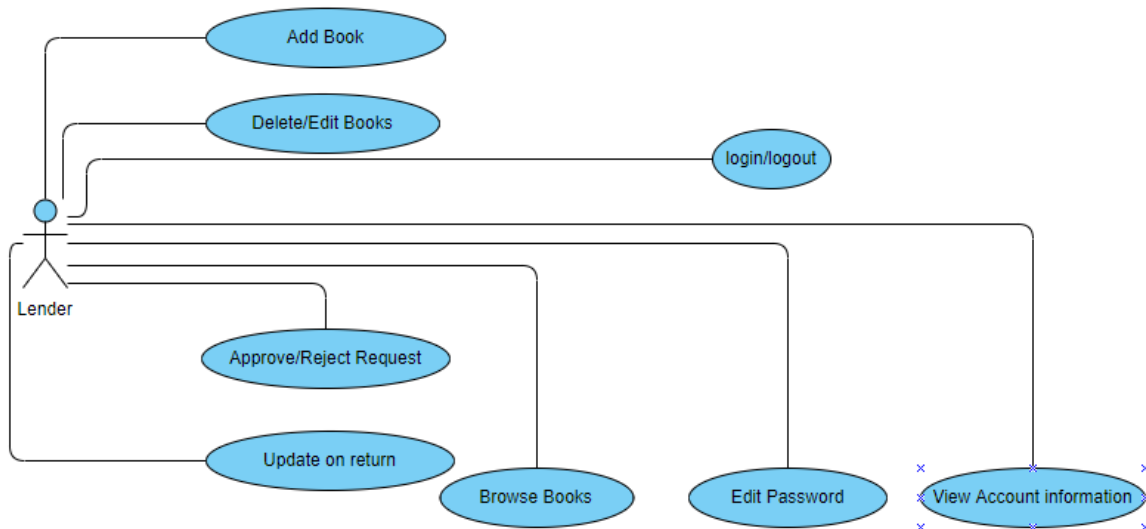
3.1 USE CASE DIAGRAMS

3.1.1 OVERALL USECASE DIAGRAM



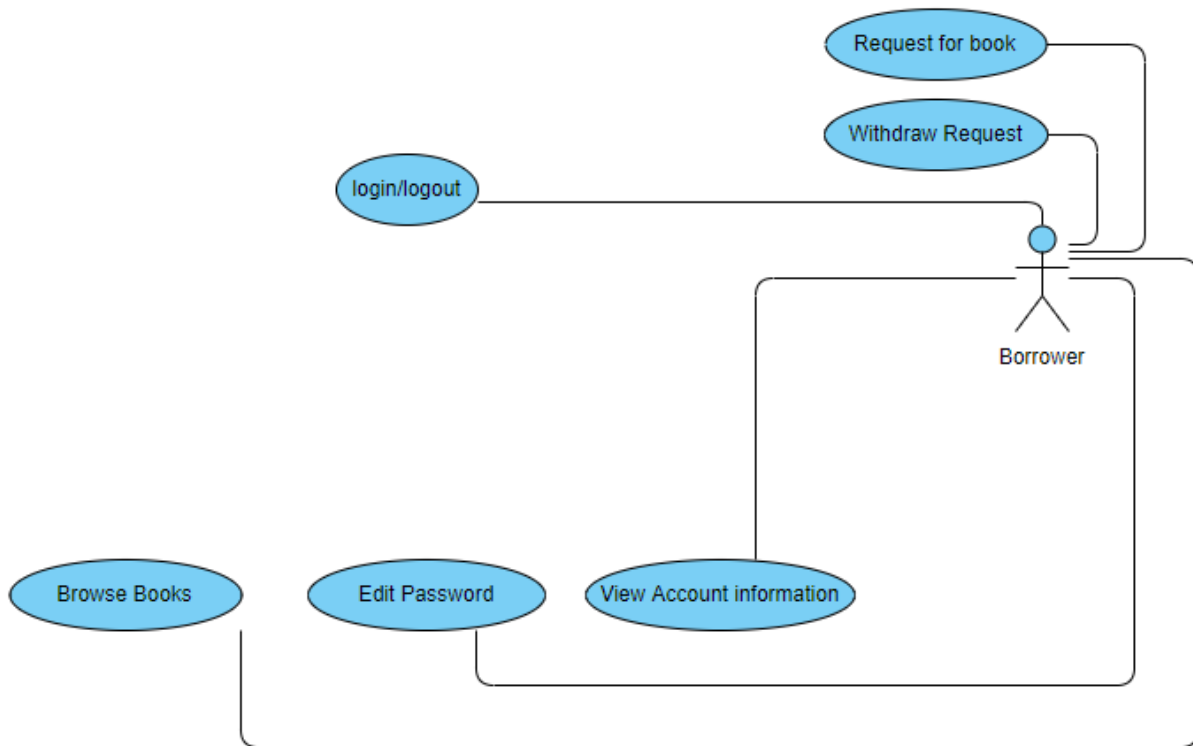
3.1.1.1 Overall use case diagram

3.1.2 LENDERS USECASE DIAGRAM



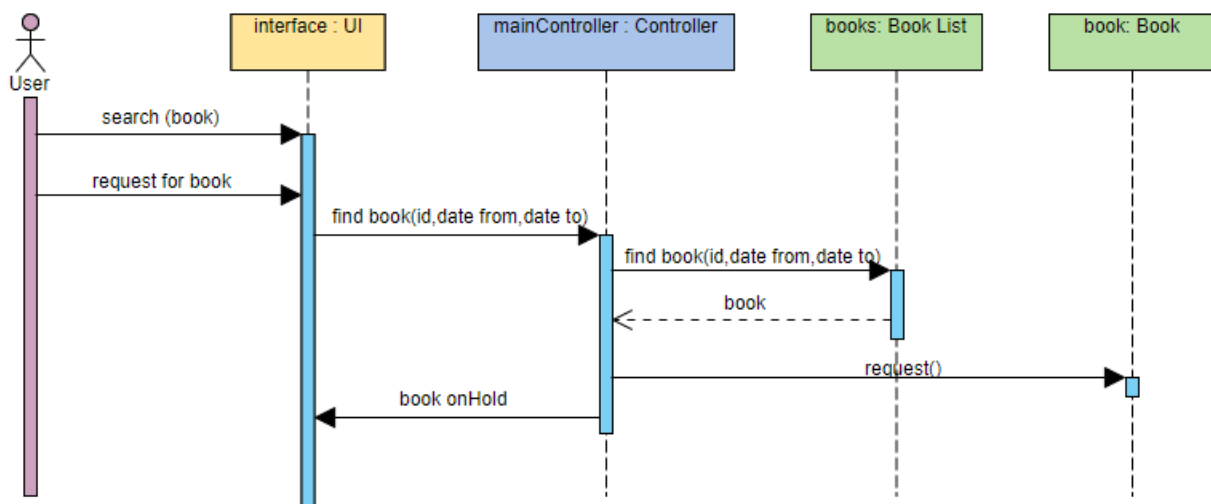
3.1.2.1 Lender's use case diagram

3.1.3 BORROWERS USECASE DIAGRAM

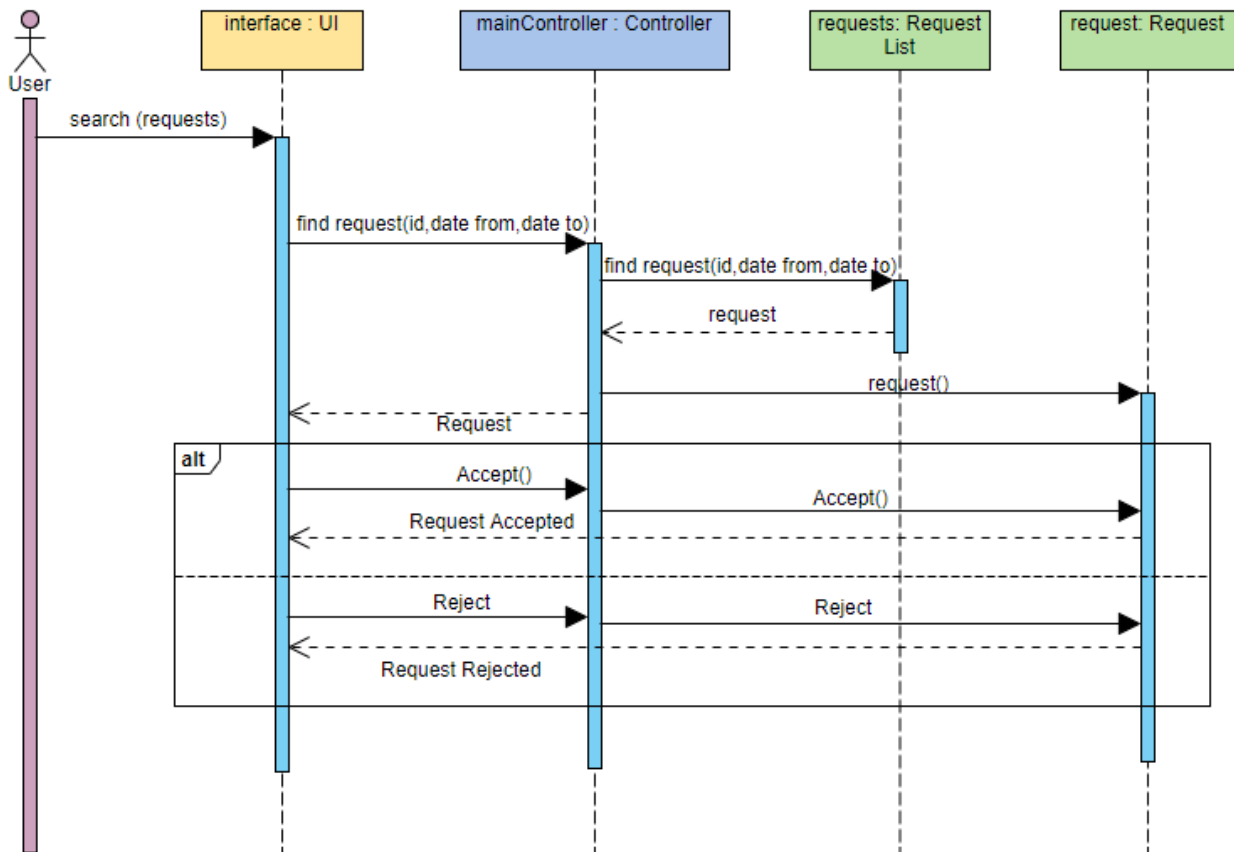


3.1.3.1 Borrower's use case

3.2 SEQUENCE DIAGRAM

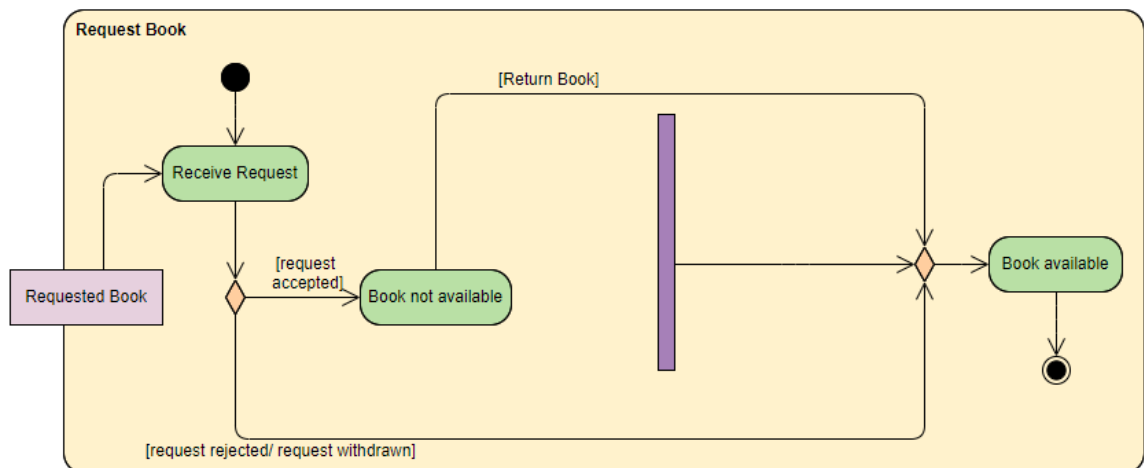


3.2.1 Request for book sequence diagram



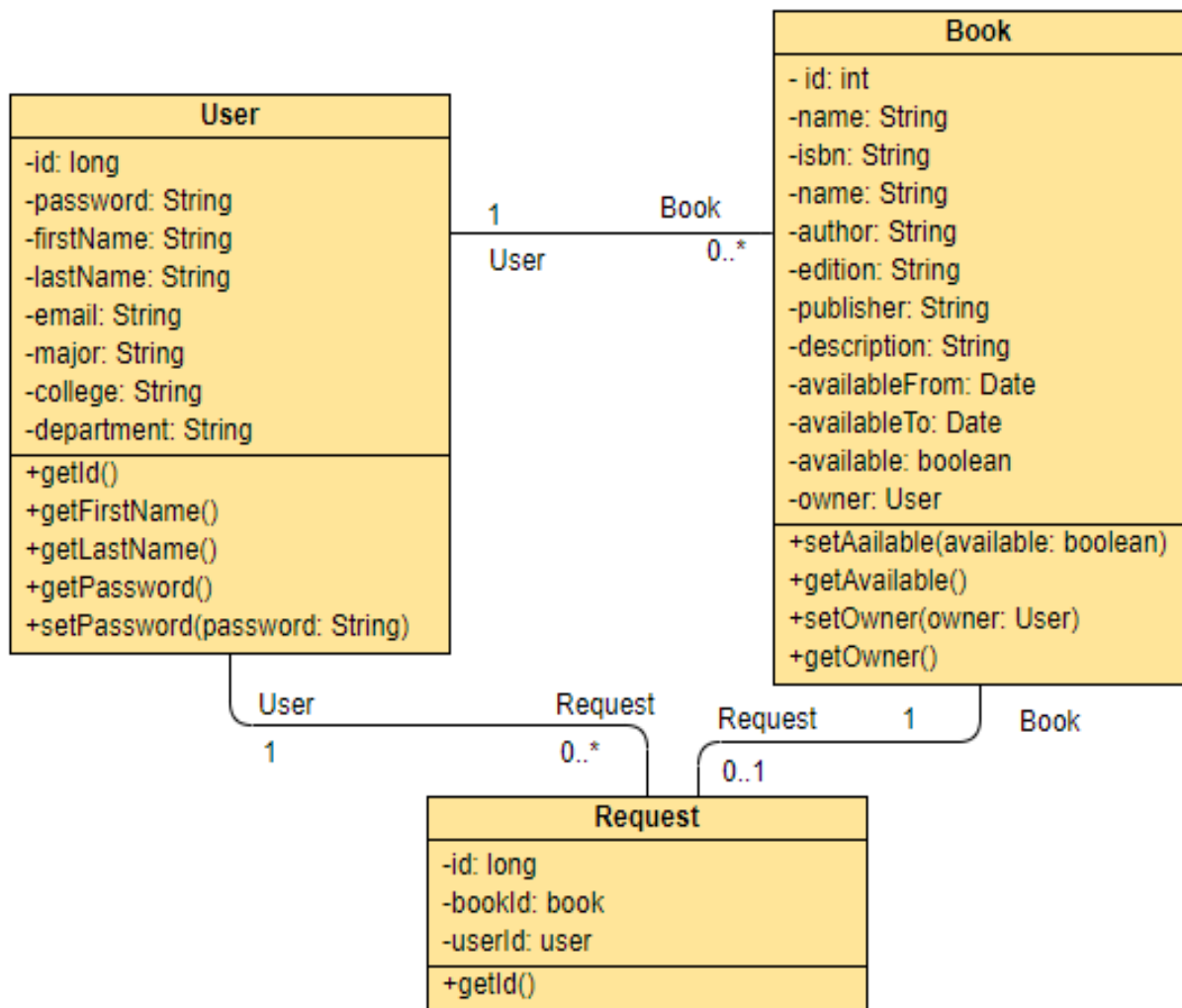
3.2.2 Accept or Reject request of a book sequence diagram

3.3 ACTIVITY DIAGRAM



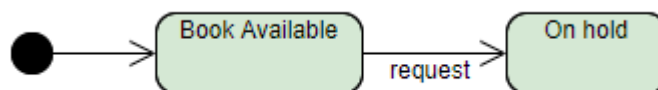
3.4.1 Accept or reject request

3.4 CLASS DIAGRAM

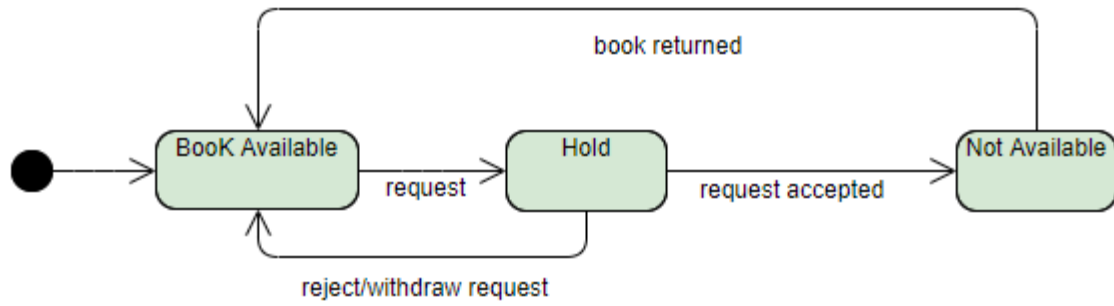


3.3.1 Class diagram

3.5 STATE CHART DIAGRAM

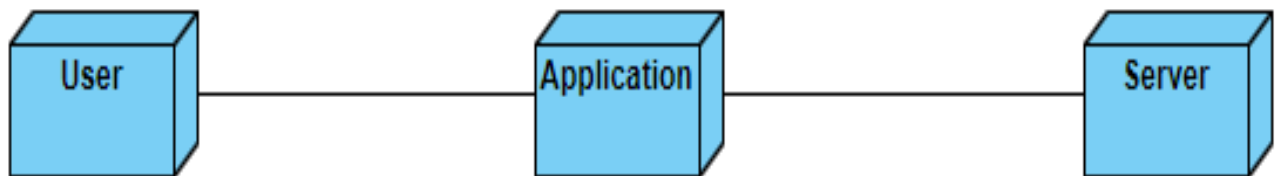


3.5.1 Request for book



3.5.1 Accept/Reject request

3.5 DEPLOYMENT DIAGRAM

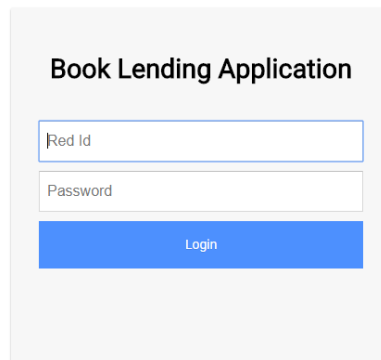


3.6.1 Deployment

4. SYSTEM IMPLEMENTATION

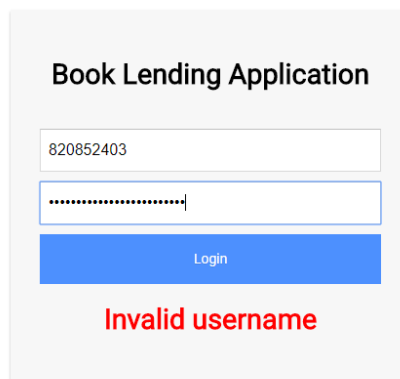
4.1 SIGN IN PAGE

- User can sign in to the system using his/her red-id and password.
- If credentials are wrong, it displays an error message prompts the user to retype the student's red-id and password.
- On successful login it redirects to the Catalog/Home page.



The screenshot shows a login form titled "Book Lending Application". It contains two input fields: "Red Id" and "Password". Below these fields is a blue "Login" button.

4.1.1 Login Page



The screenshot shows the same login form as in 4.1.1, but with the "Red Id" field containing the text "820852403" and the "Password" field filled with dots. Below the "Login" button, the text "Invalid username" is displayed in red.

4.1.2 Login with error message

4.2 CATALOG/HOME PAGE

- Once logged in to the system, student can browse through the catalog page which has ISBN, Book Name, Author, Publisher, available dates and owners.

- Students can request any book from catalog. If a book is requested a request is sent to the owner and he can approve or reject that request.
- It has several options like
 - Add Book – Owner can add a book to the catalog.
 - My books – Books added by the Owner.
 - My Lending – All the requests placed for the owner.
 - My Borrowings – Requests placed by user for other books.
 - Edit Book information – Edit Book information.

| Goutham | [Home](#) [My Books](#) [Add Book](#) [My Lendings](#) [My Borrowings](#) [Logout](#)

Books Catalog

ISBN	Book Name	Author	Publisher	Edition	Description	Owner	Available From	Available to	Status
316238798	Harry Potter	JK Rowling	Little Brown	12th	Novel	Goutham	2018-07-20	2018-07-27	Available
201702258	UML	Alistair	Addison	2nd	Usecases	Goutham	2018-07-22	2018-07-31	On Hold
393979504	Programming	K.N.King	W.W.Norton	2nd	C Programming	Goutham			Not Available
134670949	DS	Y.Daniel Liang	Pearson	1st	Data Structures	Goutham			Not Available
133813460	Java Prog	Liang	Prentice Hall Inc	10th	JAVA	Chris	2018-07-17	2018-07-23	Request to Lend

4.2.1 Home Page

4.3 ADD BOOK

- A Student can add a book in Add Book page.
- Student should enter all the required fields in the add book form.
- If any required field is missing from the form, then an error message will be prompted to complete the form.
- Once a book is submitted with all the details it will be added to the catalog page.
- And updated to the students my book page.

[| Goutham |](#) [Home](#) [My Books](#) [Add Book](#) [My Lendings](#) [My Borrowings](#) [Logout](#)

Add Book to Lend

Book ISBN	<input type="text" value="Enter ISBN"/>
Book Name	<input type="text" value="Enter Book Name"/>
Author	<input type="text" value="Enter Book Author"/>
Edition	<input type="text" value="Enter Book Edition"/>
Publisher	<input type="text" value="Enter Book Publisher"/>
Description	<input type="text" value="Enter description about book"/>
Available From	<input type="text" value="mm / dd / yyyy"/>
Available To	<input type="text" value="mm / dd / yyyy"/>

4.3.1 Page to add book

[| Goutham |](#) [Home](#) [My Books](#) [Add Book](#) [My Lendings](#) [My Borrowings](#) [Logout](#)

Book ISBN	<input type="text" value="Enter ISBN"/>
Book Name	<input type="text" value="Enter Book Name"/>
Author	<input type="text" value="Enter Book Author"/>
Edition	<input type="text" value="Enter Book Edition"/>
Publisher	<input type="text" value="Enter Book Publisher"/>
Description	<input type="text" value="Enter description about book"/>
Available From	<input type="text" value="mm / dd / yyyy"/>
Available To	<input type="text" value="mm / dd / yyyy"/>

Add Book

4.3.2 Page to add book

4.4 MY BOOKS

- My books page has all the books added by the user.
- He can edit or delete the books until it is lent.
- Once the book is lent to the student, owner cannot edit or delete the book information.
- Once returned from the receiver, again owner can edit or delete the book or add the book again to the catalog.

My Books

ISBN	Book Name	Author	Publisher	Edition	Description	Available From	Available to	Edit	Delete
316238798	Harry Potter	JK Rowling	Little Brown	12th	Novel	2018-07-20	2018-07-27	Edit	Delete
201702258	UML	Alistair	Addison	2nd	Usecases	2018-07-22	2018-07-31	Edit	Delete
393979504	Programming	K.N.King	W.W.Norton	2nd	C Programming			Book Lent	Book Lent
134670949	DS	Y.Daniel Liang	Pearson	1st	Data Structures			Book Lent	Book Lent

4.4.1 Page showing books added by user

4.5 MY LENDING

- This page consists of all the requests placed for the owner's books.
- He can accept or reject the request and can update the status if book is returned.

My Lendings

ISBN	Book Name	Request Date	Requested by	Request Status	Return Status
201702258	UML	2018-07-17	sree	Approve Reject	
201702258	UML	2018-07-17	sree	Approved	Returned
134670949	DS	2018-07-17	sree	Approved	To Be Returned
393979504	Programming	2018-07-17	sree	Rejected	
201702258	UML	2018-07-17	sree	Withdrawn	

4.5.1 Approve and reject requests by book owner

4.6 MY BORROWINGS

- This page has all the books a student borrowed and the pending requests he placed.
- It also shows the status if the book is returned.
- A student can withdraw the request if it's not yet been approved.

My Borrowings

ISBN	Book Name	Request Date	Request Status	Return Status
596007739	JavaInNutshell	2018-07-17	Pending	Withdraw
316228583	Causal Vacancy	2018-07-17	Approved	Not Yet Returned
131872486	Java Thinking	2018-07-17	Requested	Withdrawn
596007739	JavaInNutshell	2018-07-17	Rejected	
316228583	Causal Vacancy	2018-07-17	Approved	Returned

4.6 Page showing all the books borrowed by user and their status

4.7 EDIT BOOK INFORMATION

- Student can edit the book information.
- After a book is returned a student can update the available dates.

| Goutham | Home **My Books** Add Book My Lendings My Borrowings Logout

Edit Book to Lend

Book ISBN	<input type="text" value="201702258"/>
Book Name	<input type="text" value="UML"/>
Author	<input type="text" value="Alistair"/>
Edition	<input type="text" value="2nd"/>
Publisher	<input type="text" value="Addison"/>
Description	<input type="text" value="Usecases"/>
Available From	<input type="text" value="07 / 22 / 2018"/>
Available To	<input type="text" value="07 / 31 / 2018"/>

4.7.1 Edit Book Page

[| Goutham |](#) [Home](#) [My Books](#) [Add Book](#) [My Lendings](#) [My Borrowings](#) [Logout](#)

Book ISBN	<input type="text" value="201702258"/>
Book Name	<input type="text" value="UML"/>
Author	<input type="text" value="Alistair"/>
Edition	<input type="text" value="2nd"/>
Publisher	<input type="text" value="Addison"/>
Description	<input type="text" value="Usecases"/>
Available From	<input type="text" value="07 / 22 / 2018"/>
Available To	<input type="text" value="07 / 31 / 2018"/>
<input type="button" value="Edit Book"/>	

4.7.2 Edit Book Page

4.8 EMAIL REMAINDER

Email remainder would be sent to borrower reminding about the return.

5. RUNNING THE SYSTEM

Source code for this project can be found at [GitHub](#) Repository.

(github.com/sreeleela/book-lending-application)

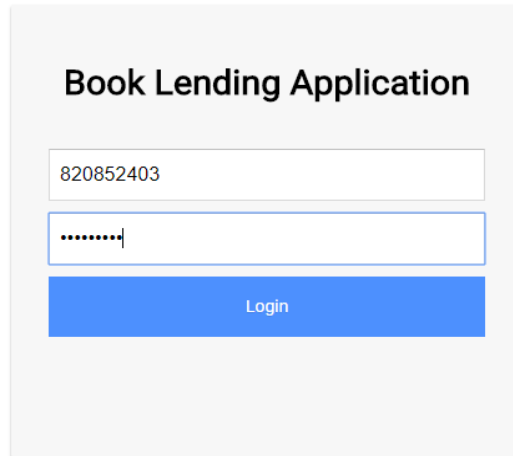
5.1 LOGIN WITH USERNAME AND PASSWORD

Enter Red Id as username and password. If incorrect details are entered it displays error else it logs in and shows home page.

For testing you may use following information

RID: 820852403

Password: sreeleela

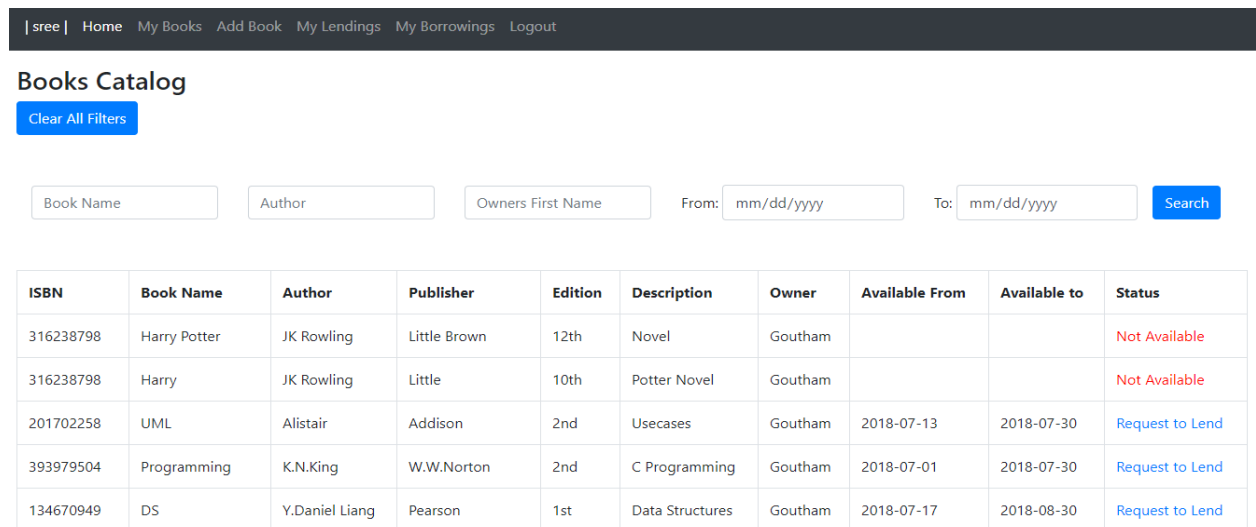


The image shows a login form for a 'Book Lending Application'. It has a title 'Book Lending Application' at the top. Below the title, there is a text input field containing the username '820852403'. Underneath that is a password input field with masked characters '.....'. At the bottom of the form is a blue button labeled 'Login'.

5.1.1 Enter username and password

5.2 LIST OF ALL BOOKS WITH THEIR INFORMATION AND STATUS

On Successful login user sees home page which has list of books, their information and availability status.



The image shows the 'Books Catalog' home page. At the top is a navigation bar with links: | sree | Home My Books Add Book My Lendings My Borrowings Logout. Below the navigation bar is the title 'Books Catalog' and a blue button 'Clear All Filters'. There is a search section with input fields for 'Book Name', 'Author', 'Owners First Name', 'From:' (with a date picker set to mm/dd/yyyy), and 'To:' (with a date picker set to mm/dd/yyyy), followed by a blue 'Search' button. Below the search section is a table with 10 columns: ISBN, Book Name, Author, Publisher, Edition, Description, Owner, Available From, Available to, and Status. The table contains 5 rows of book data.

ISBN	Book Name	Author	Publisher	Edition	Description	Owner	Available From	Available to	Status
316238798	Harry Potter	JK Rowling	Little Brown	12th	Novel	Goutham			Not Available
316238798	Harry	JK Rowling	Little	10th	Potter Novel	Goutham			Not Available
201702258	UML	Alistair	Addison	2nd	Usecases	Goutham	2018-07-13	2018-07-30	Request to Lend
393979504	Programming	K.N.King	W.W.Norton	2nd	C Programming	Goutham	2018-07-01	2018-07-30	Request to Lend
134670949	DS	Y.Daniel Liang	Pearson	1st	Data Structures	Goutham	2018-07-17	2018-08-30	Request to Lend

5.2.1 Home page

You can observe the following status

On hold: When the user requests the book it goes to hold.

Not Available: If the book borrowed it shows as not available

Request to Lend: If the book is available

Available: This is show only to the owner of the book, saying that the book is available for request.

There is also filter to search for specific books.

[sree](#) | [Home](#) | [My Books](#) | [Add Book](#) | [My Lendings](#) | [My Borrowings](#) | [Logout](#)

Books Catalog

Clear All Filters

From: To:

ISBN	Book Name	Author	Publisher	Edition	Description	Owner	Available From	Available to	Status
316228583	Causal Vacancy	JK Rowling	Little Brown	12th	Novel	sree			Not Available
596007739	JavalnNutshell	DavidFlangan	OReillyMedia	5th	Java	sree	2018-07-20	2018-07-27	Available
131872486	Java Thinking	Bruice Ekil	Prentice Hall	4th	Java	sree			Not Available

5.2.2 Filters to search for books

5.3 MANAGE LENGINGS

5.3.1 REQUEST TO LEND

Click on “Request to Lend”

[sree](#) | [Home](#) | [My Books](#) | [Add Book](#) | [My Lendings](#) | [My Borrowings](#) | [Logout](#)

Books Catalog

Clear All Filters

From: To:

ISBN	Book Name	Author	Publisher	Edition	Description	Owner	Available From	Available to	Status
316238798	Harry Potter	JK Rowling	Little Brown	12th	Novel	Goutham	2018-07-24	2018-08-01	Request to Lend

5.3.1.1 Click on request to lend

Books Catalog

[Clear All Filters](#)

From: To:

congratulations!! Request sent. Happy Lending.

ISBN	Book Name	Author	Publisher	Edition	Description	Owner	Available From	Available to	Status
316238798	Harry Potter	JK Rowling	Little Brown	12th	Novel	Goutham	2018-07-24	2018-08-01	On Hold

5.3.1.2 Request sent

Books Catalog

[Clear All Filters](#)

From: To:

ISBN	Book Name	Author	Publisher	Edition	Description	Owner	Available From	Available to	Status
316238798	Harry Potter	JK Rowling	Little Brown	12th	Novel	Goutham	2018-07-24	2018-08-01	On Hold

5.3.1.3 Book is on hold

5.3.2 WITHDRAW REQUEST

Now open “My Borrowings”. Your request shows up there.

My Borrowings

Note: Lender's information (email) will be available once he approves your request . And, it is available till the return is complete. This is to protect privacy.

ISBN	Book Name	Request Date	Request Status	Return Status	Book Owner and Contact Info
316238798	Harry Potter	2018-07-24	Pending	Withdraw	Goutham

5.3.2.1 My Borrowings after sending request

| sree |
Home
My Books
Add Book
My Lendings
My Borrowings
Logout

My Borrowings

Request Withdrawn

Note: Lender's information (email) will be available once he approves your request . And, it is available till the return is complete. This is to protect privacy.

ISBN	Book Name	Request Date	Request Status	Return Status	Book Owner and Contact Info
316238798	Harry Potter	2018-07-24	Requested	Withdrawn	Goutham

5.3.2.2 Request withdrawn message

| sree |
Home
My Books
Add Book
My Lendings
My Borrowings
Logout

My Borrowings

Note: Lender's information (email) will be available once he approves your request . And, it is available till the return is complete. This is to protect privacy.

ISBN	Book Name	Request Date	Request Status	Return Status	Book Owner and Contact Info
316238798	Harry Potter	2018-07-24	Requested	Withdrawn	Goutham

5.3.2.3 My borrowings list after withdrawing request

| sree |
Home
My Books
Add Book
My Lendings
My Borrowings
Logout

Books Catalog

Clear All Filters

Book Name

Author

Owners First Name

From: mm/dd/yyyy

To: mm/dd/yyyy

Search

ISBN	Book Name	Author	Publisher	Edition	Description	Owner	Available From	Available to	Status
316238798	Harry Potter	JK Rowling	Little Brown	12th	Novel	Goutham	2018-07-24	2018-08-01	Request to Lend

5.3.2.4 Book available again

5.4 MANAGING LENGINGS

5.4.1 WITHDRAWN REQUEST

My Lendings

Note: Borrower's information (email) will be available once you approve their request . And, it is available till the return is complete. This is to protect privacy.

ISBN	Book Name	Request Date	Requested by	Request Status	Return Status
316238798	Harry Potter	2018-07-24	sree	Withdrawn	

5.4.1.1 Request withdrawn status shown to lender

5.4.2 REJECT REQUEST

Borrower's information is displayed.

My Lendings

Note: Borrower's information (email) will be available once you approve their request . And, it is available till the return is complete. This is to protect privacy.

ISBN	Book Name	Request Date	Requested by	Request Status	Return Status
316238798	Harry Potter	2018-07-24	sree sree.leela92@gmail.com	Approve Reject	

5.4.2.1 Request sent to lender

My Lendings

Request Rejected

Note: Borrower's information (email) will be available once you approve their request . And, it is available till the return is complete. This is to protect privacy.

ISBN	Book Name	Request Date	Requested by	Request Status	Return Status
316238798	Harry Potter	2018-07-24	sree	Rejected	

5.4.2.2 Request rejected message

Contact information is now removed.

| Goutham | Home My Books Add Book My Lendings My Borrowings Logout

My Lendings

Note: Borrower's information (email) will be available once you approve their request . And, it is available till the return is complete. This is to protect privacy.

ISBN	Book Name	Request Date	Requested by	Request Status	Return Status
316238798	Harry Potter	2018-07-24	sree	Rejected	

5.4.2.3 My lending's list after rejecting request

| sree | Home My Books Add Book My Lendings My Borrowings Logout

My Borrowings

Note: Lender's information (email) will be available once he approves your request . And, it is available till the return is complete. This is to protect privacy.

ISBN	Book Name	Request Date	Request Status	Return Status	Book Owner and Contact Info
316238798	Harry Potter	2018-07-24	Rejected		Goutham

5.4.2.4 Borrower's request status updated after rejecting request

| sree | Home My Books Add Book My Lendings My Borrowings Logout

Books Catalog

Clear All Filters

Book Name Author Owners First Name From: mm/dd/yyyy To: mm/dd/yyyy Search

ISBN	Book Name	Author	Publisher	Edition	Description	Owner	Available From	Available to	Status
316238798	Harry Potter	JK Rowling	Little Brown	12th	Novel	Goutham	2018-07-24	2018-08-01	Request to Lend

5.4.2.5 Book available after rejecting

5.4.3 APPROVE REQUEST

[| Goutham |](#) [Home](#) [My Books](#) [Add Book](#) [My Lendings](#) [My Borrowings](#) [Logout](#)

My Lendings

Request Approved

Note: Borrower's information (email) will be available once you approve their request . And, it is available till the return is complete. This is to protect privacy.

ISBN	Book Name	Request Date	Requested by	Request Status	Return Status
316238798	Harry Potter	2018-07-24	sree sree.leela92@gmail.com	Approved	To Be Returned

5.4.3.1 Request approved message by lender

[| Goutham |](#) [Home](#) [My Books](#) [Add Book](#) [My Lendings](#) [My Borrowings](#) [Logout](#)

My Lendings

Note: Borrower's information (email) will be available once you approve their request . And, it is available till the return is complete. This is to protect privacy.

ISBN	Book Name	Request Date	Requested by	Request Status	Return Status
316238798	Harry Potter	2018-07-24	sree sree.leela92@gmail.com	Approved	To Be Returned

5.4.3.2 My Lending's list after approving request

Lender's information displayed to borrower after approving request.

[| sree |](#) [Home](#) [My Books](#) [Add Book](#) [My Lendings](#) [My Borrowings](#) [Logout](#)

My Borrowings

Note: Lender's information (email) will be available once he approves your request . And, it is available till the return is complete. This is to protect privacy.

ISBN	Book Name	Request Date	Request Status	Return Status	Book Owner and Contact Info
316238798	Harry Potter	2018-07-24	Approved	Not Yet Returned	Goutham thoramgowtham@gmail.com

5.4.3.3 Status updated to borrower after approving

Books Catalog

[Clear All Filters](#)

From: To:

ISBN	Book Name	Author	Publisher	Edition	Description	Owner	Available From	Available to	Status
316238798	Harry Potter	JK Rowling	Little Brown	12th	Novel	Goutham			Not Available

5.4.3.4 Book not available after approving request

5.4.4 UPDATE TO RETURN

Contact information on borrower's and lender's side are removed.

My Lendings

Book Returned

Note: Borrower's information (email) will be available once you approve their request . And, it is available till the return is complete. This is to protect privacy.

ISBN	Book Name	Request Date	Requested by	Request Status	Return Status
316238798	Harry Potter	2018-07-24	sree	Approved	Returned

5.4.4.1 Return status updated by lender

My Lendings

Note: Borrower's information (email) will be available once you approve their request . And, it is available till the return is complete. This is to protect privacy.

ISBN	Book Name	Request Date	Requested by	Request Status	Return Status
316238798	Harry Potter	2018-07-24	sree	Approved	Returned

5.4.4.2 My lending after updating return status

My Borrowings

Note: Lender's information (email) will be available once he approves your request . And, it is available till the return is complete. This is to protect privacy.

ISBN	Book Name	Request Date	Request Status	Return Status	Book Owner and Contact Info
316238798	Harry Potter	2018-07-24	Approved	Returned	Goutham

5.4.4.3 Borrowers return status updated after returning book

Book is unavailable until lender update the available dates.

Books Catalog

[Clear All Filters](#)

From: To:

ISBN	Book Name	Author	Publisher	Edition	Description	Owner	Available From	Available to	Status
316238798	Harry Potter	JK Rowling	Little Brown	12th	Novel	Goutham			Not Available

5.4.4.4 Book status after returning

5.5 MANAGE BOOKS

Edit and delete can be done before or after lending. But, not in between.

My Books

ISBN	Book Name	Author	Publisher	Edition	Description	Available From	Available to	Edit	Delete
316228583	Causal Vacancy	JK Rowling	Little Brown	12th	Novel			Book Lent	Book Lent

5.5.1 Edit and delete disabled

5.5.1 EDIT BOOKS

| Goutham | Home My Books Add Book My Lendings My Borrowings Logout

My Books

ISBN	Book Name	Author	Publisher	Edition	Description	Available From	Available to	Edit	Delete
316238798	Harry Potter	JK Rowling	Little Brown	12th	Novel			Edit	Delete

5.5.1.1 My books page

| Goutham | Home My Books Add Book My Lendings My Borrowings Logout

Edit Book to Lend

Book ISBN	<input type="text" value="316238798"/>
Book Name	<input type="text" value="Harry Potter"/>
Author	<input type="text" value="JK Rowling"/>
Edition	<input type="text" value="12th"/>
Publisher	<input type="text" value="Little Brown"/>
Description	<input type="text" value="Novel"/>
Available From	<input type="text" value="mm / dd / yyyy"/>
Available To	<input type="text" value="mm / dd / yyyy"/>

5.5.1.2 Edit book page

| Goutham |
Home
My Books
Add Book
My Lendings
My Borrowings
Logout

Book ISBN
316238798

Book Name
Harry Potter

Author
JK Rowling

Edition
12th

Publisher
Little Brown

Description
Novel

Available From
07 / 24 / 2018

Available To
09 / 02 / 2018

Edit Book

5.5.1.3 Update book page

| Goutham |
Home
My Books
Add Book
My Lendings
My Borrowings
Logout

My Books

Book Edited

ISBN	Book Name	Author	Publisher	Edition	Description	Available From	Available to	Edit	Delete
316238798	Harry Potter	JK Rowling	Little Brown	12th	Novel	2018-07-24	2018-09-02	Edit	Delete

5.5.1.4 Book details updated

| sree |
Home
My Books
Add Book
My Lendings
My Borrowings
Logout

Books Catalog

Clear All Filters

Book Name
Author
Owners First Name
From: mm/dd/yyyy
To: mm/dd/yyyy
Search

ISBN	Book Name	Author	Publisher	Edition	Description	Owner	Available From	Available to	Status
316238798	Harry Potter	JK Rowling	Little Brown	12th	Novel	Goutham	2018-07-24	2018-08-01	Request to Lend

5.5.1.5 Book available again

5.5.2 DELETE BOOKS

| Goutham | [Home](#) [My Books](#) [Add Book](#) [My Lendings](#) [My Borrowings](#) [Logout](#)

My Books

Book Deleted

No books to display. [Add book to get started.](#)

5.5.2.1 Deleting a book

5.6 ACCOUNT INFORMATION

5.6.1 VIEW ACCOUNT INFORMATION

Account information is not editable to preserve authenticity. But, user can update password.

| sree | [Home](#) [My Books](#) [Add Book](#) [My Lendings](#) [My Borrowings](#) [Logout](#)

My Account

Red ID

820852403

Name

sree Nadipalli

Email Id

sree.leela92@gmail.com

Major

Computer Science

College

SDSU

Department

Computer Science Engineering

[Edit Password](#)

5.6.1.1 Account information

5.6.2 EDIT PASSWORD

[| sree |](#) [Home](#) [My Books](#) [Add Book](#) [My Lendings](#) [My Borrowings](#) [Logout](#)

My Account

Red ID	<input type="text" value="820852403"/>
Name	<input type="text" value="sree Nadipalli"/>
Email Id	<input type="text" value="sree.leela92@gmail.com"/>
Major	<input type="text" value="Computer Science"/>
College	<input type="text" value="SDSU"/>
Department	<input type="text" value="Computer Science Engineering"/>

5.6.2.1 Edit password

[| sree |](#) [Home](#) [My Books](#) [Add Book](#) [My Lendings](#) [My Borrowings](#) [Logout](#)

My Account

Red ID	<input type="text" value="820852403"/>
Name	<input type="text" value="sree Nadipalli"/>
Email Id	<input type="text" value="sree.leela92@gmail.com"/>
Major	<input type="text" value="Computer Science"/>
College	<input type="text" value="SDSU"/>
Department	<input type="text" value="Computer Science Engineering"/>

Updated password

5.6.2.2 Update password

6. FUTURE WORK

6.1 EXPANDING THE SCOPE

The scope of current application is SDSU. This is mainly to ensure lenders and borrower's information is authentic and better security. The scope can be expanded but more research has to be done to ensure security and authenticity.

6.2 ADD EFFECTIVE SEARCH MECHANISM

Effective search mechanisms can be implemented in application for better searching of book based on different parameters.

6.3 MORE AUTOMATIC NOTIFICATIONS AND REMAINDERS

Notifications and reminders can be sent to lender and borrower reminding them about the book.

6.4 MORE CONTROL ON INFORMATION OF LENDER AND BORROWER

More study has to be done on controlling the visibility of information to lender and borrower.