

A

Project Report

On..

Library Management System

Developed By..

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Submitted to ..

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Acknowledgements

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I would like to thank my project coordinator and my faculty guide for his valuable guidance for the project and I would like to thank my project partnet who helped me through my entire project.

Preface

The purpose of this Library Management System is to improve the user experience and their awarenesses.

The Library Management System project will be used to minimize the time and the resource by maintaining the details of the user systematically so that the data can be used in possible quickest time.

While the resources which minimized are workforce, money and paper etc.

The system is user-friendly and will help the library and the scholars.

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Project Profile

Project Title	The Library Management System
Objective of System	The Library management system will allow user to register with its user name and password and then user can login itself on this aaplication and can collect books for reading.
Hardware Requirements	Pentium 90 MHz or faster and 1GB RAM or higher
Software Requiremnts	Python version 3.11.9 or higher, Mysql
Front-End	Python Customtkinter,tkinter
Back-End	Python Mysql.connector
Database	Mysql
Others	Ms-word 2019

Project Requirement

➤ Hardware Requirement

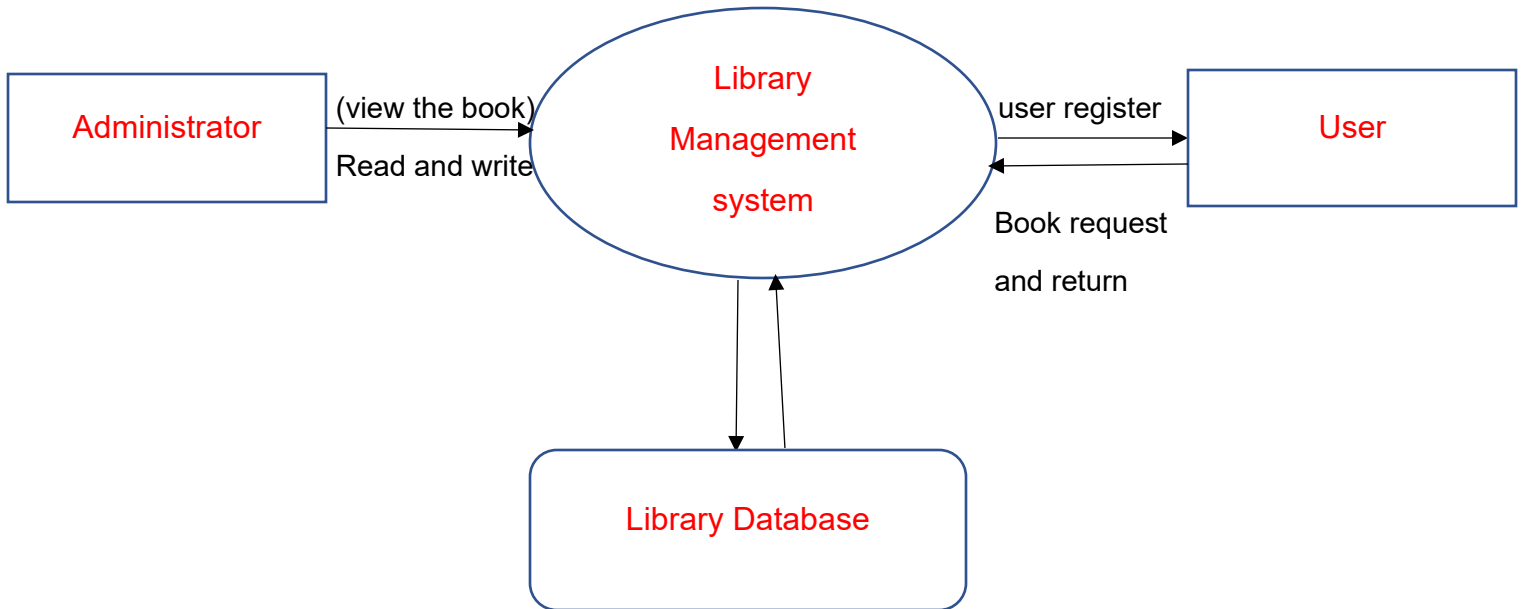
Hardware Name	Hardware
Processor	Pentium or AMD
storage	150MB or Higher
RAM	1GB or Higher

Technology Requirements

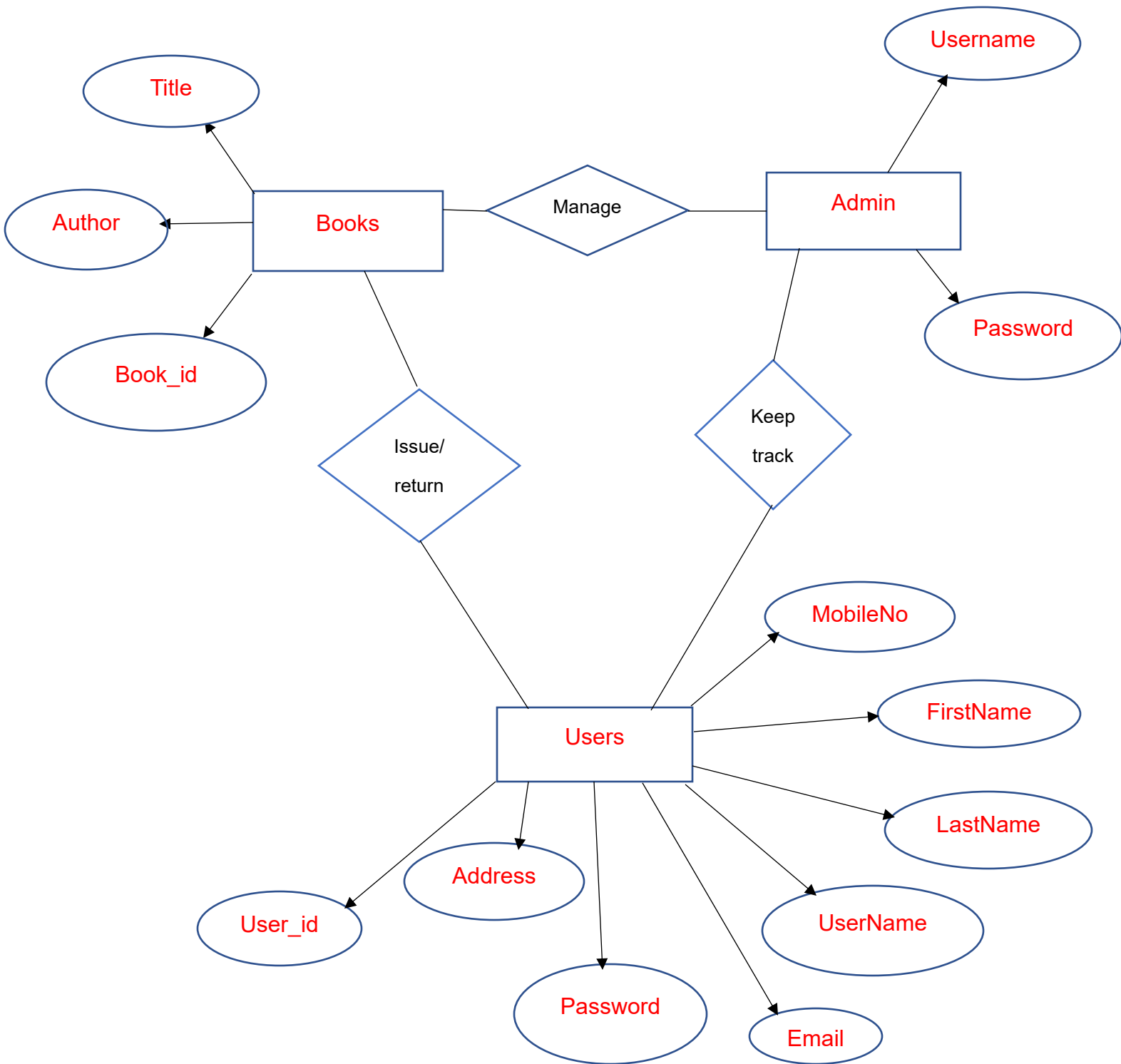
➤ Software Requirement

No.	Software Used
1	Python
2	Mysql (Laragon)
3	Windows OS (Windows 10/11)
4	Visual Studio Code

Data Flow Diagram



ER Diagram



Data Dictionary

➤ Reg_table

Sr no.	Field Name	Data Type	Size	Constrain
1	User_id	Int	5	Primary Key,Foreign Key
2	First_name	Varchar	255	-
3	Last_name	Varchar	255	-
4	Address	Varchar	255	-
5	Email	Varchar	128	-
6	Mobile_no	Varchar	10	-
7	Username	Varchar	255	-
8	Password	Varchar	8	-

➤ Admin Login

Sr no.	Field Name	Data Type	Size	Constrains
1	Username	Varchar	255	-
2	Password	Varchar	8	-

➤ **Books**

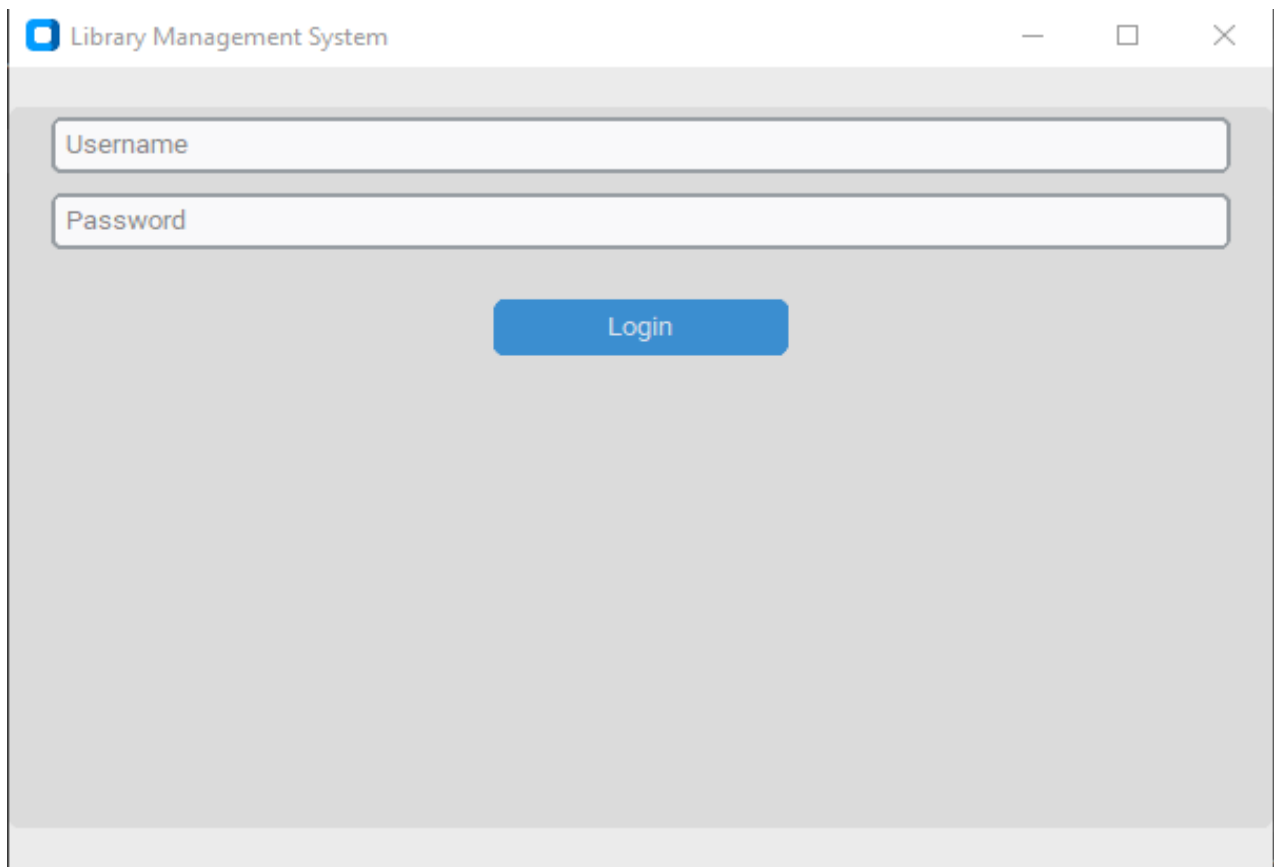
Sr no.	Field Name	Data Type	Size	Constrains
1	Book_id	Int	5	Primary Key, Foreign Key
2	Title	Varchar	255	-
3	Author	Varchar	255	-
4	Genre	Varchar	255	-
5	Available	Boolean	-	-

➤ **User_collection**

Sr no.	Field Name	Data Type	Size	Constrains
1	Id	Int	5	Primary Key
2	User_id	Int	5	Foreign Key
3	Book_id	Int	5	Foreign Key

Screen Shots

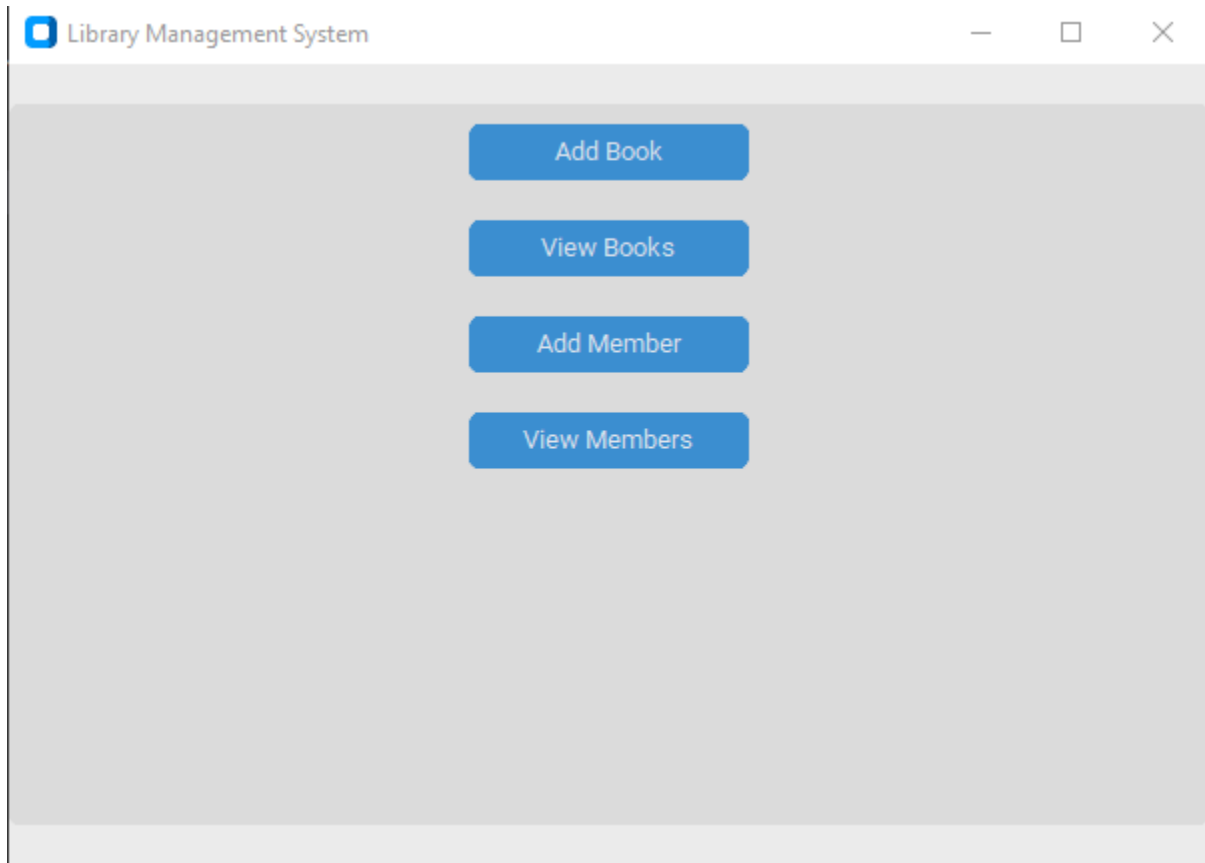
➤ Admin Login Page



The screenshot shows a web browser window titled "Library Management System". The page has a light gray background. At the top, there is a header bar with the title "Library Management System" on the left and standard window control buttons (minimize, maximize, close) on the right. Below the header, there are two input fields: "Username" and "Password". Both fields are white with a light gray border. Below the "Password" field, there is a blue button with the text "Login" in white. The button is centered horizontally. The rest of the page is a solid light gray color.

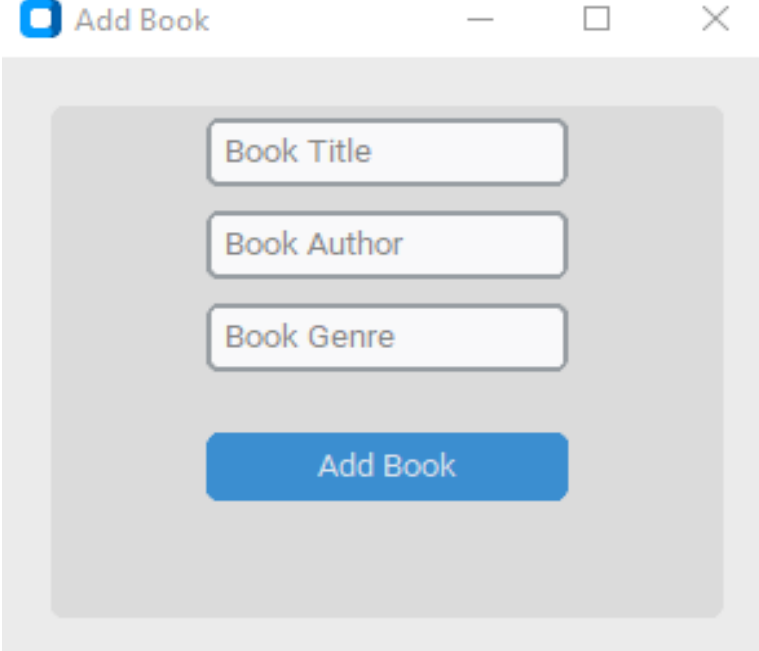
In this page admin can enter the main page using correct username and password. It is an authentication for all admin.

➤ Admin panel



This is the main dashboard of admin panel in this page admin can add book, member and also can view books and members.

➤ Add book page



A screenshot of a web application window titled "Add Book". The window has a light gray background and a darker gray rounded rectangle in the center. Inside this rectangle, there are three white input fields with rounded corners, each containing placeholder text: "Book Title", "Book Author", and "Book Genre". Below these fields is a blue button with rounded corners and the text "Add Book". The window also features standard window controls (minimize, maximize, close) in the top right corner.

In this page admin can add book. Admin needs to fulfill all the fields and he/she can add book.

➤ View books page

Books List			
ID	Title	Author	Genre
3	the witcher : the last wish	andrez schowski	fantasy,thriller,mystic
4	ASOIF : a game of thrones	george r r martin	fantasy, thriller,mystery
5	harry potter and the sorcerer's stone	j.k. rowling	fantasy, magical
6	harry potter and the chamber of the secrets	j.k.rowling	fantasy,thriller
7	harry potter and the prizoner of azkaban	j.k.rowling	fantasy,thrill,mystery
8	harry potter and the goblet of fire	j.k. rowling	fantasy,sports
9	harry potter and the order of the pheonix	j.k. rowling	fantasy,drama,political
10	harry potter and the half blood prince	j.k. rowling	fantasy, suspense-thriller
11	harry potter and the deathly hallows	j.k.rowling	fantasy,drama,action
12	ASOIF:fire and blood	george r r martin	drama,mystic,political
13	the norse mythology	neil gaimon	history,mythology
15	The witcher : blood of elves	Andrez sapkowski	mystery,adventure,fantasy

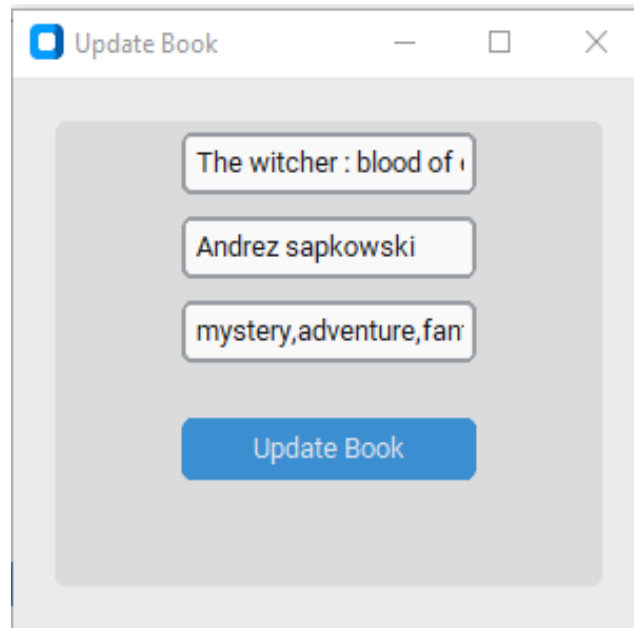
Delete Book

Update Book

In this page admin can view and manage all the books are available right now.

Admin can also delete selected book and update the selected books in case of needs.

➤ Update book Page

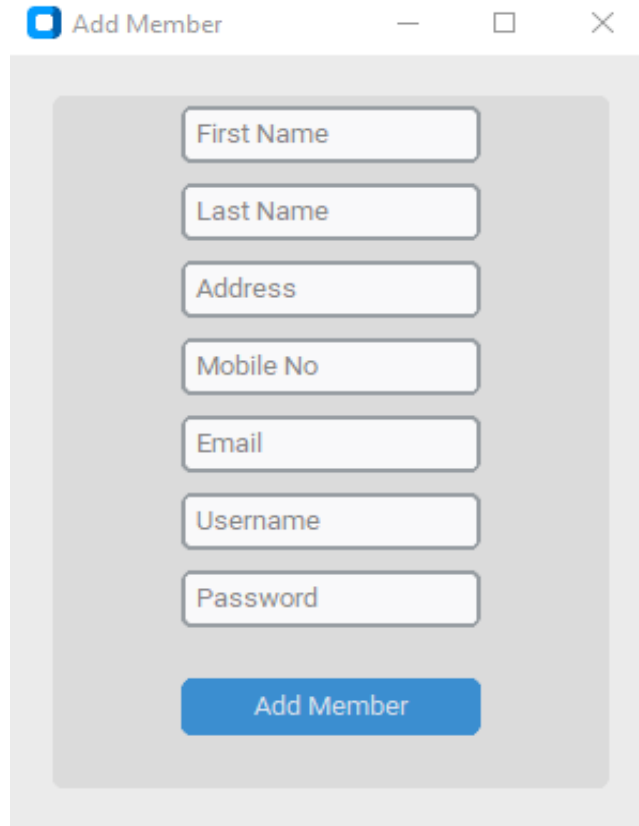


The screenshot shows a web browser window titled "Update Book". Inside the window, there is a form with three text input fields and one submit button. The first input field contains the text "The witcher : blood of ", the second contains "Andrez sapkowski", and the third contains "mystery,adventure,fan". Below these fields is a blue button with the text "Update Book".

In this page admin can update the book. Admin needs to do changes that he/she wants in the selected book.

By simply clicking on the update button book will be updated.

➤ Add Member Page

A screenshot of a web application window titled "Add Member". The window has a standard macOS-style title bar with a blue square icon, a minus sign, a maximize button, and a close button. The main content area is a light gray rectangle containing a darker gray rounded rectangle. Inside this rounded rectangle, there are seven white input fields with rounded corners, each containing a placeholder label: "First Name", "Last Name", "Address", "Mobile No", "Email", "Username", and "Password". Below these fields is a blue button with rounded corners and the text "Add Member" in white.

In this page admin can add member by simply fill all the fields and click on the add member.

All the fields must need to be filled.

➤ View Members Page

Members List							
ID	First Name	Last Name	Address	Mobile No	Email	Username	Password
1	aayush	vanol	rajkot	991166221	abc@gmail.com	aayush123	12345678
2	lucky	vishroliya	rajkot	9988776654	XYZ@gmail.com	lucky12	12345678
3	hardik	parmar	rajkot	9090909090	abcd@gmail.com	hardik123	12345678

Delete Member

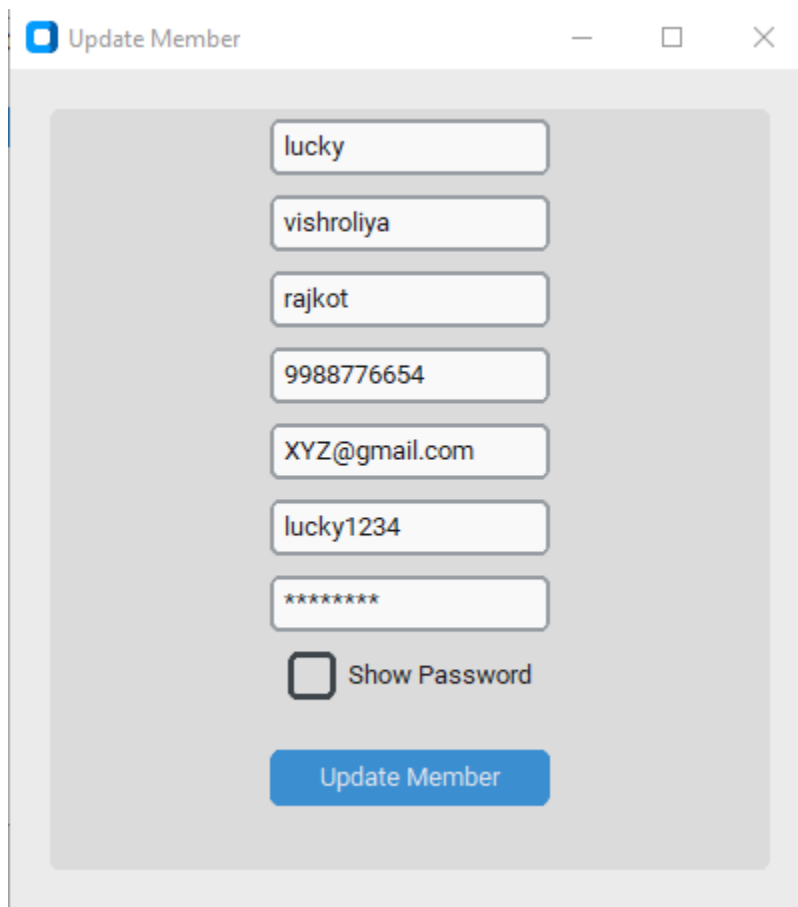
Update Member

In this page admin can view and manage all the members that are registered in the software.

Admin can delete the selected member using the Delete Member button.

Admin can also update the selected member using the Update member button.

➤ Update member Page

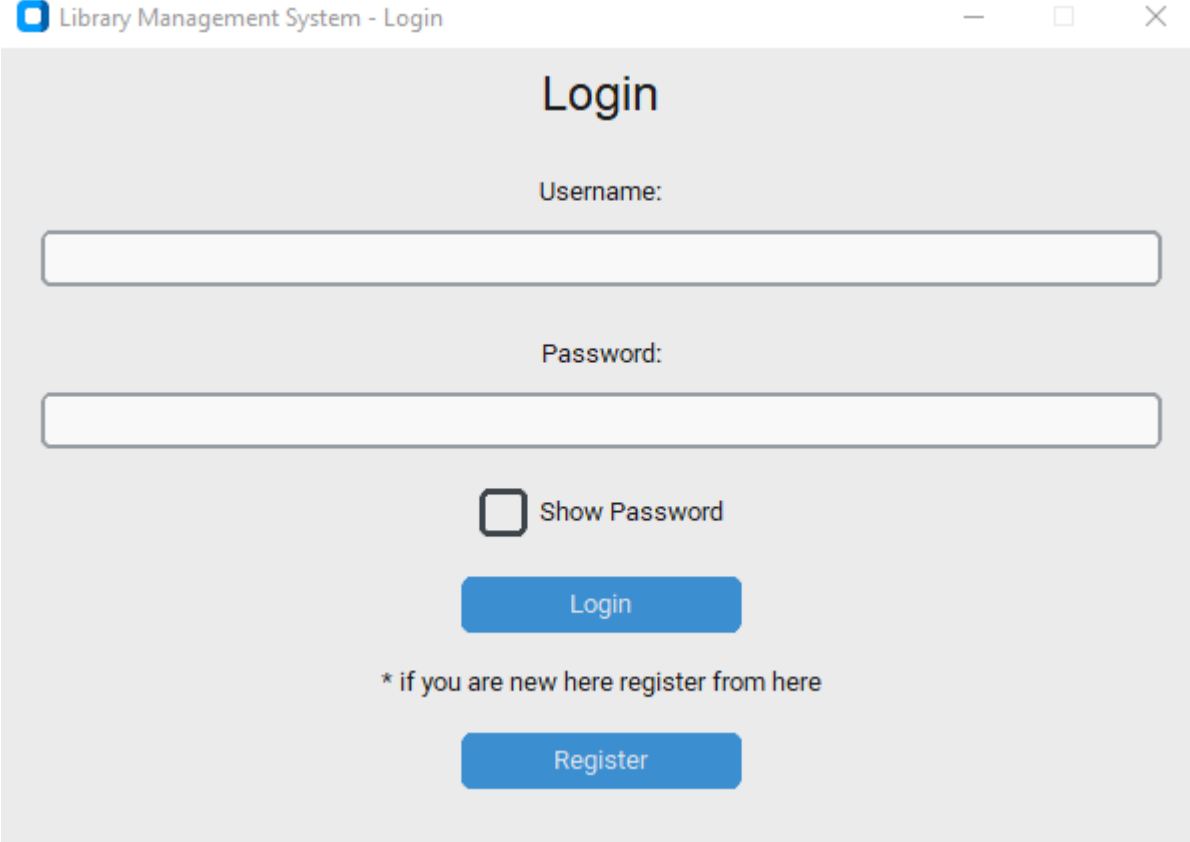


The image shows a web application window titled "Update Member". Inside the window, there is a form with several input fields and a button. The fields are arranged vertically and contain the following text: "lucky", "vishroliya", "rajkot", "9988776654", "XYZ@gmail.com", "lucky1234", and "*****". Below the last field is a checkbox labeled "Show Password". At the bottom of the form is a blue button labeled "Update Member".

In this page admin can update the member. Admin needs to do changes that he/she wants in the selected member.

By simply clicking on the update button, member will be updated.

➤ User Login Page



Library Management System - Login

Login

Username:

Password:

☐ Show Password

Login

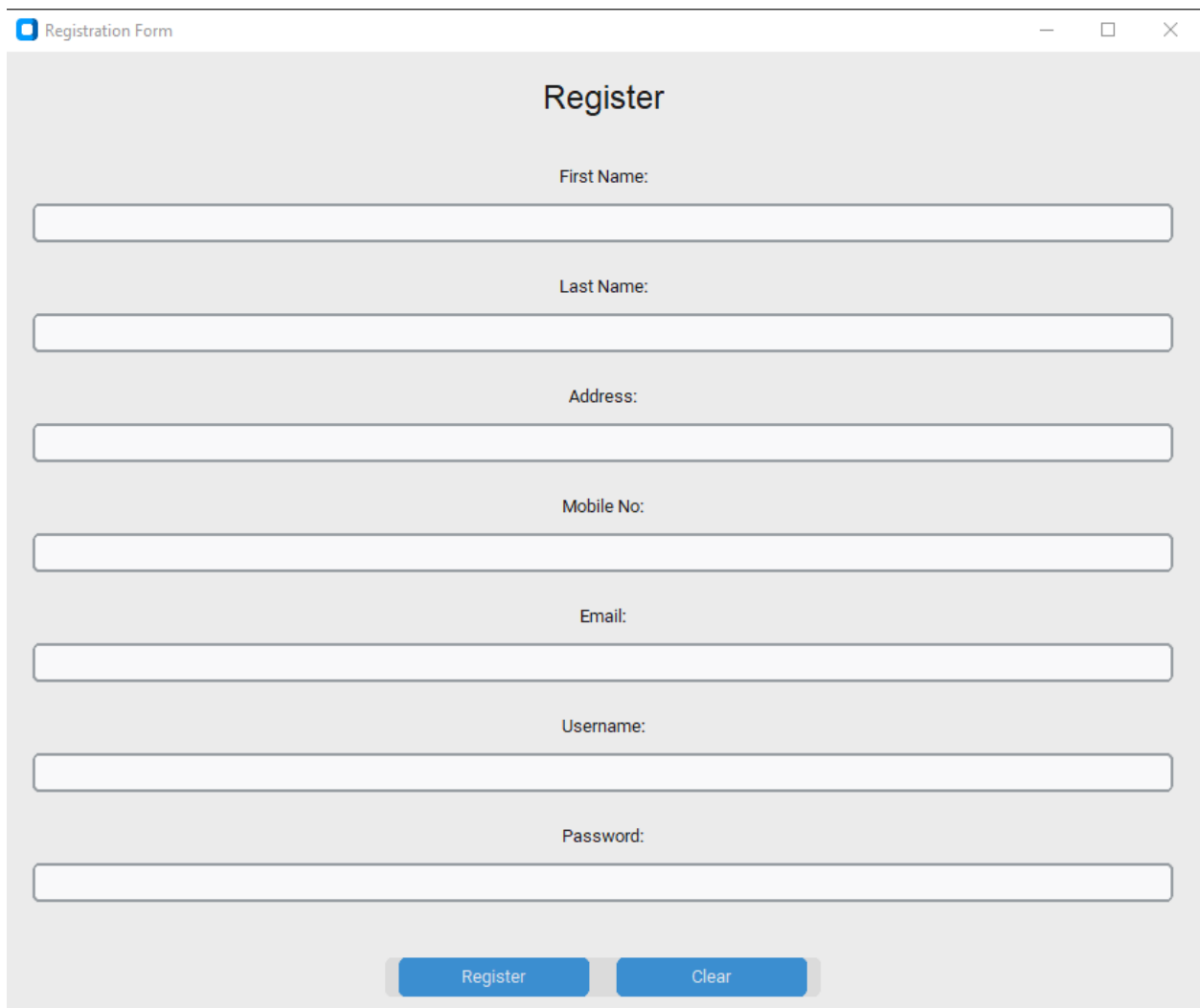
* if you are new here register from here

Register

In this page user can login into the software by filling correct username and password.

If user visit this page first time user can register himself by simply clicking on the Register button.

➤ Registration Page



The image shows a web browser window titled "Registration Form". Inside the window, there is a form titled "Register". The form contains seven input fields, each with a label above it: "First Name:", "Last Name:", "Address:", "Mobile No:", "Email:", "Username:", and "Password:". At the bottom of the form, there are two buttons: "Register" and "Clear".

Registration Form

Register

First Name:

Last Name:

Address:

Mobile No:

Email:

Username:

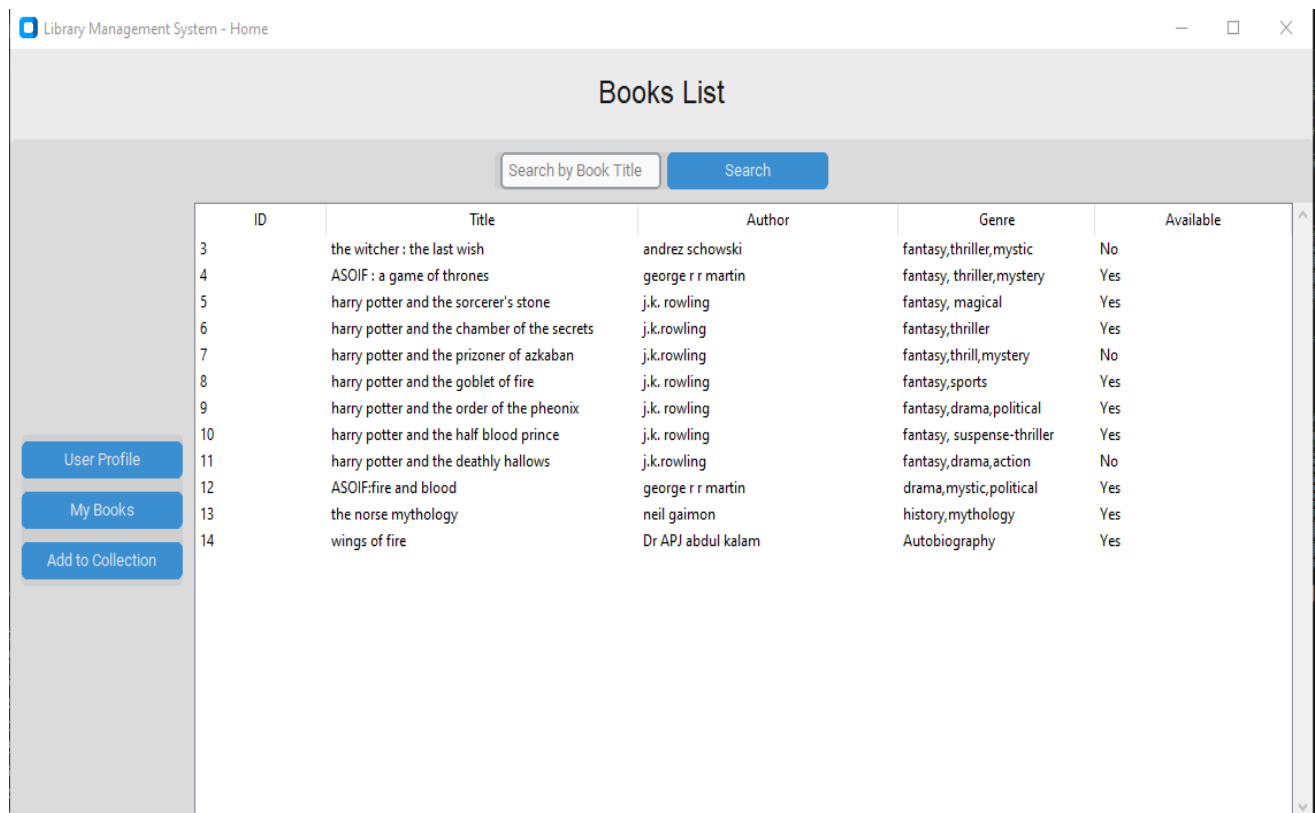
Password:

Register Clear

In this page user can register himself by filling form above given.

Thus, all the form fields must needed to be fulfilled by user otherwise user can't register.

➤ User main-screen Page



This is the user main-screen page.

In this screen user can see all the books that are in the software user can also search the book he needs.

User can simply select book and click the button 'Add to collection' and the book will be in his account.

➤ User book Page

My Books

My Books

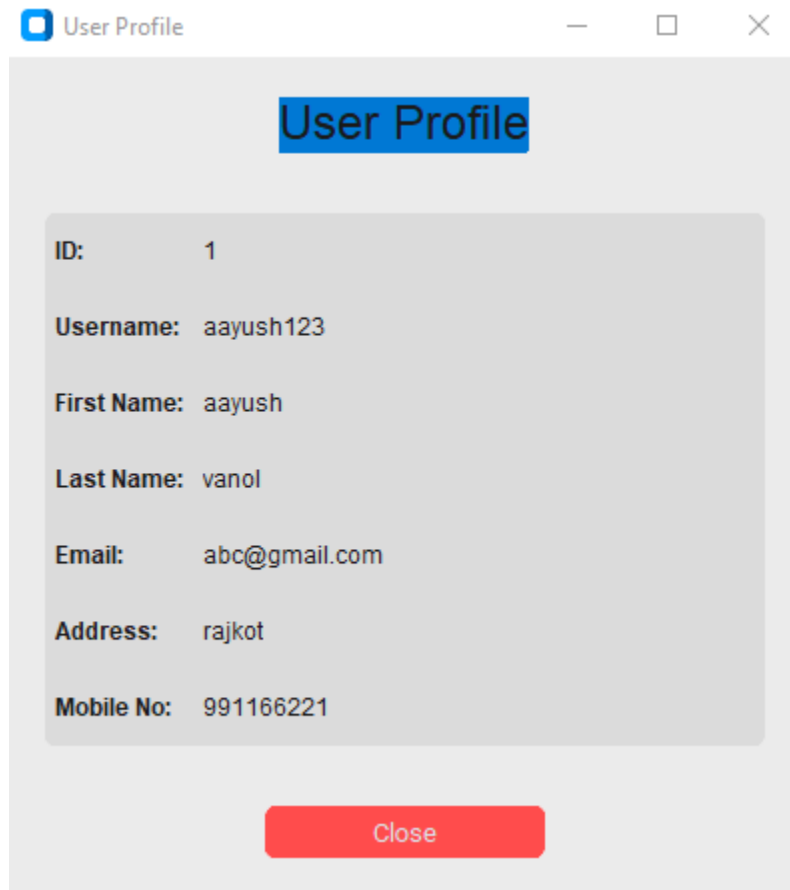
ID	Title	Author	Genre
3	the witcher : the last wish	andrez schowski	fantasy,thriller,mystic
7	harry potter and the prizoner of azkaban	j.k.rowling	fantasy,thrill,mystery
11	harry potter and the deathly hallows	j.k.rowling	fantasy,drama,action
10	harry potter and the half blood prince	j.k. rowling	fantasy, suspense-thr

Return Book

In this page User can see his collected books.

User can return book by clicking on the return book button.

➤ User Profile Page



In this page user can simply see his/her profile.

Future Enhancements

Our software “Library Management System” which provides complete information about Users like Student and admin.

We will add more content on them in future. In our web-based application right now, only Books and Users with their information available but in future we will add Online Lectures, Links, etc.

We will also provide more images in GUI related to our software in future. We will try to find out more about this topic and add in future. We will try to make this application more attractive so that visitor cannot get bored while using it.

Limitations

➤ **User Limitations:**

- **Concurrent Users:**

The system may struggle with performance if too many users access it simultaneously, leading to slow response times or crashes.

- **User Authentication:**

Limited user authentication methods may expose the system to unauthorized access.

- **Functionality Limitations:**

- **Search Functionality:**

Basic search capabilities may not support advanced queries, such as filtering by multiple criteria.

- **Reporting:**

Limited reporting features may restrict users from generating customized reports on user activity or inventory status.

Bibliography

- <https://www.w3schools.com/python/>
- <https://stackoverflow.com/questions/tagged/python>