Introduction

The project titled Online Library Management System is Library management web application for monitoring and controlling the transactions in a library .The project "**Online Library Management System"** is developed in php, which mainly focuses on basic operations in a library like adding new member, new books, and updating new information, searching books and members and facility to borrow and return books.

This project work undertaken in context of partial fulfilment of MCA. We have tried our best to make the complicated process of library management system as simple as possible using structured and modular technique and menu oriented interface. We have tried to design the web application in such a way that user may not have any difficulty in using this package and further expansion is possible without much effort. Even though we cannot claim that this work is entirely to be exhaustive, the main purpose of our exercise is to provide complete detail regarding books and computerized the system a proper manner rather than manually which is time consuming. We are confident about this software package can be readily use by non programming personal avoiding human handled chance of error.

"Online Library Management System" is a web application designed to help users maintain and organize library. Our is easy to use for both beginners and advanced users. It features a familiar and well thought-out, an attractive user interface, combined with strong searching Insertion and reporting capabilities. The report generation facility of library system helps to get a good idea of which are the books borrowed by the members, makes users possible to generate reports' hard copy.

Library Management System is an web application which refers to library systems which are generally small or medium in size. It is used by librarian to manage the library using a computerized system where he/she can record various transactions like issue of books, return of books, addition of new books, addition of new students etc. Books and student maintenance modules are also included in this system which would keep track of the students using the library and also a detailed description about the books a library contains. With this computerized system there will be no loss of book record or member record which generally happens when a non computerized system is used.

All these modules are able to help librarian to manage the library with more convenience and in a more efficient way as compared to library systems which are not computerized.

Abstract

Project is related to Library management is a sub-discipline of institutional management that focuses on specific issues faced by libraries and library management professionals. Library management encompasses normal managerial tasks, as well as intellectual freedom and fundraising responsibilities. Issues faced in library management frequently overlap with those faced in managing non-profit organizations. Any person can become a member of the library by filling a prescribed form. They can get the book issued, so that they can take home and return them.

Library management system is a project which aims in developing a computerized system to maintain all the daily work of library .This project has many features which are generally not availiable in normal library management systems like facility of user login and a facility of teachers login .It also has a facility of admin login through which the admin can monitor the whole system .It also has facility of an online notice board where teachers can student can put up information about workshops or seminars being held in our colleges or nearby colleges and librarian after proper verification from the concerned institution organizing the seminar can add it to the notice board . It has also a facility where student after logging in their accounts can see list of books issued and its issue date and return date and also the students can request the librarian to add new books by filling the book request form.The librarian after logging into his account ie admin account can generate various reports such as student report , issue report, teacher report and book report

Online Library management system is used by librarian to manage the library using a computerized system where he/she can record various transactions like issue of books, return of books, addition of new books, addition of new students etc.Books and student maintenance modules are also included in this system which would keep track of the students using the library and also a detailed description about the books a library contains. With this computerized system there will be no loss of book record or member record which generally happens when a non computerized system is used.

Overall this project of ours is being developed to help the students as well as staff of library to maintain the library in the best way possible and also reduce the human efforts.

Objectives

The project aims and objectives that will be achieved after completion of this project are discussed in this subchapter. The aims and objectives are as follows :-

- Online book issue .
- Request column for librarian for providing new books.
- A separate column for digital library .
- Student login page where student can find books issued by him/her and date of return.
- A search column to search availability of books.
- A Librarian login page where librarian can add any events being organized in the college and important suggestions regarding books
- Librarian can issue books ,return ,delete and add new books to the inventory.
- Librarian can also approve or disapprove the student from using the web application.
- Librarian can send message or notice to any student.
- Online notice board about the workshop.
- Improvement in control and performance The system is developed to cope up with the current issues and problems of library .The system can add user, validate user and is also bug free.
- Save cost After computerized system is implemented less human force will be required to maintain the library thus reducing the overall cost.
- Save time Librarian is able to search record by using few clicks of mouse and few search keywords thus saving his valuable time.

Problem specification/Need of project

System analysis

Existing system:

System Analysis is a detailed study of the various operations performed by a system and their relationships within and outside of the system. Analysis begins when a user or manager begins a study of the program using existing system.

During analysis, data collected on the various files, decision points and transactions handled by the present system. The commonly used tools in the system are Data Flow Diagram, interviews, etc. Training, experience and common sense are required for collection of relevant information needed to develop the system. The success of the system depends largely on how clearly the problem is defined, thoroughly investigated and properly carried out through the choice of solution. A good analysis model should provide not only the mechanisms of problem understanding but also the frame work of the solution. Thus it should be studied thoroughly by collecting data about the system. Then the proposed system should be analyzed thoroughly in accordance with the needs.

System analysis can be categorized into four parts.

- ✓ System planning and initial investigation
- ✓ Information Gathering
- ✓ Applying analysis tools for structured analysis
- ✓ Feasibility study
- ✓ Cost/ Benefit analysis.

In our existing system all the transaction of books are done manually, So taking more time for a transaction like borrowing a book or returning a book and also for searching of members and books. Another major disadvantage is that to preparing the list of books borrowed and the available books in the library will take more time, currently it is doing as a one day process for verifying all records.It also needs lots of man power to maintain the system which also affects the cost, thus it cost vey expensive to maintain the system. So after conducting the feasibility study we decided to make the manual Library management system to be computerized.

Proposed system:

Proposed system is an automated Library Management System. Through our software librarian can add members, add books, search members, search books, update information, edit information, borrow and return books in quick time. Our proposed system has the following advantages.

- User friendly interface
- Fast access to database
- Less error
- More Storage Capacity
- Search facility
- Look and Feel Environment
- Quick transaction
- Reduces workload
- Access to material to ease
- Quality collection
- Secure transaction
- Maintenance of data is very easy and work load is reduced.

All the manual difficulties in managing the Library have been rectified by implementing computerization.

Feasibility study

Whatever we think need not be feasible .It is wise to think about the feasibility of any problem we undertake. Feasibility is the study of impact, which happens in the organization by the development of a system. The impact can be either positive or negative. When the positives nominate the negatives, then the system is considered feasible. Here the feasibility study can be performed in two ways such as technical feasibility and Economical Feasibility.

Technical Feasibility:

We can strongly says that it is technically feasible, since there will not be much difficulty in getting required resources for the development and maintaining the system as well. All the resources needed for the development of the software as well as the maintenance of the same is available in the organization here we are utilizing the resources which are available already.

Economical Feasibility :

Development of this application is highly economically feasible .The organization needed not spend much m one for the development of t he system already available. The only thing is to be done is making an environment for the development with an effective supervision. I f we are doing so , we can attain the maximum usability of the corresponding resources .Even after the development , the organization will not be in a condition to invest more in t he organization .There fore , the system is economically feasible.

Operational Feasibility:

No doubt the proposed system is fully GUI based that is very user friendly and all inputs to be taken all self-explanatory even to a layman. Besides, a proper training has been conducted to let know the essence of the system to the users so that they feel comfortable with new system. As far our study is concerned the clients are comfortable and happy as the system has cut down their loads and doing.

Software requirement specifications

The Software Requirements Specification is produced at the culmination of the analysis task. The function and performance allocated to software as part of system engineering are refined by establishing a complete information description, a detailed functional and behavioral description, an indication of performance requirements and design constraints, appropriate validation criteria, and other data pertinent to requirements. The proposed system we are going to develop is used as in different places. Therefore, it is expected that the web application should perform functionally.

The proposed system has the following requirements:

- System needs store information about new entry of Library.
- Performance requirements.
- Safety requirement, the database may be crashed due to viruses.
- System need to maintain quantity record.
- System need to keep the record of User.
- System need to update and delete the record.
- System also needs a search area.
- It also needs a security system to prevent data.
- System requires a Internet connectivity.
- System requires a server to run the application.
- System requires a domain name.
- System also needs some security.
- System needs a storage.

Hardware configuration:

Processor	:	Pentium III 630MHz
RAM	:	128 MB
Hard Disk	:	20GB
Monitor	:	15” Color monitor
Key Board	:	122 Keys
Server	:	Apache etc.
Others	:	Internet Connectivity.

Software configuration:

Operating System	: Windows 98,Windows XP etc.
Web browser	: Internet Explorer ,Chrome etc with Javascript enabled
Database	: sqlite
IDE	: Visual studio code.

Technology used

Front end:

***HTML 5*:-** HTML5 is the latest and most enhanced version of HTML. Technically, HTML is not a programming language, but rather a markup language.

HTML5 is a standard for structuring and presenting content on the World Wide Web..The new standard incorporates features like video playback and drag-and-drop that have been previously dependent on third-party browser plug-ins such as Adobe Flash, Microsoft Silverlight, and Google Gears.

HTML5 is designed, as much as possible, to be backward compatible with existing web browsers. Its new features have been built on existing features and allow you to provide fallback content for older browsers.

***CSS 3* :-** Cascading Style Sheets (CSS) is a style sheet language used for describing the look and formatting of a document written in a markup language. CSS3 is a latest standard of css earlier versions(CSS2). CSS3 is collaboration of CSS2 specifications and new specifications, we can called this collaboration is module.**CSS** is used to control the style of a web document in a simple and easy way.

Advantages of CSS

- **CSS saves time** − You can write CSS once and then reuse same sheet in multiple HTML pages. You can define a style for each HTML element and apply it to as many Web pages as you want.
- **Pages load faster** –by using CSS, we don't need to write HTML tag attributes every time. Just write one CSS rule of a tag and apply it to all the occurrences of that tag. So less code means faster download times.
- **Multiple Device Compatibility** − Style sheets allow content to be optimized for more than one type of device. By using the same HTML document, different versions of a website can be presented for handheld devices such as PDAs and cell phones or for printing.
- **Global web standards** − Now HTML attributes are being deprecated and it is being recommended to use CSS. So its a good idea to start using CSS in all the HTML pages to make them compatible to future browsers.

***BOOTSTRAP 4*:-** Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS- and (optionally) JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components. Bootstrap is a web framework that focuses on simplifying the development of informative web pages (as opposed to web apps). The primary purpose of adding it to a web project is to apply Bootstrap's choices of color, size, font and layout to that project. As such, the primary factor is whether the developers in charge find those choices to their liking. Once added to a project, Bootstrap provides basic style definitions for all HTML elements. The result is a uniform appearance for prose, tables and form elements across web browsers. In addition, developers can take advantage of CSS classes defined in Bootstrap to further customize the appearance of their contents.

Bootstrap also comes with several JavaScript components in the form of jQuery plugins. They provide additional user interface elements such as dialog boxes, tooltips, and carousels. Each Bootstrap component consists of an HTML structure, CSS declarations, and in some cases accompanying JavaScript code. They also extend the functionality of some existing interface elements, including for example an auto-complete function for input fields.

***JAVASCRIPT* :-** JavaScript is a lightweight, interpreted programming language. It is designed for creating network-centric applications. It is complimentary to and integrated with Java. JavaScript is very easy to implement because it is integrated with HTML. It is open and cross-platform.

JavaScript is a dynamic computer programming language. It is lightweight and most commonly used as a part of web pages, whose implementations allow client-side script to interact with the user and make dynamic pages. It is an interpreted programming language with object-oriented capabilities.

JavaScript was first known as LiveScript, but Netscape changed its name to JavaScript, possibly because of the excitement being generated by Java. JavaScript made its first appearance in Netscape 2.0 in 1995 with the name LiveScript. The general-purpose core of the language has been embedded in Netscape, Internet Explorer, and other web browsers.

JQUERY :-jQuery is a fast and concise JavaScript Library created by John Resig in 2006 with a nice motto: Write less, do more. jQuery simplifies HTML document traversing, event handling, animating, and Ajax interactions for rapid web development. jQuery is a JavaScript toolkit designed to simplify various tasks by writing less code.

jQuery's syntax is designed to make it easier to navigate a document, select DOM elements, create animations, handle events, and develop Ajax applications. jQuery also provides capabilities for developers to create plug-ins on top of the JavaScript library. This enables developers to create abstractions for low-level interaction and animation, advanced effects and high-level, themeable widgets. The modular approach to the jQuery library allows the creation of powerful dynamic web pages and Web applications.

jQuery, at its core, is a Document Object Model (DOM) manipulation library. The DOM is a tree-structure representation of all the elements of a Web page. jQuery simplifies the syntax for finding, selecting, and manipulating these DOM elements. For example, jQuery can be used for finding an element in the document with a certain property (e.g. all elements with an h1 tag), changing one or more of its attributes (e.g. color, visibility), or making it respond to an event (e.g. a mouse click).

jQuery also provides a paradigm for event handling that goes beyond basic DOM element selection and manipulation. The event assignment and the event callback function definition are done in a single step in a single location in the code. jQuery also aims to incorporate other highly used JavaScript functionality (e.g. fade ins and fade outs when hiding elements, animations by manipulating CSS properties).

***FONT AWESOME*:-** Font Awesome is a font and icon toolkit based on CSS and LESS. It was made by Dave Gandy for use with Bootstrap, and later was incorporated into the Bootstrap CDN. Font Awesome has a 38% market share among those websites that use third-party font scripts on their platform, ranking it second place after Google Fonts.

Font Awesome is designed to be used with inline elements, and we recommend sticking with a consistent HTML element to reference them by in your project. We like the <i> tag for brevity and because most folks use for emphasized/italicized semantic text these days. If that’s not your cup of tea, using a is more semantically correct.

Back end:

***PHP* :-**

PHP is a popular general-purpose scripting language that is especially suited to web development. It was originally created by Danish-Canadian programmer Rasmus Lerdorf in 1994 the PHP reference implementation is now produced by The PHP Group.PHP originally stood for *Personal Home Page*, but it now stands for the recursive initialism *PHP: Hypertext Preprocessor* .

PHP code is usually processed on a web server by a PHP interpreter implemented as a module, a daemon or as a Common Gateway Interface (CGI) executable. On a web server, the result of the interpreted and executed PHP code – which may be any type of data, such as generated HTML or binary image data – would form the whole or part of a HTTP response. Various web template systems, web content management systems, and web frameworks exist which can be employed to orchestrate or facilitate the generation of that response. Additionally, PHP can be used for many programming tasks outside of the web context, such as standalone graphical applications and robotic drone control. Arbitrary PHP code can also be interpreted and executed via command-line interface (CLI).

PHP is a general-purpose scripting language that is especially suited to server-side web development, in which case PHP generally runs on a web server. Any PHP code in a requested file is executed by the PHP runtime, usually to create dynamic web page content or dynamic images used on websites or elsewhere. It can also be used for command-line scripting and client-side graphical user interface (GUI) applications. PHP can be deployed on most web servers, many operating systems and platforms, and can be used with many relational database management systems (RDBMS). Most web hosting providers support PHP for use by their clients. It is available free of charge, and the PHP Group provides the complete source code for users to build, customize and extend for their own use.

***SQLITE* :-**

SQLite is a software library that implements a self-contained, serverless, zero-configuration, transactional SQL database engine. SQLite is the most widely deployed SQL database engine in the world. The source code for SQLite is in the public domain. This tutorial will give you a quick start with SQLite and make you comfortable with SQLite programming.

SQLite is an in-process library that implements a self-contained, serverless, zero-configuration, transactional SQL database engine. It is a database, which is zero-configured, which means like other databases you do not need to configure it in your system.

SQLite engine is not a standalone process like other databases, you can link it statically or dynamically as per your requirement with your application. SQLite accesses its storage files directly.

- SQLite does not require a separate server process or system to operate (serverless).
- SQLite comes with zero-configuration, which means no setup or administration needed.
- A complete SQLite database is stored in a single cross-platform disk file.
- SQLite is very small and light weight, less than 400KiB fully configured or less than 250KiB with optional features omitted.
- SQLite is self-contained, which means no external dependencies.
- SQLite transactions are fully ACID-compliant, allowing safe access from multiple processes or threads.
- SQLite supports most of the query language features found in SQL92 (SQL2) standard.
- SQLite is written in ANSI-C and provides simple and easy-to-use API.
- SQLite is available on UNIX (Linux, Mac OS-X, Android, iOS) and Windows (Win32, WinCE, WinRT).

Design

System Design

System design is the process of designing the elements of a system such as the architecture, modules and components, the different interfaces of those components and the data that goes through that system. Design is the most important part of any project, it is the basic structure of any project. In this phase, a logical system is built which fulfils the given requirements. Design phase of software development deals with transforming the clients's requirements into a logically working system. Normally, design is performed in the following two steps:

1. Primary Design Phase: In this phase, the system is designed at block level. The blocks are created on the basis of analysis done in the problem identification phase. Different blocks are created for different functions emphasis is put on minimising the information flow between blocks. Thus, all activities which require more interaction are kept in one block.

2. Secondary Design Phase: In the secondary phase the detailed design of every block is performed.

The general tasks involved in the design process are the following:

- Initialize design definition.
- Establish design characteristics.
- Assess alternatives for obtaining system elements.
- Design various blocks for overall system processes.
- Design smaller, compact and workable modules in each block.
- Design various database structures.
- Specify details of programs to achieve desired functionality.
- Design the form of inputs, and outputs of the system.
- Perform documentation of the design.
- System reviews.

User Interface Design

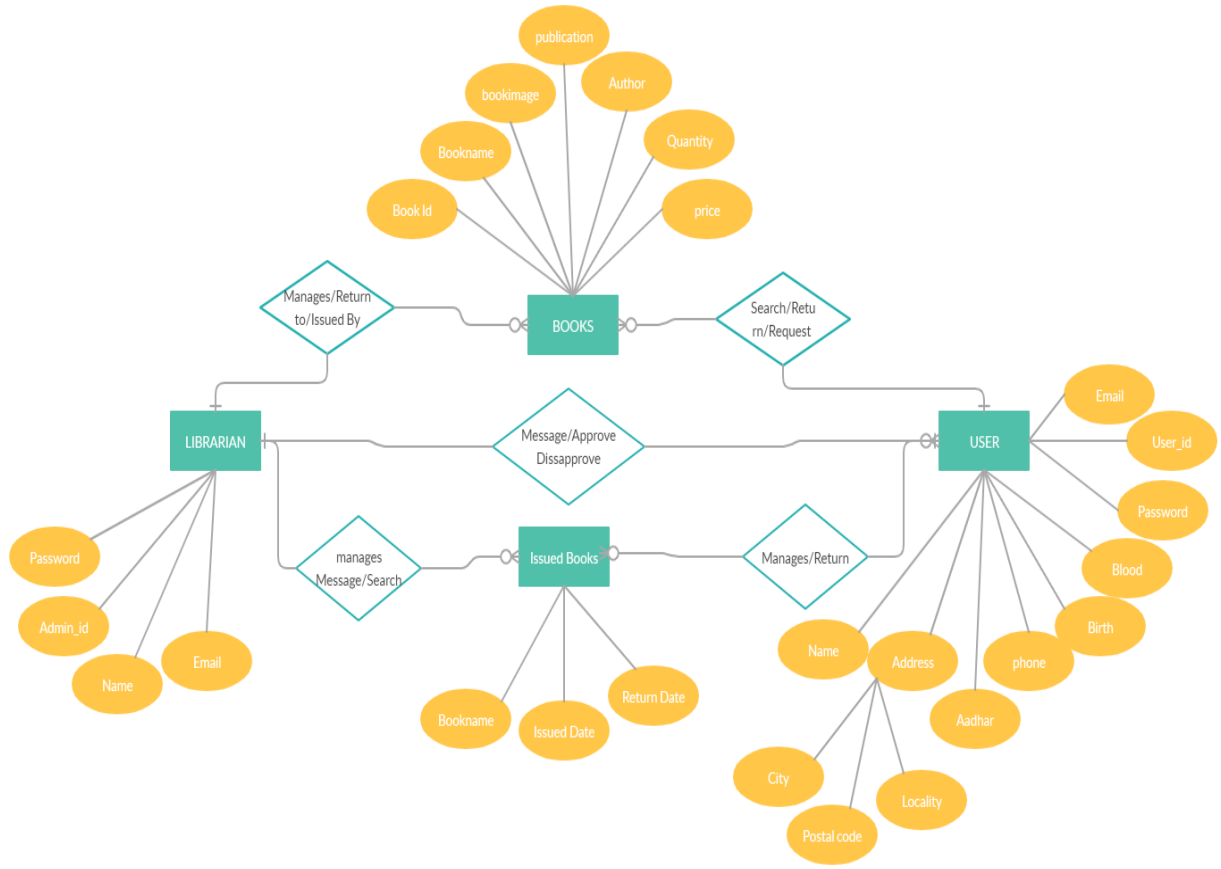
User interface design or UI design generally refers to the visual layout of the elements that a user might interact with in a website, or technological product. This could be the control buttons of a radio, or the visual layout of a webpage. User interface designs must not only be attractive to potential users, but must also be functional and created with users in mind.

User Interface Design is concerned with the dialogue between a user and the computer. It is concerned with everything from starting the system or logging into the system to the eventually presentation of desired inputs and outputs. The overall flow of screens and messages is called a dialogue.

The following steps are various guidelines for User Interface Design:

- The design should be a user friendly.
- The design must attract users.
- The system user should always be aware of what to do next.
- The screen should be formatted so that various types of information, instructions and messages always appear in the same general display area.
- Message, instructions or information should be displayed long enough to allow the system user to read them.
- Use display attributes sparingly.
- Default values for fields and answers to be entered by the user should be specified.
- A user should not be allowed to proceed without correcting an error.
- The system user should never get an operating system message or fatal error.

ER Diagram: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phone
Aadhar
Address
Name
City
Locality
Postal code
Password
Admin_id
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manages Message/Search
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Bookname
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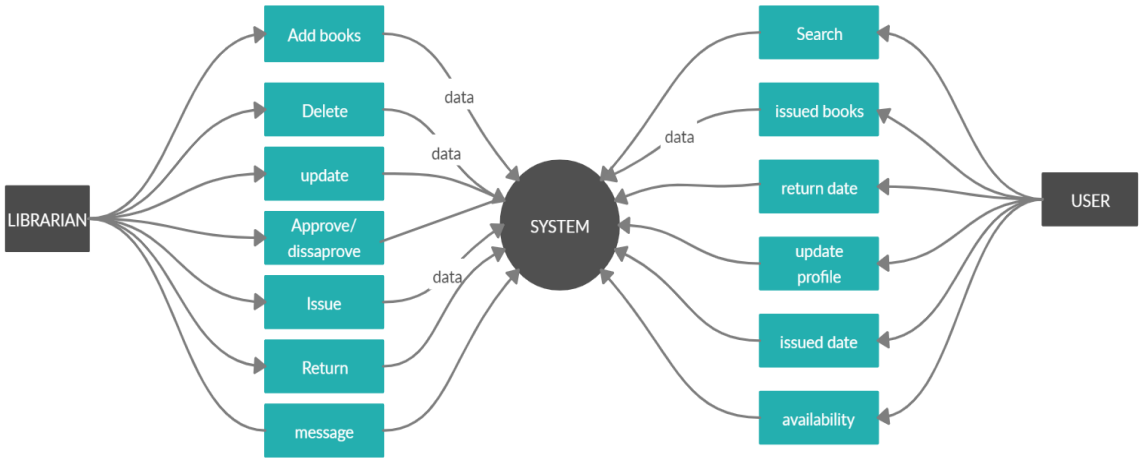
Return Date

DFD diagram:

Zero Level DFD:-

First Level DFD:-



Modules:

User Module:-

The user module contains information such as their Id, Name, Age, Sex, Address, Phone number, aadhar ,book details etc. The user can search the book and also check the availability of the books. The user can see the due date of the issued books. The user can also track the information about the previous issued books.The user can also updates his profile etc.

Operations allowed in User module:-

- REGISTRATION:- To use the facility of the system the user must be registered first.
- PROFILE:- The user can see his profile after logged in to the system.
- UPDATE:- The user csn update his profile or the details filled during the registration.
- SEARCH BOOKS:- The can search the books required by him and also checks its availability.
- ISSUED BOOKS:- user can keeps track of his previously issued books.
- DUE DATE:- user can checks the return date of the issued books.
- AVALABILITY CHECK:- user can also see the books availability.
- CHANGE PASSWORD:- The admin provides an option to the user to change his password for security reasons.
- PROFILE PICTURE:-the user has the facility of updating his profile picture on the system.

Librarian Module:-

The librarian module acts as a administration of the system. The application provide pre username and password to the system, the librarian can change them after his first login for security reasons.

The librarian module has many operations such as keeps tracks of the user, add books, update records, approves and disapprove users .let us discuss them briefly:-

Operations allowed in User module:-

- ADD BOOKS:- Librarian can add books by providing its name, image, price, author etc.
- ISSUE BOOKS:- Librarian can issue books to the required user.
- RETURN BOOKS:-It can also return the issued books.
- BOOKS INFO:- Librarian can also see the books details such as availability,etc.
- SEARCH USER DATA:- Librarian can also keeps tracks of the users and can search required information of the user.
- MESSAGE:-Librarian can also send message to the users regarding returning of the books
- APPROVE OR DISAPPROVE USERS:- If a new user regisgered then he might wait to use the services ,he might use the services after the approval of the librarian.
- UPDATE:- The librarian can also update details about the books data.
- DELETE:-The librarian has the power to delete a book if required.

Database design:

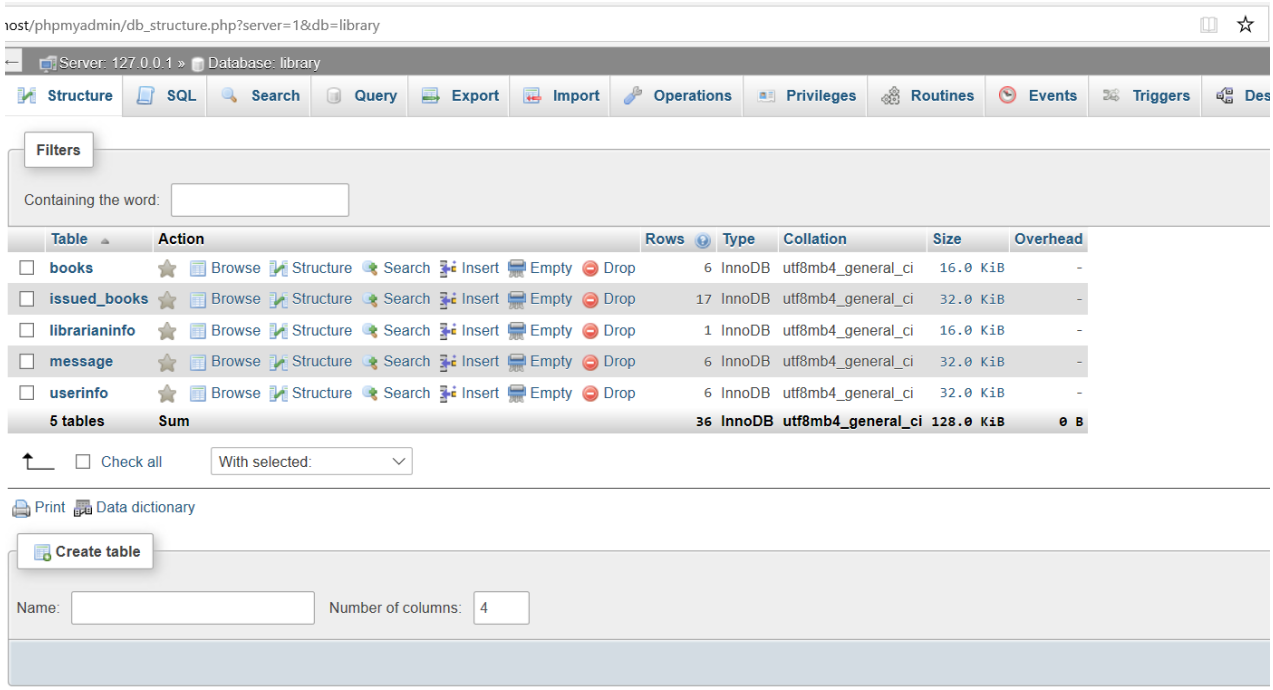
A database is an organized mechanism that has the capability of storing information through which a user can retrieve stored information in an effective and efficient manner. Database Design is a collection of processes that facilitate the designing, development, implementation and maintenance of enterprise data management systems. Properly designed database are easy to maintain, improves data consistency and are cost effective in terms of disk storage space. The database designer decides how the data elements correlate and what data must be stored.

The data is the purpose of any database and must be protected.The database design is a two level process. In the first step, user requirements are gathered together and a database is designed which will meet these requirements as clearly as possible. This step is called Information Level Design and it is taken independent of any individual Database Management System (DBMS).

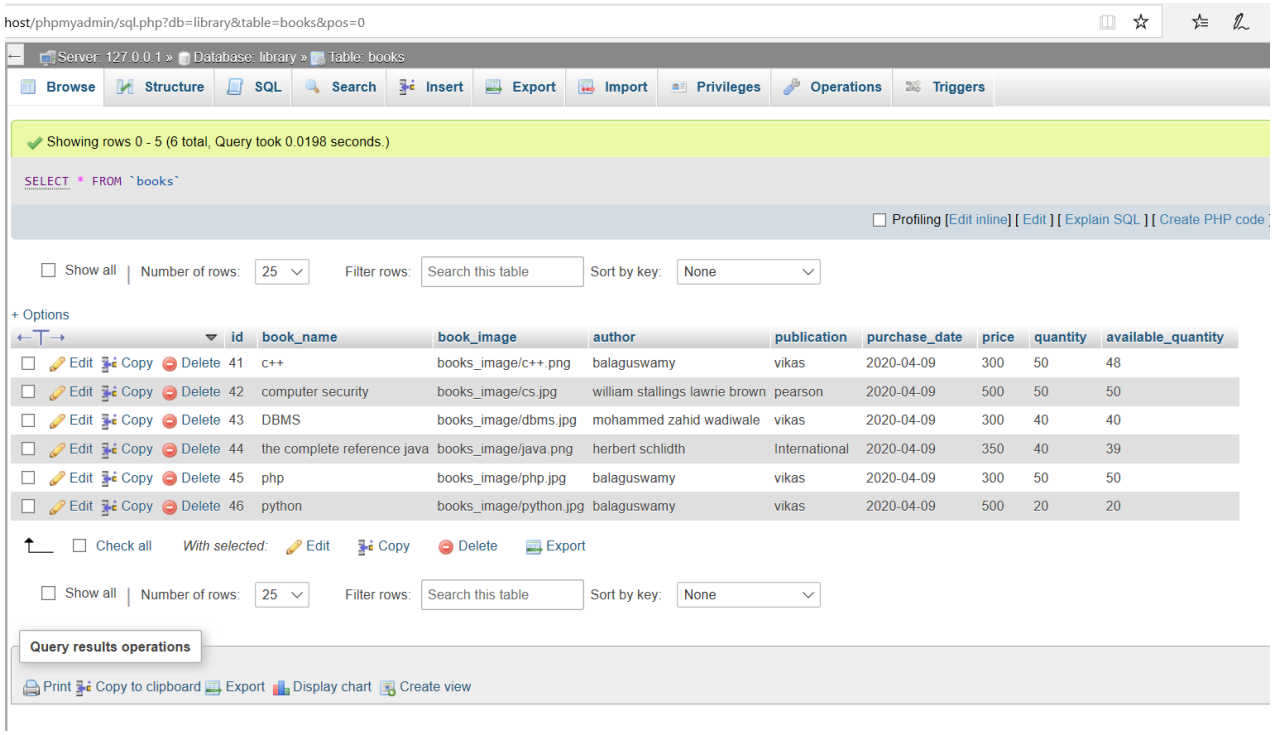
In the second step, this Information level design is transferred into a design for the specific DBMS that will be used to implement the system in question. This step is called Physical Level Design, concerned with the characteristics of the specific DBMS that will be used. A database design runs parallel with the system design. The organization of the data in the database is aimed to achieve the following two major objectives.

- Data Integrity
- Data independence

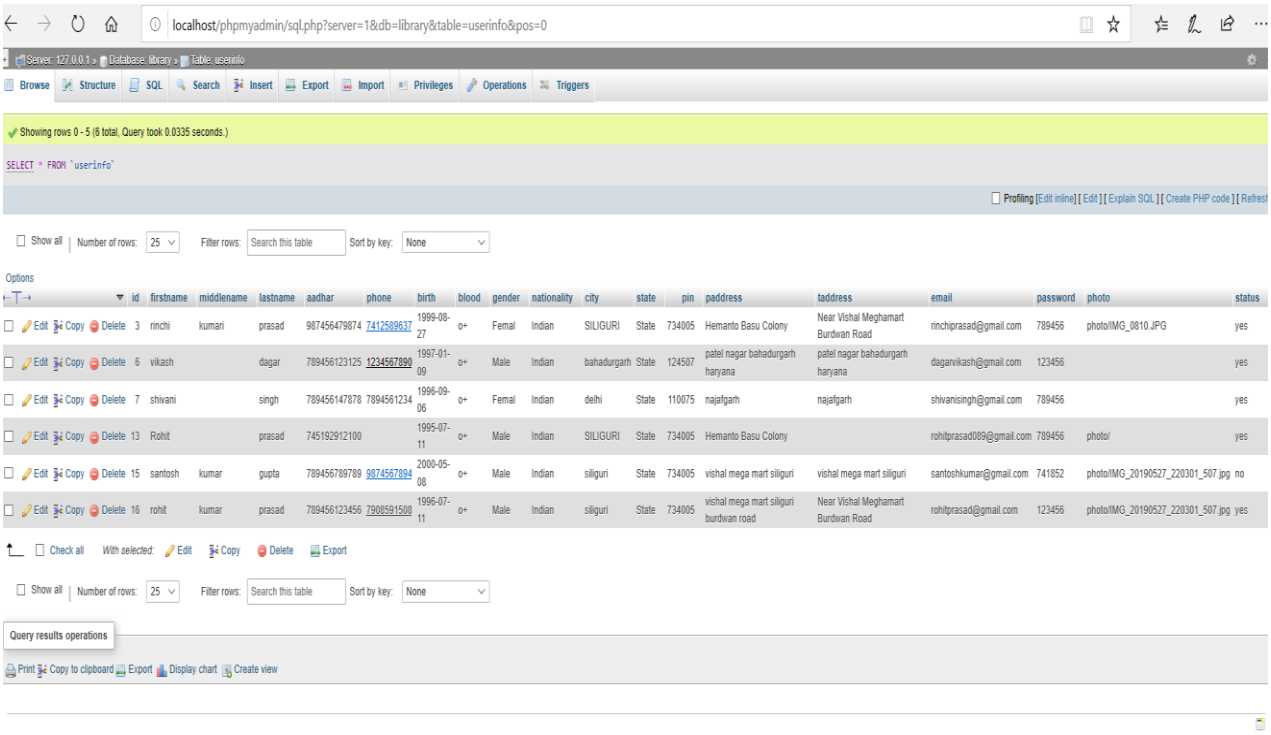
Data Tables:-



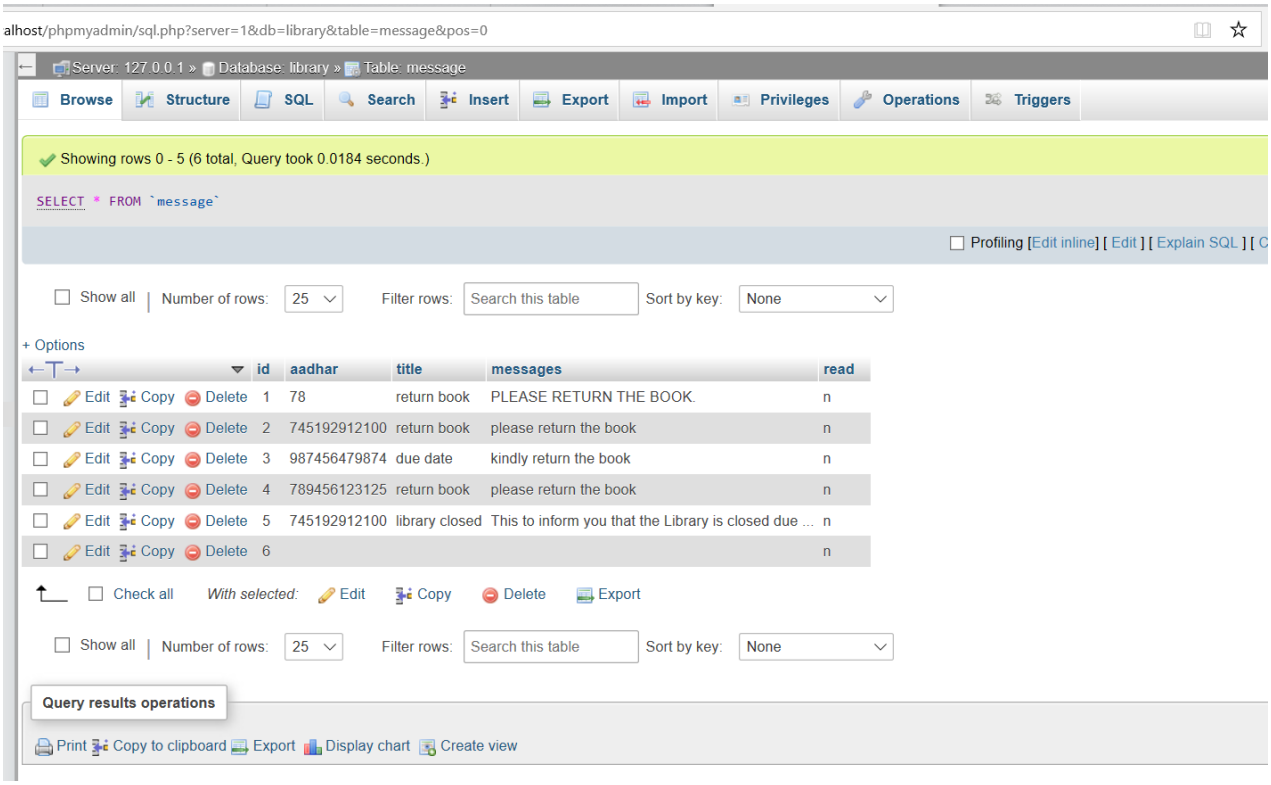
Book table:-



User table:-



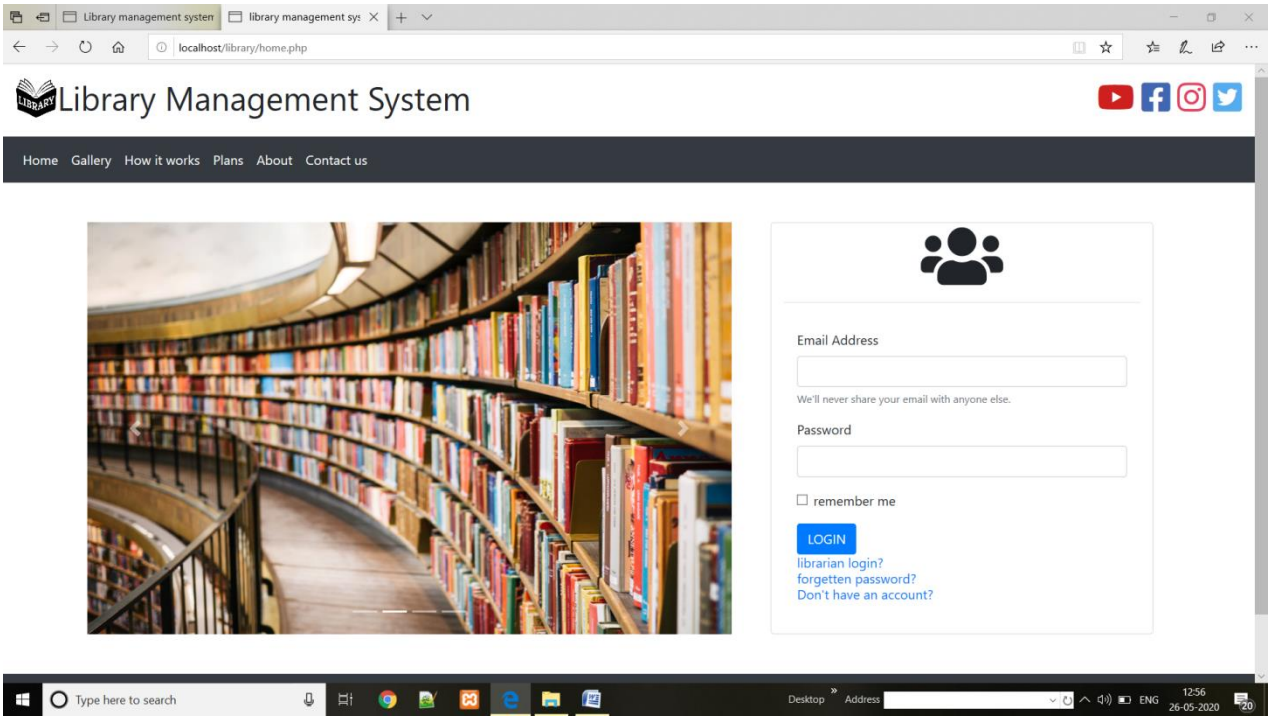
Message table:-



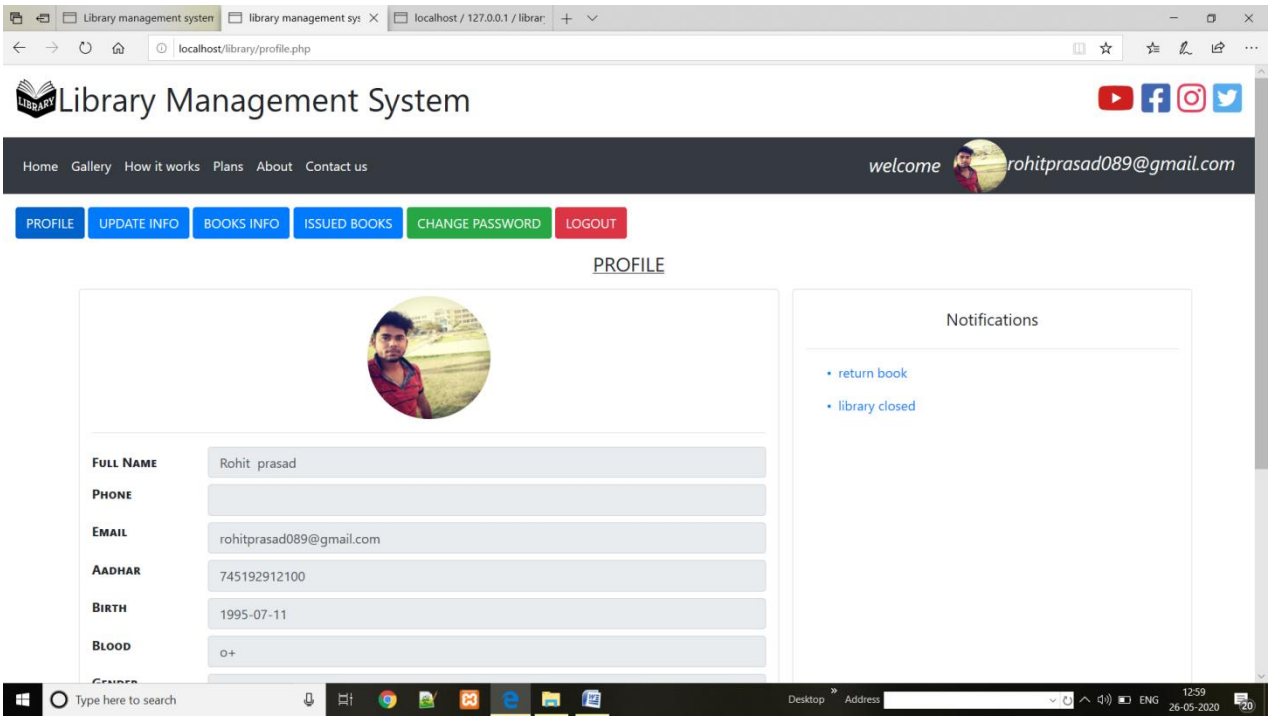
screen layout:

User:-

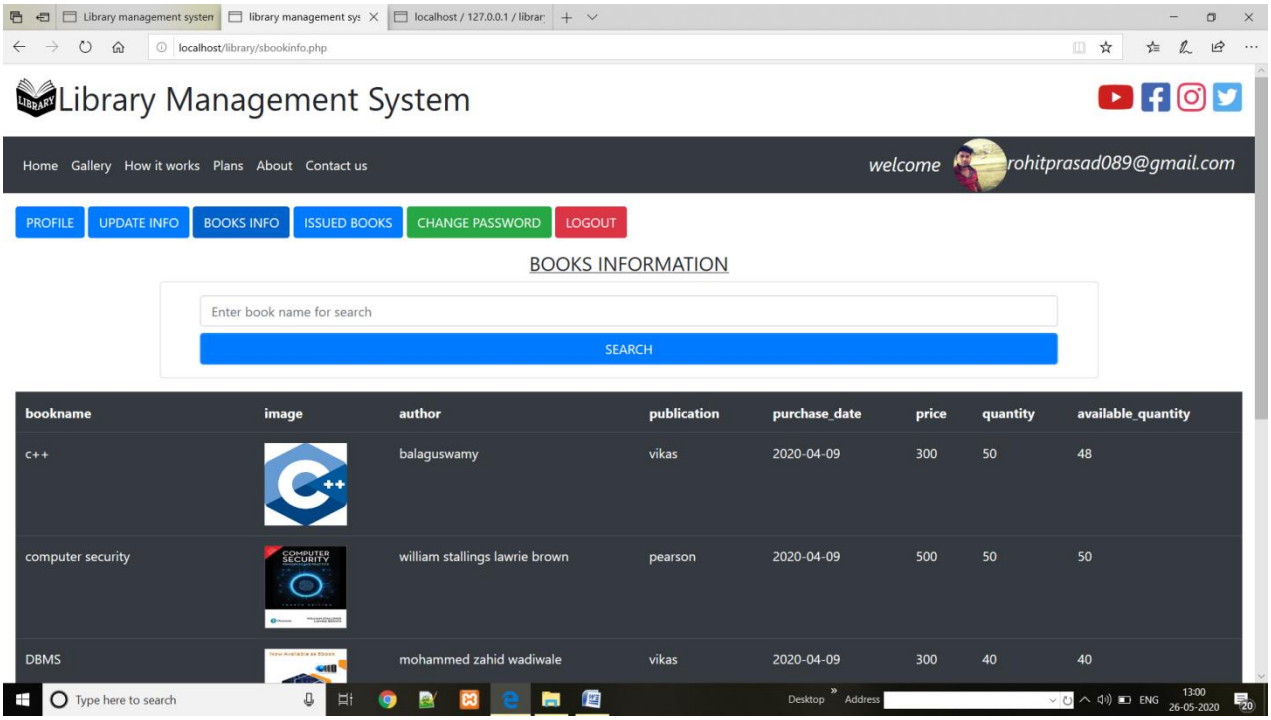
User Login:-



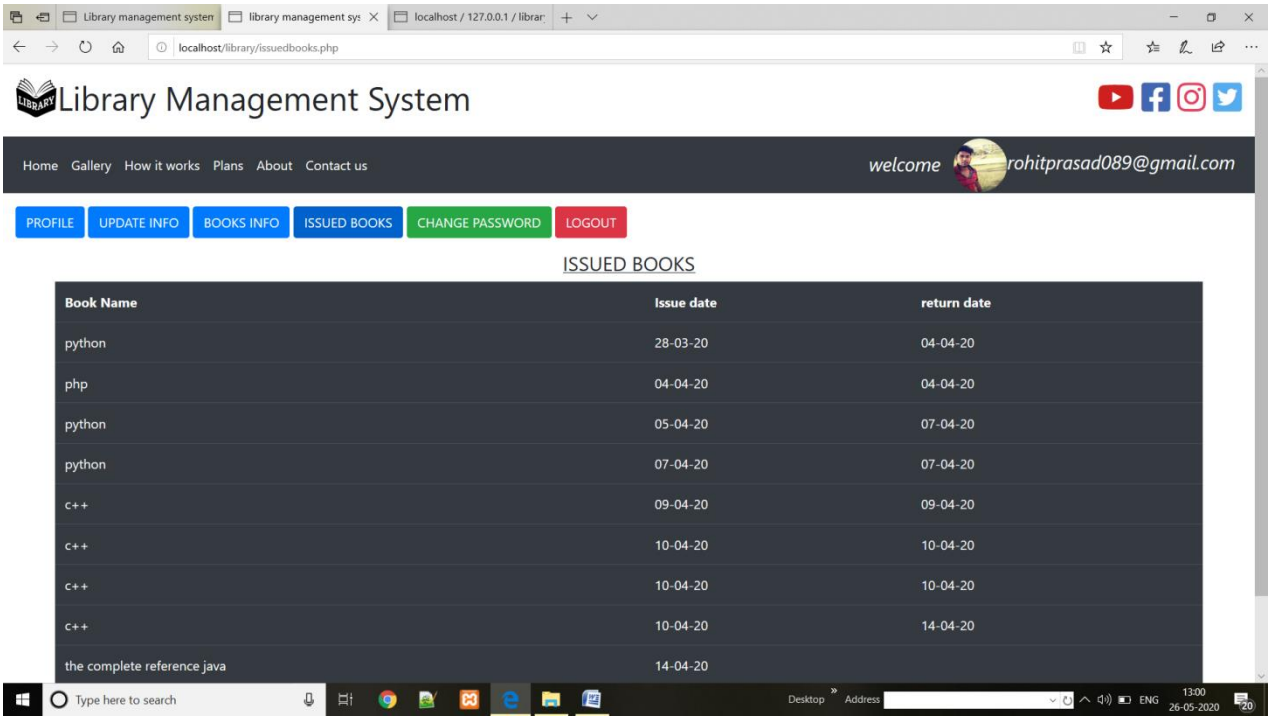
Profile:-



Books Information:-

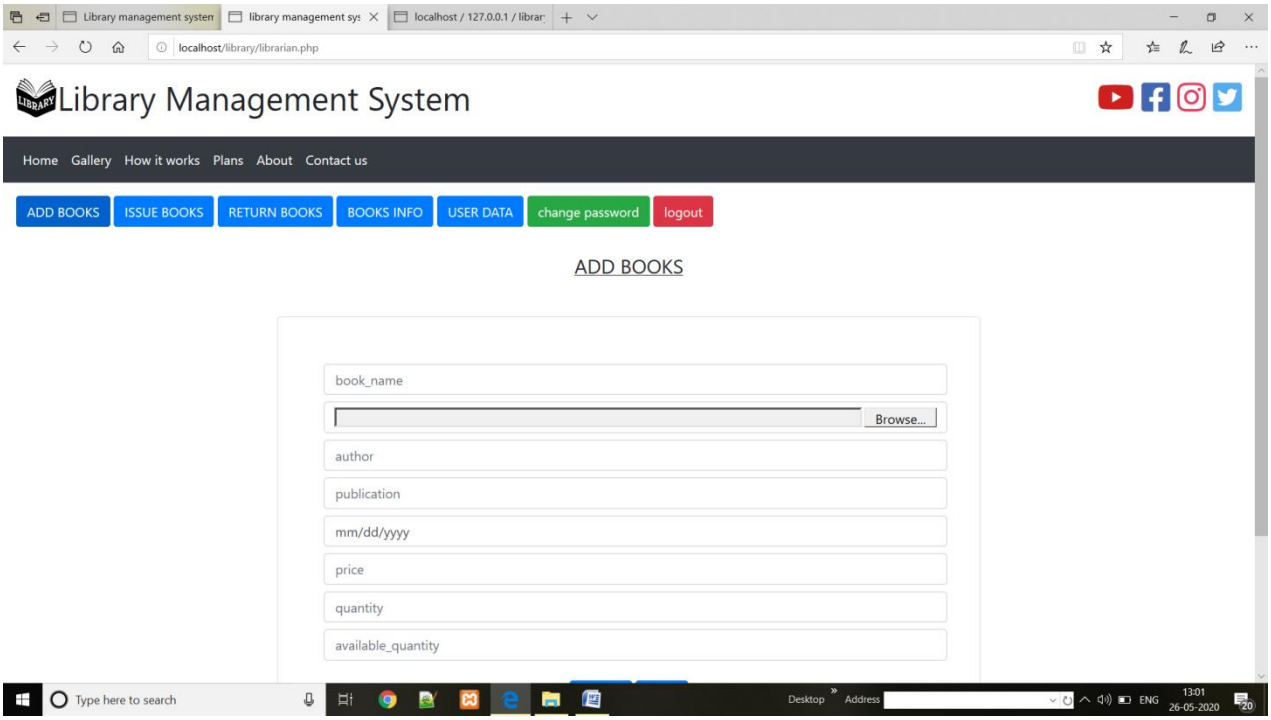


Issued Books:-

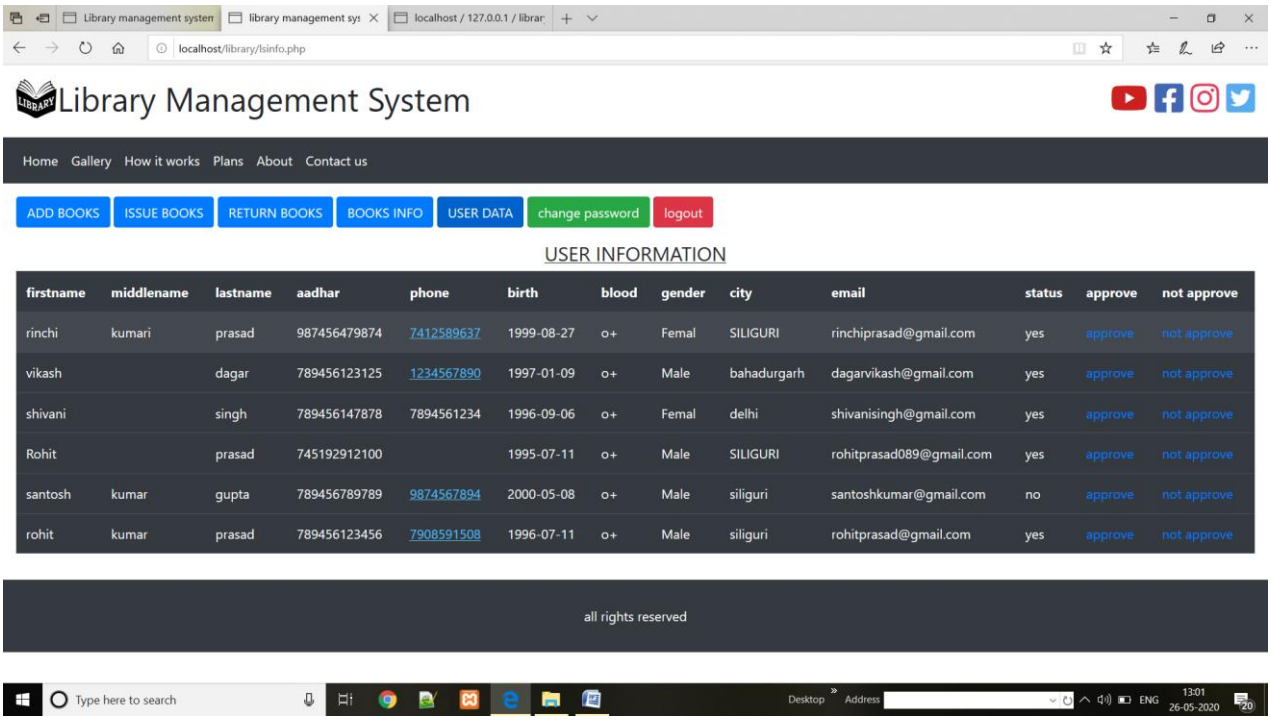


Librarian:-

Add books:-



User information:-



Testing

The aim of the system testing process was to determine all defects in our project .The program was subjected to a set of test inputs and various observations were made and based on these observations it will be decided whether the program behaves as expected or not. Our Project went through two levels of testing

1.Unit testing

2.integration testing

Unit testing:

Unit testing is undertaken when a module has been created and succesfully reviewed .In order to test a single module we need to provide a complete environment ie besides the module we would require

- The procedures belonging to other modules that the module under test calls
- Non local data structures that module accesses
- A procedure to call the functions of the module under test with appropriate parameters

Unit testing was done on each and every module.

1. Test For the admin/librarian module

- Testing admin login form-This form is used for log in of administrator of the system. In this we enter the username and password if both are correct administration page will open otherwise if any of data is wrong it will show an error message as invalid user and get redirected back to the login page and again ask for username and password.
- User account approval- In this section the admin can approve or dissapprove user, if librarian click approve buttons user will be accessed to use the application and if he clicks dissapprove button the student data will be denied of using the services.
- Book Addition- Admin can enter details of book and can add the details to the main book table also he can view the books requests .
- Book Deletion- Admin can also have the rights to delete the books.
- Send Message- librarian can send the message to only those users who issued the books and not returned it.

2.Test for User login module

- Test for user login Form-This form is used for log in of user .In this we enter the username and password if all these are correct student login page will open otherwise if any of data is wrong it will show a invalid user message and get redirected back to the login page and again ask for username and password.
- Test for account creation- This form is used for new account creation when user does not fill the form completely it asks again to fill the whole form when he fill the form fully it gets redirected to page which show waiting for conformation message as his data will be only added by administrator after verification.
- Test for change password- this form is used to check whether the system is working or not when a users change their password. When user gives command for changing the password he must first gives his current password.after the confirmation by the database he updates his new password and redirected to the login page.

Integration testing:

Integration testing is a system technique for constructing the program structure while at the same time conducting tests to uncover errors associated with interfacing. The objective is to take unit tested modules and build a program structure that has been dictated by design. Bottom-up integration is the traditional strategy used to integrate the components of a software system into functioning whole. Bottom-up integration consists of unit test followed by testing of the entire system. A sub-system consists of several modules that communicated with other defined interface.The system was done the integration testing. All the modules were tested for their compatibility with other modules .

In this type of testing we test various integration of the project module by providing the input .The primary objective is to test the module interfaces in order to ensure that no errors are occurring when one module invokes the other module.

Limitations

Although I have put my best efforts to make the application flexible, easy to operate but limitations cannot be ruled out even by me. Though the software presents a broad range of options to its users some intricate options could not be covered into it; partly because of logistic and partly due to lack of sophistication. Paucity of time was also major constraint, thus it was not possible to make the application foolproof and dynamic. Lack of time also compelled me to ignore some part such as storing old result of the candidate etc.

Considerable efforts have made the software easy to operate even for the people not related to the field of computers but it is acknowledged that a layman may find it a bit problematic at the first instance. The user is provided help at each step for his convenience in working with the application.

List of limitations which is available in the library Management System:

- The application requires internet connectivity.
- The application requires the Servers and also a domain name for running the application.
- Excel export has not been developed due to some criticality.
- The transactions are executed in on-line mode, hence off-line data for books, student capture and modification is not possible.
- The data stored is prone to cyber hacks. Opting for a reliable online system eliminates the risk.
- Costly and Expensive
- Complicated to operate.
- Risk of computer virus.
- Since the data stored over the internet. This increases the risk of data loss
- The librarian once deleted a book can reverse the task .
- Once a data or record deleted it cannot be recovered under any circumstances.
- The application should also contains some captcha code for verification process to make it more secure.

Conclusion & future scope

This web application provides a computerized version of library management system which will benefit the users as well as the staff of the library. It makes entire process online where user can search books, staff can generate reports and do book transactions. It also has a facility for user login where user can login and can see status of books issued as well request for book or give some suggestions. The librarian can approve or disapprove the users for accessing the services. The librarian can keeps track of the user data.

There is a future scope of this facility that many more features such as using in colleges and schools fields online lectures video tutorials can be added by teachers as well as online assignments submission facility, a feature Of group chat where students can discuss various issues of engineering can be added to this project thus making it more interactive more user friendly and project which fulfills each users need in the best way possible . It should add a facility of teacher's login where teachers can add lectures notes and also give necessary suggestion to librarian and also add info about workshops or events happening in our college or nearby college in the online notice board. The recovery of data is also needed since once a data is deleted then it cannot be reversed under any circumstances. The application should also contains some captcha code for verification process to make it more secure.

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Appendix A: Coding

CONNECTION:-

```
<?php
$host = 'localhost:3306';
$user = 'root';
$pass = '';
$dbname = 'library';
$conn = mysqli_connect($host, $user, $pass,$dbname);
if(!$conn){
  die('Could not connect: '.mysqli_connect_error());
}
?>
```

HEADER:-

```
<!doctype html>
<html lang="en">
  <head>
     <!-- Required meta tags -->
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">
    <!-- Bootstrap CSS -->
    <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.4.1/css/bootstrap.min.css"
```

```
integrity="sha384-
Vkoo8x4CGsO3+Hhxv8T/Q5PaXtkKtu6ug5TOeNV6gBiFeWPGFN9MuhOf23Q9Ifjh"
crossorigin="anonymous">

    <script src="https://kit.fontawesome.com/e59b510569.js"
crossorigin="anonymous"></script>

    <link rel="stylesheet" href="css/stylesheet.css">

    <title>library management system</title>

  </head>

  <body>

  <div class=p-3>

  <div class="float-right">

  <i class="fab fa-youtube p-1" style="font-size:40px;color:#cd201f"></i>

   <i class="fab fa-facebook-square" style="font-size:40px;color:#4267B2"></i>

   <i class="fab fa-instagram p-1" style="font-size:40px;color:#e4405f"></i>

   <i class="fab fa-twitter-square" style="font-size:40px;color:#55acee"></i>

   </div>

  <div class="float-left">

    <img src="images/logo.png" width=50px height=50px>

    </div>

    <h1>Library Management System</h1>

</div>

    <nav class="navbar navbar-expand-lg bg-dark">

  <button class="navbar-toggler" type="button" data-toggle="collapse" data-
target="#navbarSupportedContent" aria-controls="navbarSupportedContent" aria-
expanded="false" aria-label="Toggle navigation">
```

```
    <span class="navbar-toggler-icon"></span>
  </button>
  <div class="collapse navbar-collapse" id="navbarSupportedContent">
    <ul class="navbar-nav mr-auto">
      <li class="nav-item active">
        <a class="nav-link text-white" href="index.php">Home <span class="sr-
only">(current)</span></a>
      </li>
      <li class="nav-item">
        <a class="nav-link text-white" href="gallery.php">Gallery</a>
      </li>
      <li class="nav-item">
        <a class="nav-link text-white" href="working.php">How it works</a>
      </li>
      <li class="nav-item ">
        <a class="nav-link text-white" href="about.php">About</a>
      </li>
      <li class="nav-item">
        <a class="nav-link text-white" href="contact.php">Contact us</a>
      </li>
      </ul>
</nav>
```

INDEX:-

```
<?php
session_start();
include('header.php')
?>
<div class="container-fluid">
<div class="row m-5">
<div class="col-7 mx-4">
<div id="carouselExampleIndicators" class="carousel slide" data-ride="carousel">
  <ol class="carousel-indicators">
    <li data-target="#carouselExampleIndicators" data-slide-to="0" class="active"></li>
    <li data-target="#carouselExampleIndicators" data-slide-to="1"></li>
    <li data-target="#carouselExampleIndicators" data-slide-to="2"></li>
    <li data-target="#carouselExampleIndicators" data-slide-to="3"></li>
  </ol>
  <div class="carousel-inner">
    <div class="carousel-item active">
      <img src="images/1.jpg" class="d-block w-100" alt="..." height="500">
    </div>
    <div class="carousel-item">
      <img src="images/2.jpg" class="d-block w-100" alt="..."height="500">
    </div>
    <div class="carousel-item">
```

```
    <img src="images/3.jpg" class="d-block w-100" alt="..." height="500">
   </div>
   <div class="carousel-item">
    <img src="images/4.jpg" class="d-block w-100" alt="..." height="500">
   </div>
  </div>
  <a class="carousel-control-prev" href="#carouselExampleIndicators" role="button" data-slide="prev">
   <span class="carousel-control-prev-icon" aria-hidden="true"></span>
   <span class="sr-only">Previous</span>
  </a>
  <a class="carousel-control-next" href="#carouselExampleIndicators" role="button" data-slide="next">
   <span class="carousel-control-next-icon" aria-hidden="true"></span>
   <span class="sr-only">Next</span>
  </a>
</div>
</div>
<!--login form-->
<div class="card col-4 ml-2 login-card">
<center><i class="fas fa-users fa-5x"></i></center>
<hr>
<form method="post" class="p-3">
  <div class="form-group">
```

```
    <label for="exampleInputEmail1">Email Address</label>
    <input type="email" class="form-control" name="email" id="exampleInputEmail1"
aria-describedby="emailHelp">
    <small id="emailHelp" class="form-text text-muted">We'll never share your email
with anyone else.</small>
  </div>
  <div class="form-group">
    <label for="exampleInputPassword1">Password</label>
    <input type="password" class="form-control"  name="password"
id="exampleInputPassword1">
  </div>
  <button type="submit" name="submit" class="btn btn-primary">LOGIN</button>
  <div>
  <h6 class="pt-2">
  <a href="librarianlogin.php">librarian login?</a><br>
  <a onclick='alert("Please contact to librarian")'  href="">forgetten password?</a><br>
  <a href=registration.php>Don't have an account?</a></h6>
  </div>
</form>
<?php
if(isset($_POST['submit']))
    {
        include_once('connection.php');
        $email = $_POST['email'];
```

```
        $password = $_POST['password'];

        $sql=mysqli_query($conn,"select * from userinfo where email='$email' &&
password='$password' && status='yes'");

    $count=0;

    $count=mysqli_num_rows($sql);

    if($count==0)

        {?>

        <p style="color:white; text-align:center; background-color:red;margin:auto;
padding:5px;border-radius:5px;">Invalid user</p>

   <?php  }

        else{

  $_SESSION["email"]=$_POST["email"];

 ?>

  <script>

  window.location="users/profile.php";

  </script>

  <?php

 }}

else{} ?>

</div></div></div>

</div></div>

<?php

include('footer.php');

?>
```

FOOTER:-

```
<!---footer--->

<footer>

<div class="bg-dark p-3 text-white">

<p><center>all rights reserved</center></p>

</div>

</footer>

   <!-- Optional JavaScript -->

   <!-- jQuery first, then Popper.js, then Bootstrap JS -->

   <script src="https://code.jquery.com/jquery-3.4.1.slim.min.js" integrity="sha384-
J6qa4849blE2+poT4WnyKhv5vZF5SrPo0iEjwBvKU7imGFAV0wwj1yYfoRSJoZ+n"
crossorigin="anonymous"></script>

   <script src="https://cdn.jsdelivr.net/npm/popper.js@1.16.0/dist/umd/popper.min.js"
integrity="sha384-
Q6E9RHvbIyZFJoft+2mJbHaEWldlvI9IOYy5n3zV9zzTtmI3UksdQRVvoxMfooAo"
crossorigin="anonymous"></script>

   <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.4.1/js/bootstrap.min.js"
integrity="sha384-
wfSDF2E50Y2D1uUdj0O3uMBJnjuUD4Ih7YwaYd1iqfktj0Uod8GCExl3Og8ifwB6"
crossorigin="anonymous"></script>

  </body>

</html>
```

REGISTRATION:-

```
<?php
include('header.php')
?>
  <!--content-->
  <div class="data p-4">
      <h3>REGISTRATION FORM</h3>
      <form action="#" method="post" name="sform" enctype="multipart/form-data" onsubmit="return validateform()">
  <div class="row pt-2">
    <div class="form-group col-md-4">
      <input type="text" class="form-control" name="firstname" id="firstname" placeholder="First name">
      <div class="error text-warning" id="firstnameErr"></div>
    </div>
      <div class="form-group col-md-4">
      <input type="text" class="form-control" name="middlename" id="middlename" placeholder="Middle  name">
    </div>
    <div class="form-group col-md-4">
      <input type="text" class="form-control" name="lastname" id="lastname" placeholder="Last name" required>
      <div class="error text-warning" id="lastnameErr"></div>
    </div>
```

```
<div class="form-group col-md-4">
 <input type="text" class="form-control" name="aadhar" id="aadhar"
placeholder="Aadhar no." required>
 <div class="error text-warning" id="aadharErr"></div>
</div>
 <div class="form-group col-md-4">
 <input type="number" class="form-control" name="phone" id="phone"
placeholder="phone" required>
 <div class="error text-warning" id="phoneErr"></div>
</div>
<div class="form-group col-md-4">
 <input type="text" class="form-control "  name="birth" id="inputDate"
onfocus="(this.type='date')" min="1979-12-31" max="2000-01-02" placeholder="Dob"
required>
</div>
 <div class="form-group col-md-4">
<select class="form-control" id="blood" name="blood">
  <option>BLOOD_GROUP</option>
  <option>O+</option>
  <option>O-</option>
  <option>A+</option>
  <option>A-</option>
  <option>B+</option>
  <option>B-</option>
```

```
        <option>AB+</option>
        <option>AB-</option>
    </select>
      <div class="error text-warning" id="bloodErr"></div>
    </div>
       <div class="form-group col-md-4">
      Gender:
  <input type="radio" name="gender" value="Male" checked/> Male
  <input type="radio" name="gender" value="Female"/> Female
      <input type="radio" name="gender" value="others"/> Others
      </div>
    <div class="form-group col-md-4">
      Nationality:
      <input type="radio"  name="nationality" value="Indian" checked> Indian
  <input type="radio"  name="nationality" value="Others"> Others
      </div>
    <div class="form-group col-md-4">
      <input type="text" class="form-control " name="city" id="city" placeholder="City"
required>
      <div class="error text-warning" id="cityErr"></div>
    </div>
    <div class="form-group col-md-4 ">
   <input type="text" class="form-control" id="state" name="state" placeholder="State"
required>
```

```
  <div class="error text-warning" id="stateErr"></div>
 </div>
  <div class="form-group col-md-4 ">
   <input type="text" class="form-control" id="pin" name="pin" placeholder="Postal Code" required>
    <div class="error text-warning" id="pinErr"></div>
  </div>
 <div class="form-group col-md-12">
    <input type="text" class="form-control" id="inputAddress" name="paddress" placeholder="Permanent address" required>
 </div>
 <div class="form-group col-md-12">
  <input type="text" class="form-control" id="inputAddress2" name="taddress" placeholder="Temporary address" required>
 </div>
 <div class="form-group col-md-4">
   <input type="email" class="form-control" name="email" id="inputEmail4" placeholder="Email" required>
    <div class="error text-warning" id="emailErr"></div>
  </div>
  <div class="form-group col-md-4">
   <input type="password" class="form-control " name="password" id="password" placeholder="Password" required>
  </div>
  <div class="form-group col-md-4">
```

```
    <input type="password" class="form-control " name="password1" id="password1"
placeholder="Confirm password" required>
    <div class="error text-warning" id="passwordErr"></div>
   </div>
  <div class="form-group col-md-4">
   <input type="text" name="file" class="form-control" placeholder="Upload Profile
Photo" required onfocus="(this.type='file')">
  </div></div>
  <button type="submit" name="submit" class="btn btn-primary">Sign Up</button>
  <button type="reset" class="btn btn-primary">Reset</button>
</form>
</div>
<!-- validations-->
<script>
     // Defining a function to display error message
function printError(elemId, hintMsg) {
   document.getElementById(elemId).innerHTML = hintMsg;
  }
// Defining a function to validate form
function validateform() {
   // Retrieving the values of form elements
   var firstname = document.sform.firstname.value;
     var lastname = document.sform.lastname.value;
     var aadhar = document.sform.aadhar.value;
```

```
    var password1 = document.sform.password.value;
    var password2 = document.sform.password1.value;
    var phone = document.sform.phone.value;
    var blood = document.sform.blood.value;
  var city = document.sform.city.value;
  var state = document.sform.state.value;
    var pin = document.sform.pin.value;


    // Defining error variables with a default value
  var firstnameErr = lastnameErr = aadharErr  = passwordErr = phoneErr = bloodErr =
cityErr =stateErr = pinErr = true;
  // Validate firstname
  if(firstname == "") {
      printError("firstnameErr", "Please enter your firstname");
  } else {
      var regex = /^[a-zA-Z\s]+$/;
      if(regex.test(firstname) === false) {
          printError("firstnameErr", "Please enter a valid firstname");
      } else {
          printError("firstnameErr", "");
          firstnameErr = false;
      }
  }
```

```
  // Validate lastname
if(lastname == "") {
    printError("lastnameErr", "Please enter your lastname");
} else {
    var regex = /^[a-zA-Z\s]+$/;
    if(regex.test(lastname) === false) {
        printError("lastnameErr", "Please enter a valid lastname");
    } else {
        printError("lastnameErr", "");
        lastnameErr = false;
    }
}
  // Validate aadhar
if(aadhar == "") {
    printError("aadharErr", "Please enter your aadhar");
}else {
    var regex = /^[1-9]\d{11}$/;
    if(regex.test(aadhar) === false) {
        printError("aadharErr", "Please enter a valid 12 digit aadhar number");
    } else{
        printError("aadharErr", "");
        phoneErr = false;
    }
```

```
}
  // validate password
  if(password1==password2){
        printError("passwordErr", "");
        passwordErr = false;

  } else {
    printError("passwordErr", "Please enter same password");
    }

// Validate phone number
if(phone == "") {
    printError("phoneErr", "Please enter your phone number");
} else {
    var regex = /^[1-9]\d{9}$/;
    if(regex.test(phone) === false) {
        printError("phoneErr", "Please enter a valid 10 digit mobile number");
    } else{
        printError("phoneErr", "");
        phoneErr = false;
    }
}
  // validate blood
```

```
if(blood == "BLOOD_GROUP") {
    printError("bloodErr", "Please select your blood group");
} else {
    printError("bloodErr", "");
    bloodErr = false;
}
  // Validate city
if(city == "") {
    printError("cityErr", "Please enter your city");
} else {
    var regex = /^[a-zA-Z\s]+$/;
    if(regex.test(city) === false) {
        printError("cityErr", "Please enter a valid city");
    } else {
        printError("cityErr", "");
        cityErr = false;
    }
}
// Validate state
if(state == "") {
    printError("stateErr", "Please enter your state");
} else {
    var regex = /^[a-zA-Z\s]+$/;
```

```
        if(regex.test(state) === false) {
            printError("stateErr", "Please enter a valid state");
        } else {
            printError("stateErr", "");
            cityErr = false;
        }
    }
    // Validate zip
    if(pin == "") {
        printError("pinErr", "Please enter your postal code");
    } else {
        var regex = /^[1-9]\d{5}$/;
        if(regex.test(phone) === false) {
            printError("pinErr", "Please enter a valid 6 digit zip code");
        } else{
            printError("pinErr", "");
            pinErr = false;
        }
    }
    // Prevent the form from being submitted if there are any errors
    if((firstnameErr || lastnameErr || aadharErr || passwordErr || phoneErr || bloodErr ||
cityErr || stateErr || pinErr) == true) {
        return false;
```

```
    } else {
                alert("succesfull");
    }
}
</script>
        <!-- php code-->
<?php
include('footer.php')
?>
<?php
function reg()
{
    include_once('connection.php');
    $firstname = $_POST['firstname'];
    $middlename = $_POST['middlename'];
    $lastname = $_POST['lastname'];
    $aadhar=$_POST['aadhar'];
    $phone = $_POST['phone'];
    $birth = $_POST['birth'];
    $blood = $_POST['blood'];
    $gender = $_POST['gender'];
    $nationality = $_POST['nationality'];
    $city =$_POST['city'];
```

```
$state = $_POST['state'];

$pin = $_POST['pin'];

$paddress = $_POST['paddress'];

$taddress = $_POST['taddress'];

$email = $_POST['email'];

$password = $_POST['password'];

$files=$_FILES['file'];

$filename=$files['name'];

$fileerror=$files['error'];

$filetmp=$files['tmp_name'];

$dst='../photo/'.$filename;

move_uploaded_file($filetmp,$dst);

  $sql="insert into userinfo
(firstname,middlename,lastname,aadhar,phone,birth,blood,gender,nationality,city,state,pi
n,paddress,taddress,email,password,photo,status)
values('$firstname','$middlename','$lastname','$aadhar','$phone','$birth','$blood','$gender','
$nationality','$city','$state','$pin','$paddress','$taddress','$email','$password','$dst','no')";

if(mysqli_query($conn, $sql)){

 echo "Record inserted successfully";

}else{

echo "Could not insert record: ".mysqli_error($conn);

}

}

if(isset($_POST['submit']))
```

```
{
     reg();
  echo 'succesfully inserted';
}
?>
```

USER PROFILE:-

```
<?php
session_start();
if(!isset($_SESSION['email']))
{
  header('location:../index.php');
}
include('sheader.php');
include('../connection.php');
?>
  <!--content-->
  <div class="container-fluid mt-3">
<center><h4 class="mt-3"><u>PROFILE</u></h4></center>
<?php
 $res1=mysqli_query($conn,"select * from userinfo where email='$_SESSION[email]'");
       while($row1=mysqli_fetch_array($res1))
       {
```

```
    $firstname=$row1["firstname"];
    $middlename=$row1["middlename"];
    $lastname=$row1["lastname"];
    $phone=$row1["phone"];
    $email=$row1["email"];
    $aadhar=$row1["aadhar"];
    $_SESSION["aadhar"]=$aadhar;
    $birth = $row1['birth'];
    $blood = $row1['blood'];
    $gender = $row1['gender'];
    $nationality = $row1['nationality'];
    $city =$row1['city'];
    $state = $row1['state'];
    $pin = $row1['pin'];
    $paddress = $row1['paddress'];
    $taddress = $row1['taddress'];
    $photo=$row1["photo"];
}
?>
<div class="row justify-content-center m-3">
<div class="card col-7 mx-3">
                <div class="row">
                    <div class="col-12 pt-2">
```

```
<center><img width="150px" height="150px" class="rounded-circle" src="<?php
echo $photo;?>" /> </center>

</div>  </div>

<hr>

<div class="row">

<label for name="Full Name" class="col-sm-2 col-form-label labels">Full
Name</label>

<div class=col-sm-10>

<input type="text" name="name" class="form-control" id="" value="<?php echo
$firstname.' '.$middlename.' '.$lastname;?>" disabled>

</div>

<label for Phone="Phone" class="col-sm-2 col-form-label labels">Phone</label>

<div class=col-sm-10>

<input type="text" name="phone" class="form-control mt-2" id="" value="<?php
echo $phone;?>" disabled>

</div>

<label for email="Email" class="col-sm-2 col-form-label labels">Email</label>

<div class=col-sm-10>

<input type="text" name="email" class="form-control mt-2" id="" value="<?php
echo $email;?>" disabled>

</div>

<label for aadhar="Aadhar" class="col-sm-2 col-form-label labels">Aadhar</label>

<div class=col-sm-10>

<input type="text" name="aadhar" class="form-control mt-2" value="<?php echo
$aadhar;?>" id="" disabled>
```

```
</div>

<label for birth="birth" class="col-sm-2 col-form-label labels">Birth</label>

<div class=col-sm-10>

<input type="text" name="birth" class="form-control mt-2" id="" value="<?php
echo $birth;?>" disabled>

</div>

<label for blood="blood" class="col-sm-2 col-form-label labels">Blood</label>

<div class=col-sm-10>

<input type="text" name="blood" class="form-control mt-2" id="" value="<?php
echo $blood;?>" disabled>

</div>

<label for gender="gender" class="col-sm-2 col-form-label labels">Gender</label>

<div class=col-sm-10>

<input type="text" name="gender" class="form-control mt-2" id="" value="<?php
echo $gender;?>" disabled>

</div>

<label for nationality="Nationality" class="col-sm-2 col-form-label
labels">Nationality</label>

<div class=col-sm-10>

<input type="text" name="nationality" class="form-control mt-2" id=""
value="<?php echo $nationality;?>" disabled>

</div>

<label for city="city" class="col-sm-2 col-form-label labels">City</label>

<div class=col-sm-10>
```

```
<input type="text" name="city" class="form-control mt-2" id="" value="<?php echo $city;?>" disabled>

</div>

<label for state="state" class="col-sm-2 col-form-label labels">State</label>

<div class=col-sm-10>

<input type="text" name="state" class="form-control mt-2" id="" value="<?php echo $state;?>"  disabled>

</div>

<label for name="pin" class="col-sm-2 col-form-label labels">Pincode</label>

<div class=col-sm-10>

<input type="text" name="pin" class="form-control mt-2" id="" value="<?php echo $pin;?>" disabled>

</div>

<label for address="Address" class="col-sm-2 col-form-label labels">Address</label>

<div class=col-sm-10>

<textarea name="address" class="form-control mt-2" id="" value="" disabled><?php echo $paddress;?></textarea>

</div>

</div>

</div>

<!--notifications-->

<div class="card col-4">

<center><h5 class=pt-4>Notifications</h5></center>

<hr>
```

```
<?php

 $query=mysqli_query($conn,"SELECT * FROM message WHERE
aadhar=$_SESSION[aadhar]");

while($row=mysqli_fetch_array($query)){

$title=$row['title'];

$messages=$row['messages'];

?>

<ul><a href=" onclick="this.innerHTML='<?php echo $messages;?>'"><li><?php echo
$title;?></li></a></ul>

<?php

}

?>

</div>

</div>

</div>

<?php

include('../footer.php')

?>
```

ISSUED BOOKS:-

```
<?php
session_start();
if(!isset($_SESSION['email']))
{
  header('location:../index.php');
}
include('sheader.php');
include_once('../connection.php');
?>
   <!--content-->
   <div class="container-fluid mt-3">
<div class="data px-5 ">
<center><h4 class="mt-3"><u>ISSUED BOOKS</u></h4></center>
 <table class='table table-hover table-dark'>
 <tr>
 <th>Book Name</th>
 <th>Issue date</th>
 <th>return date</th>
 </tr>
 <?php
  $res=mysqli_query($conn,"select * from issued_books where
email='$_SESSION[email]'");
```

```
 while ($row=mysqli_fetch_array($res))
 {
  echo"<tr>";
  echo"<td>";echo $row["book_name"]; echo"</td>";
  echo"<td>";echo $row["issue_date"];echo"</td>";
  echo"<td>";echo $row["return_date"];echo"</td>";
  echo"</tr>";
 }
?>
 </table>
 </div>
 </div>
<?php
include('../footer.php');
?>
```

LIBRARIAN LOGIN:-

```
<?php
session_start();
include('header.php')
?>
<div class="container-fluid">
<div class="row m-5">
```

```
<div class="col-7 mx-4">
<div id="carouselExampleIndicators" class="carousel slide" data-ride="carousel">
  <ol class="carousel-indicators">
    <li data-target="#carouselExampleIndicators" data-slide-to="0" class="active"></li>
    <li data-target="#carouselExampleIndicators" data-slide-to="1"></li>
    <li data-target="#carouselExampleIndicators" data-slide-to="2"></li>
    <li data-target="#carouselExampleIndicators" data-slide-to="3"></li>
  </ol>
  <div class="carousel-inner">
    <div class="carousel-item active">
      <img src="images/1.jpg" class="d-block w-100" alt="..." height="500">
    </div>
    <div class="carousel-item">
      <img src="images/2.jpg" class="d-block w-100" alt="..."height="500">
    </div>
    <div class="carousel-item">
      <img src="images/3.jpg" class="d-block w-100" alt="..." height="500">
    </div>
    <div class="carousel-item">
      <img src="images/4.jpg" class="d-block w-100" alt="..." height="500">
    </div>
  </div>
```

```
  <a class="carousel-control-prev" href="#carouselExampleIndicators" role="button"
data-slide="prev">
    <span class="carousel-control-prev-icon" aria-hidden="true"></span>
    <span class="sr-only">Previous</span>
  </a>
  <a class="carousel-control-next" href="#carouselExampleIndicators" role="button"
data-slide="next">
    <span class="carousel-control-next-icon" aria-hidden="true"></span>
    <span class="sr-only">Next</span>
  </a>
</div>
</div>
<!--login form-->
<div class="card col-4 ml-2">
<center><i class="fas fa-users fa-5x"></i></center>
<hr>
<form method="post" class="p-3">
  <div class="form-group">
    <label for="exampleInputEmail1">Email Address</label>
    <input type="email" class="form-control" name="email" id="exampleInputEmail1"
aria-describedby="emailHelp">
    <small id="emailHelp" class="form-text text-muted">We'll never share your email
with anyone else.</small>
  </div>
```

```
  <div class="form-group">
    <label for="exampleInputPassword1">Password</label>
    <input type="password" class="form-control"  name="password"
id="exampleInputPassword1">
  </div>
  <div class="form-group form-check">
    <input type="checkbox" class="form-check-input" id="exampleCheck1">
    <label class="form-check-label" for="exampleCheck1">remember me</label>
  </div>
  <button type="submit" name="submit" class="btn btn-primary">LOGIN</button>
  <div>
  <h6>
  <a href="index.php">Student login?</a><br>
  </div>
</form>
<?php
if(isset($_POST['submit']))
     {
                include_once('connection.php');
    $email = $_POST['email'];
                $password = $_POST['password'];
                $sql=mysqli_query($conn,"select * from librarianinfo where email='$email'
&& password='$password'");
       $count=0;
```

```
        $count=mysqli_num_rows($sql);
        if($count==0)
        {?>
          <p style="color:white; text-align:center; background-color:red;margin:auto;
padding:5px;border-radius:5px;">Invalid user</p>
    <?php     }
          else{
          $_SESSION["email"]=$_POST["email"];
     ?>
           <script>
           window.location="librarian/librarian.php";
           </script>
    <?php
        }}
    ?>
</div>
</div>
</div>
<?php
include('footer.php')
?>
```

LIBRARIAN DASHBOARD:-

```
<?php
session_start();
if(!isset($_SESSION['email']))
{
  header('location:../index.php');
}
include('lheader.php')
?><!--content-->
<center><h4 class="m-3"><u>ADD BOOKS</u></h4></center>
<div class="container">
<div class="row justify-content-center my-5">
<div class="card p-5 col-s-12 col-md-9 ">
<form method="post" class="justify-content-center" enctype="multipart/form-data" >
<input type="text" name="name" class="form-control m-2" id=""
placeholder="book_name" required>
<input type="file" name="file" class="form-control m-2">
<input type="text" name="author" class="form-control m-2" id="" placeholder="author"
required>
<input type="text" name="publication" class="form-control m-2" id=""
placeholder="publication" required>
<input type="date" name="date" class="form-control m-2" id=""
placeholder="purchase_date" required>
<input type="text" name="price" class="form-control m-2" id="" placeholder="price"
required>
```

```
<input type="text" name="qty" class="form-control m-2" id="" placeholder="quantity"
required>

<input type="text" name="aqty" class="form-control m-2" id=""
placeholder="available_quantity" required>

<center><button type="submit" name="submit" class="btn btn-primary mt-
3">Submit</button>

<button type="reset" name="reset" class="btn btn-primary mt-
3">Reset</button></center>

</form>

</div>

</div>

</div>

<?php

include_once('../connection.php');

if(isset($_POST['submit']))

  {

    $files=$_FILES['file'];

    $filename=$files['name'];

    $fileerror=$files['error'];

    $filetmp=$files['tmp_name'];

    $dst='../books_image/'.$filename;

    move_uploaded_file($filetmp,$dst);

  $query=mysqli_query($conn,"insert into books values
('','$_POST[name]','$dst','$_POST[author]','$_POST[publication]','$_POST[date]','$_POS
T[price]','$_POST[qty]','$_POST[aqty]')");
```

```
 if($query){
 echo"<script>alert('Book Inserted Successfully')</script>";
 }
 else
 {
   echo'<script>alert("Insertion Failed")</script>';
 }
}
?><?php
include('../footer.php');
?>
```

ISSUE BOOKS:-

```
<?php
session_start();
if(!isset($_SESSION['email']))
{
 header('location:../index.php');
}
include('lheader.php');
include_once('../connection.php');
?>
 <!--content-->
```

```
<center><h4 class="mt-3"><u>ISSUE BOOKS</u></h4></center>
<div class="container">
<div class="row justify-content-center">
<div class="card py-3 px-5 mb-3 col-s-12 col-md-9 ">
 <form class="" method="POST">
 <select class="form-control" name="aadhar" placeholder="aadhar no.">
   <?php
      $res=mysqli_query($conn,"select aadhar from userinfo");
      while($row=mysqli_fetch_array($res))
         {
            echo"<option>";
            echo $row["aadhar"];
            echo"</option>";
         }
   ?>
 <input type="submit" class="form-control btn-primary my-2" name="submit">
 <?php
   if(isset($_POST['submit']))
   {
      $res1=mysqli_query($conn,"select * from userinfo where
aadhar='$_POST[aadhar]'");
      while($row1=mysqli_fetch_array($res1))
      {
```

```
        $firstname=$row1["firstname"];
        $middlename=$row1["middlename"];
        $lastname=$row1["lastname"];
        $phone=$row1["phone"];
        $email=$row1["email"];
        $aadhar=$row1["aadhar"];
        $_SESSION["aadhar"]=$aadhar;
    }
    ?>
    </div>
    <div class="card m-3 p-4 col-s-12 col-md-9 ">
    <input type="text" name="aadhar" class="form-control mt-2" value="<?php echo $aadhar;?>" id="" placeholder="aadhar" disabled>
    <input type="text" name="name" class="form-control mt-2" id="" value="<?php echo $firstname.' '.$middlename.' '.$lastname;?>" placeholder="name">
    <input type="text" name="phone" class="form-control mt-2" id="" value="<?php echo $phone;?>" placeholder="phone">
    <input type="text" name="email" class="form-control mt-2" id="" value="<?php echo $email;?>" placeholder="email">
    <input type="text" name="issuedate" class="form-control mt-2" id="" value="<?php echo date("d-m-y");?>"  placeholder="issue date">
    <input type="text" name="returndate" class="form-control mt-2" id="" value="" placeholder="return date">
    <select class="form-control mt-2" name="book_name" placeholder="book_name">
  <?php
```

```
$res=mysqli_query($conn,"select book_name from books");
while($row=mysqli_fetch_array($res))
{
echo"<option>";
echo $row["book_name"];
echo"</option>";
}
?>
<input type="submit" name="submit1" class="form-control btn-primary mt-3" id="" value="issue book">
<?php
}
else{

}
?>
</form>
</div></div></div>
<?php
if(isset($_POST["submit1"]))
{
$query1 = mysqli_query($conn,"INSERT INTO issued_books VALUES ('','$_SESSION[aadhar]','$_POST[name]','$_POST[phone]','$_POST[email]','$_POST[issuedate]','$_POST[returndate]','$_POST[book_name]')");
```

```
 $query2 =  mysqli_query($conn,"update books set
available_quantity=available_quantity-1 where book_name='$_POST[book_name]'");

if ($query1&&$query2)

{

 echo"<script>alert('Books Issued Succesfully')</script>";

}

else{

  echo "<script>alert('Books Issued failed')</script>";

}

}

?>

<?php

include('../footer.php');

?>
```

BOOKS INFORMATION:-

```
<?php

session_start();

if(!isset($_SESSION['email']))

{

  header('location:../index.php');

}

include('lheader.php')
```

```
?>
<center><h4 class="mt-3"><u>BOOKS INFORMATION</u></h4></center>
<div class="container-fluid">
<div class="row justify-content-center">
<div class="card py-3 mb-3 col-s-12 col-md-9 ">
 <form class="" method="POST">
 <input type="text" class="form-control" name="t1" placeholder="Enter book name for search">
 <input type="submit" class="form-control btn-primary" name="submit">
 </form>
</div>
<div class="m-3">
  <?php
  if(isset($_POST["submit"]))
  {
    include_once('../connection.php');
    $res=mysqli_query($conn,"select * from books where book_name like('%$_POST[t1]%')");
    echo"<div class='table-responsive'>";
    echo"<table class='table table-hover table-dark'>";
    echo"<tr>";
    echo"<th>";echo"bookname";echo"</th>";
    echo"<th>";echo"image";echo"</th>";
    echo"<th>";echo"author";echo"</th>";
```

```
    echo"<th>";echo"publication";echo"</th>";
    echo"<th>";echo"purchase_date";echo"</th>";
    echo"<th>";echo"price";echo"</th>";
    echo"<th>";echo"quantity";echo"</th>";
    echo"<th>";echo"available_quantity";echo"</th>";
    echo"</tr>";
    while($row=mysqli_fetch_array($res))
    {
    echo"<tr>";
    echo"<td>";echo $row["book_name"];echo"</td>";
    echo"<td>";?><img src="<?php echo $row["book_image"];?>" height="100"
width="100"><?php echo"</td>";
    echo"<td>";echo $row["author"];echo"</td>";
    echo"<td>";echo $row["publication"];echo"</td>";
    echo"<td>";echo $row["purchase_date"];echo"</td>";
    echo"<td>";echo $row["price"];echo"</td>";
    echo"<td>";echo $row["quantity"];echo"</td>";
    echo"<td>";echo $row["available_quantity"];echo"</td>";
    echo"</tr>";
    }
    echo"</table>";
    echo"</div>";
  }
```

```
  else{
    include_once('../connection.php');
    $res=mysqli_query($conn,"select * from books");
    echo"<div class='table-responsive'>";
    echo"<table class='table table-hover table-dark'>";
    echo"<tr>";
    echo"<th>";echo"bookname";echo"</th>";
    echo"<th>";echo"image";echo"</th>";
    echo"<th>";echo"author";echo"</th>";
    echo"<th>";echo"publication";echo"</th>";
    echo"<th>";echo"purchase_date";echo"</th>";
    echo"<th>";echo"price";echo"</th>";
    echo"<th>";echo"quantity";echo"</th>";
    echo"<th>";echo"available_quantity";echo"</th>";
    echo"<th>";echo"DELETE BOOK";echo"</th>";
    echo"</tr>";
    while($row=mysqli_fetch_array($res))
    {
    echo"<tr>";
    echo"<td>";echo $row["book_name"];echo"</td>";
    echo"<td>";?><img src="<?php echo $row["book_image"];?>" height="100"
width="100"><?php echo"</td>";
    echo"<td>";echo $row["author"];echo"</td>";
```

```
    echo"<td>";echo $row["publication"];echo"</td>";

    echo"<td>";echo $row["purchase_date"];echo"</td>";

    echo"<td>";echo $row["price"];echo"</td>";

    echo"<td>";echo $row["quantity"];echo"</td>";

    echo"<td>";echo $row["available_quantity"];echo"</td>";

    echo "<td><a onClick=\"javascript: return confirm('Please confirm deletion');\"
href='deletebook.php?id=".$row["id"]."'>delete</a></td>";

    echo"</tr>";

  }

    echo"</table>";

    echo"</div>";

  }

  ?>

  </div></div></div>

<?php

include('../footer.php');

?>
```

USER INFORMATION:-

```
<?php
session_start();
if(!isset($_SESSION['email']))
{
  header('location:../index.php');
}
include('lheader.php')
?><!--content-->
  <div class="container-fluid p-3">
  <center><h4 class="mt-3"><u>USER INFORMATION</u></h4></center>
<?php
    include_once('../connection.php');
    $res=mysqli_query($conn,"select * from userinfo");
    echo"<div class='table-responsive'>";
    echo"<table class='table table-hover table-dark'>";
    echo"<tr>";
    echo"<th>";echo"firstname";echo"</th>";
    echo"<th>";echo"middlename";echo"</th>";
    echo"<th>";echo"lastname";echo"</th>";
    echo"<th>";echo"aadhar";echo"</th>";
    echo"<th>";echo"phone";echo"</th>";
    echo"<th>";echo"birth";echo"</th>";
```

```
echo"<th>";echo"blood";echo"</th>";

echo"<th>";echo"gender";echo"</th>";

echo"<th>";echo"city";echo"</th>";

echo"<th>";echo"email";echo"</th>";

echo"<th>";echo"status";echo"</th>";

echo"<th>";echo"approve";echo"</th>";

echo"<th>";echo"not approve";echo"</th>";

echo"</tr>";

while($row=mysqli_fetch_array($res))

{

echo"<tr>";

echo"<td>";echo $row["firstname"];echo"</td>";

echo"<td>";echo $row["middlename"];echo"</td>";

echo"<td>";echo $row["lastname"];echo"</td>";

echo"<td>";echo $row["aadhar"];echo"</td>";

echo"<td>";echo $row["phone"];echo"</td>";

echo"<td>";echo $row["birth"];echo"</td>";

echo"<td>";echo $row["blood"];echo"</td>";

echo"<td>";echo $row["gender"];echo"</td>";

echo"<td>";echo $row["city"];echo"</td>";

echo"<td>";echo $row["email"];echo"</td>";

echo"<td>";echo $row["status"];echo"</td>";
```

```
   echo"<td>";?> <a href="approve.php?id=<?php echo $row["id"]; ?>
">approve</a><?php echo"</td>";

   echo"<td>";?> <a href="notapprove.php?id=<?php echo $row["id"]; ?> ">not
approve</a><?php echo"</td>";

   echo"</tr>";

   }

   echo"</table>";

   echo"</div>";

?>

</div>

<?php

include('../footer.php')

?>
```

RETURN BOOK:-

```
<?php

session_start();

if(!isset($_SESSION['email']))

{

  header('location:../index.php');

}

include('lheader.php');

include_once('../connection.php');

?>
```

```
 <!--content-->
 <center><h4 class="mt-3"><u>RETURN BOOK</u></h4></center>
<div class="container">
<div class="row justify-content-center">
<div class="card py-3 px-5 mb-3 col-12 ">
 <form class="" method="POST">
 <select class="form-control" name="aadhar" placeholder="aadhar no.">
   <?php
      $res=mysqli_query($conn,"select aadhar from issued_books where return_date="");
      while($row=mysqli_fetch_array($res))
         {
            echo"<option>";
            echo $row["aadhar"];
            echo"</option>";
         }
   ?>
 <input type="submit" class="form-control btn-primary" name="submit">
 </form>
 </div>
 <?php
   if(isset($_POST['submit']))
   {
    echo" <div class='card py-3 px-5 mb-3 col-12'>";
```

```
$res1=mysqli_query($conn,"select * from issued_books where
aadhar='$_POST[aadhar]' and return_date="");
echo"<div class='table-responsive'>";
echo"<table class='table table-hover table-dark'>";
echo "<tr>";
echo "<th>";echo"name";echo "</th>";
echo "<th>";echo"aadhar";echo "</th>";
echo "<th>";echo"phone";echo "</th>";
echo "<th>";echo"email";echo "</th>";
echo "<th>";echo"bookname";echo "</th>";
echo "<th>";echo"issuedate";echo "</th>";
echo "<th>";echo"RETURN";echo "</th>";
echo "<th>";echo"MESSAGE";echo "</th>";
echo "</tr>";
while($row=mysqli_fetch_array($res1))
{
echo"<tr>";
echo"<td>";echo $row["name"];echo"</td>";
echo"<td>";echo $row["aadhar"];echo"</td>";
echo"<td>";echo $row["phone"];echo"</td>";
echo"<td>";echo $row["email"];echo"</td>";
echo"<td>";echo $row["book_name"];echo"</td>";
echo"<td>";echo $row["issue_date"];echo"</td>";
```

```
        echo"<td>";?> <a href="return.php?id=<?php echo $row["id"]; ?>
">return</a><?php echo"</td>";

        echo"<td>";?> <a href="msg.php?id=<?php echo $row["id"]; ?>
">message</a><?php echo"</td>";

        echo"</tr>";

        }

        echo"</table>";

        echo "</div>";

        echo "</div>";

    }

        ?>

</div></div>

<?php

include('../footer.php');

?>
```

PASSWORD CHANGE:-

```
<?php

session_start();

if(!isset($_SESSION['email']))

{

  header('location:../index.php');

}

include('lheader.php')
```

```
?>

  <!--content-->

  <div class="container-fluid mt-3">

  <center><h4 class="mt-3"><u>CHANGE PASSWORD</u></h4></center>

<div class="row justify-content-center">

<div class="card py-3 px-5 mb-3 col-s-12 col-md-8">

      <form action="#" method="POST">

    <input type="password" class="form-control mt-2" name="oldpassword"
placeholder="old password" required>

    <input type="password" class="form-control mt-2" name="newpassword"
placeholder="new password" required>

    <input type="password" class="form-control mt-2" name="confirmpassword"
placeholder="confirm password" required>

 <center> <input type="submit" name="submit" class="btn btn-primary mt-2"
value="UPDATE">

  <button type="reset" class="btn btn-primary mt-2">RESET</button></center>

</form>

</div>

</div>

</div>

</div>

  <?php

if (isset($_POST['submit'])){

  $oldpassword=$_POST['oldpassword'];
```

```
  $newpassword=$_POST['newpassword'];

  $confirmpassword=$_POST['confirmpassword'];

  $query=mysqli_query($conn,"SELECT password from librarianinfo WHERE
email='$_SESSION[email]'");

  while ($row=mysqli_fetch_array($query)){

  $password=$row['password'];

  }

  if($oldpassword=$password){

  $query1=mysqli_query($conn,"UPDATE librarianinfo SET password='$newpassword'
WHERE email='$_SESSION[email]'");

  if ($query1) {?>

    <script>

        alert("Password changed successfully");

        window.location="../users/slogout.php";

    </script>

    <?php

} else {

    echo "Error updating record: " . mysqli_error($conn);

}}

}

include('../footer.php')

?>
```

MESSAGE:-

```
<?php
session_start();
if(!isset($_SESSION['email']))
{
  header('location:../index.php');
}
include('lheader.php');
include('../connection.php');
?>
<h3>message</h3>
<form class=col-6 method="post">
<input type="text" class="form-control" name="title" placeholder="title">
<textarea class="form-control" name="message" placeholder="message"></textarea>
<input type="submit" class="form-control bg-primary" name="submit" value="send">
</form>
<?php
 if(isset($_POST['submit']))
 {
  $id=$_GET["id"];
 $query= mysqli_query($conn,"select aadhar from issued_books where id=$id");
 $row=mysqli_fetch_array($query);
 $aadhar=$row['aadhar'];
```

```
 $title=$_POST['title'];
 $message=$_POST['message'];
 $query1=mysqli_query($conn,"INSERT INTO message
VALUES('','$aadhar','$title','$message','n')");
 if($query1){
   echo"<script>alert('message sent');
   window.location='returnbook.php';</script>";
 }
 else{
  echo"<script>alert('message sent failed');
  window.location='returnbook.php';</script>";
 }
 }
include('../footer.php');
?>
```

APPROVE USER:-

```
<?php
include_once('../connection.php');
$id=$_GET["id"];
mysqli_query($conn,"update userinfo set status='yes' where id=$id");
header('location:lsinfo.php');
?>
```

DISSAPPROVE USER:-

```
<?php
include_once('../connection.php');
$id=$_GET["id"];
mysqli_query($conn,"update userinfo set status='no' where id=$id");
header('location:lsinfo.php');
?>
```

LOGOUT:-

```
<?php
session_start();
session_destroy();
unset($_SESSION['$email']);
?>
<script>
alert("logout");
window.location="../index.php";
</script>
```

GALLERY:-

```
<?php
include('header.php')
?>
  <!--content-->
    <div class="row mt-4">
    <div class="col-4 gallery">
    <img src="images/1.jpg" class="img-fluid">
    </div>
    <div class="col-4 gallery">
    <img src="images/2.jpg" class="img-fluid">
    </div>
    <div class="col-4 gallery">
    <img src="images/3.jpg" class="img-fluid">
    </div>
    </div>
    <div class="row my-3">
    <div class="col-4 gallery">
    <img src="images/4.jpg" class="img-fluid">
    </div>
        <div class="col-4 gallery">
    <img src="images/5.jpg" class="img-fluid">
    </div>
```

```
        <div class="col-4 gallery">
   <img src="images/6.jpg" class="img-fluid">
   </div>
   </div>
   </div>
<?php
include('footer.php')
?>
```

ABOUT:-

```
<?php
include('header.php')
?>
  <!--content-->
  <div class="container py-5">
  <div class="row">
  <div class="col-4">
  <img src="images/4.jpg" class="img-fluid">
  </div>
  <div class="col-8">
 <p class="about">With the objective of promoting reading habit amongst the vast literate population. Today this Library is the largest private books circulating library with over 90000+ books in various languages. we have a separate education division with text books, reference materials etc for students from Std 10 to Post Graduation. We have been
```

credited to be the first fully computerised private library. Our libraries are open 365 days supported by over 20 experienced staff members

Library management system is a project which aims in developing a computerized system to maintain all the daily work of library .This project has many features which are generally not availiable in normal library management systems like facility of user login and a facility of teachers login .It also has a facility of admin login through which the admin can monitor the whole system .It also has facility of an online notice board where teachers can student can put up information about workshops or seminars being held in our colleges or nearby colleges and librarian after proper verification from the concerned institution organizing the seminar can add it to the notice board . It has also a facility where student after logging in their accounts can see list of books issued and its issue date and return date and also the students can request the librarian to add new books by filling the book request form.The librarian after logging into his account ie admin account can generate various reports such as student report , issue report, teacher report and book report

<?php

include('footer.php')

?>

STYLESHEETS:-

```
.labels{
    font-weight: bold;
    font-variant: small-caps;
   }
.login-card:hover{
    background-color:burlywood;
}
.gallery{
    width:100%
    overflow:none;
}
.gallery img:hover{
    border: 4px solid gainsboro;
    border-radius: 7px;
    box-shadow: 5px 10px 35px 5px;
    background-color: #383333;
    cursor: pointer;
}
.about{
    font-family: cursive;
    font-style: oblique;
    font-weight: 600;
    color: indianred;
    padding:10px;
}
```