



G.M.D. ARTS, B.W. COMMERCE & SCIENCE
COLLEGE, SINNAR.

Department Of Computer Science

A project Report On
LIBRARY MANAGEMENT System

Submitted By:

Shaikh Fayyaj Abdul
Harkal sachin somnath
Jha kailash lakshman

Guided by :

SMT.N.V.LAHAMAGE



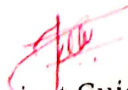
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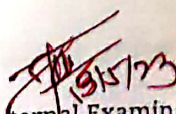
Department Of Computer Science

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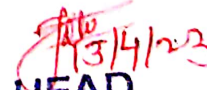
This is certify that
Shaikh Fayyaj Abdul
Harkal sachin somnath
Jha kailash lakshman

Student of BSC Computer science satisfactory completed project work on library management system towards partial full film and degree course affiliated to Savitribai Phule Pune University for the academic year 2022-2023at GMD arts B W. Commerce and science College sinnar


Project Guide
(Smt. N. V. Lahamge)


Internal Examiner




HEAD
DEPARTMENT OF COMPUTER SCIENCE
(Smt. N. V. Lahamge)
G.M.D. Arts, B.W. Commerce
and Science College, Sinnar


External Examiner

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Library Management system

Group members-

- Shaikh Fayyaj Abdul
- Harkal sachin somnath
- jha kailash lakshman

Abstract

System to maintain all the daily work of library this project has many features which are generally not available in normal library management system like library Management system is a project which AIMS in developing a computerized 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 workshop 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 which are generally not available in normal library management system like student can request the librarian to add books by filling the book request form. The librarian After logging into his account ie admin account can generate overall this project of ours is being developed to help the students as well as staff human efforts

INTRODUCTION

This chapter gives an overview about the aim , objectives ,background and operation environment of the system.

1.1 PROJECT AIMS AND 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 teacher login page where teacher can add any events being organized in the college and important suggestions regarding books.
- Online notice board about the workshop.

1.2 BACKGROUND OF PROJECT

Library Management System is an 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.

In addition, report module is also included in Library Management System. If user's position is admin, the user is able to generate different kinds of reports like lists of students registered, list of books, issue and return reports.

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.

Library Management System

1.5 OPERATION ENVIRONMENT

| | |
|------------------|--|
| PROCESSOR | INTEL CORE PROCESSOR OR BETTER PERFORMANCE |
| OPERATING SYSTEM | WINDOWS VISTA ,WINDOWS7, UBUNTU |
| MEMORY | 1GB RAM OR MORE |
| HARD DISK SPACE | MINIMUM 3 GB FOR DATABASE USAGE FOR FUTURE |
| DATABASE | MY SQL |

Motivation

efficient management : library management system can help in efficient management of library resources , such as books,general,magazines and other materials. it can help librarians keep track of what book are available,who has borrowed them, when they are due to be returned , and other important details.

user convenience : a library management system can improve user convenience by making it easier for them to search for books, place, holds, and renew borrowed items. it can also provide access to electronic resources such as ebooks and databases

data analysis : the library management system can generate reports and statistics on library usage which can help librarians and make inform decisions about resource a location and collection development

Motivation

The present Study offers intervention of MIS (Management Information System) to the conventional Library Management.Libraries, as centers of learning are experiencing unprecedented rates of change, both from internal and External environment.

The new library environment incorporates a changing user population. technology enhancements, transformation of the scholarly a renewed commitment to planning and assessment throughout the organization. However. Librarians as information managers have been slow to keep pace with this change. According to Lakos (2006), academic libraries are confronting the issues of organisational viability and relevance and are fast adapting to the new reality of the web. Since 1995, when Netscape enabled real access to the Internet, academic libraries are no longer the main owners of the information gateway. The web has changed every aspect of life. The most visible change has occurred in the size, rate of change and speed of information availability and delivery. The breakthrough combination of internet with the libraries as academic warehouses has brought us to the age of information explosion. The intervention of e-resources to libraries has manifold the reach of conventional academic resources. It is estimated that the amount of information in the world doubles every 20 months.

Motivation

As we live in an information environment dominated increasingly by the Internet, we have to understand that it is primarily a communication environment. All organizations and businesses are busy in rediscovering and reinventing themselves and adapting themselves around the potentials and the pitfalls of the Internet.

The Internet opens tremendous and until now inconceivable possibilities and it enables the creation of communities of interest. Librarians have to realize that they are in the information business rather than in the library business. They have to adjust, re-evaluate their core services, and change their perspective and purpose. Libraries have to rediscover and re-imagine themselves in order to stay relevant or fade. In order to change successfully, libraries have to change their systems, processes, but mainly their organizational cultures.

Libraries have to transform themselves into organizations that support the values of quality and quality management (Brophy & Couling, 1996). This also means that libraries should build organizations that support learning. (Senge, 1994) Libraries that focus on customer needs increase their ability to provide quality service to their customers. By concentrating on their ability to learn and create solutions, the learning organization "is continually enhancing its capacity to create its future

SYSTEM ANALYSIS

In this chapter, we will discuss and analyze about the developing process of Library Management System including software requirement specification (SRS) and comparison between existing and proposed system. The functional and non functional requirements are included in SRS part to provide complete description and overview of system requirement before the developing process is carried out. Besides that, existing vs proposed provides a view of how the proposed system will be more efficient than the existing one.

2.1 SOFTWARE REQUIREMENT SPECIFICATION

2.1.1 GENERAL DESCRIPTION

PRODUCT DESCRIPTION:

Library Management System is a computerized system which helps user(librarian) to manage the library daily activity in electronic format. It reduces the risk of paper work such as file lost, file damaged and time consuming. It can help user to manage the transaction or record more effectively and time-saving.

PROBLEM STATEMENT:

The problem occurred before having computerized system includes:

- File lost
When computerized system is not implemented file is always lost because of human environment. Some times due to some human error there may be a loss of records.
- File damaged
When a computerized system is not there file is always lost due to some accident like spilling of water by some member on file accidentally. Besides some natural disaster like floods or fires may also damage the files.

-
- Difficult to search record

When there is no computerized system there is always a difficulty in searching of records if the records are large in number .

- Space consuming

After the number of records become large the space for physical storage of file and records also increases if no computerized system is implemented.

- Cost consuming

As there is no computerized system the to add each record paper will be needed which will increase the cost for the management of library.

2.1.2 SYSTEM OBJECTIVES

- 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.

- Option of online Notice board

Librarian will be able to provide a detailed description of workshops going in the college as well as in nearby colleges

- Lecture Notes

Teacher have a facility to upload lectures notes in a pdf file having size not more than 10mb

2.1.3.1 NON FUNCTIONAL REQUIREMENTS

- Product Requirements

EFFICIENCY REQUIREMENT

When a library management system will be implemented librarian and user will easily access library as searching and book transaction will be very faster .

RELIABILITY REQUIREMENT

The system should accurately performs member registration ,member validation , report generation, book transaction and search

USABILITY REQUIREMENT

The system is designed for a user friendly environment so that student and staff of library can perform the various tasks easily and in an effective way.

ORGANIZATIONAL REQUIREMENT

IMPLEMENTATION REQUIREMENTS

In implementing whole system it uses html in front end with php as server side scripting language which will be used for database connectivity and the backend ie the database part is developed using mysql.

DELIVERY REQUIREMENTS

The whole system is expected to be delivered in six months of time with a weekly evaluation by the project guide.

2.1.3.2 FUNCTIONAL REQUIREMENTS

1. NORMAL USER

1.1 USER LOGIN

Description of feature

This feature used by the user to login into system. They are required to enter user id and password before they are allowed to enter the system. The user id and password will be verified and if invalid id is there user is allowed to not enter the system.

Functional requirements

- user id is provided when they register
- The system must only allow user with valid id and password to enter the system
- The system performs authorization process which decides what user level can access to.
- The user must be able to logout after they finished using system.

1.2 REGISTER NEW USER

Description of feature

This feature can be performed by all users to register new user to create account.

Functional requirements

- System must be able to verify information
- System must be able to delete information if information is wrong

1.3 REGISTER NEW BOOK

Description of feature

This feature allows to add new books to the library

Functional requirements

- System must be able to verify information
- System must be able to enter number of copies into table.
- System must be able to not allow two books having same book id.

1.5 SEARCH BOOK

DESCRIPTION OF FEATURE

This feature is found in book maintenance part . we can search book based on book id , book name , publication or by author name.

Functional requirements

- System must be able to search the database based on select search type
- System must be able to filter book based on keyword entered
- System must be able to show the filtered book in table view

1.5 ISSUE BOOKS AND RETURN BOOKS

DESCRIPTION OF FEATURE

This feature allows to issue and return books and also view reports of book issued.

Functional requirements

- System must be able to enter issue information in database.
- System must be able to update number of books.
- System must be able to search if book is available or not before issuing books
- System should be able to enter issue and return date information .

1.6 EVENT ADDITION

DESCRIPTION OF FEATURE

This feature allows teacher and student to add information about various workshops being conducted in college and colleges nearby.

Functional requirements

- System should be able to add detailed information about events .
- System should be able to display information on notice board available in the homepage of site

2.1.4 SOFTWARE AND HARDWARE REQUIREMENTS

This section describes the software and hardware requirements of the system

2.1.4.1 SOFTWARE REQUIREMENTS

- Operating system- Windows 7 is used as the operating system as it is stable and supports more features and is more user friendly
- Database MYSQL-MYSQL is used as database as it easy to maintain and retrieve records by simple queries which are in English language which are easy to understand and easy to write.
- Development tools and Programming language- HTML is used to write the whole code and develop webpages with css, java script for styling work and php for sever side scripting.

2.1.4.2 HARDWARE REQUIREMENTS

- Intel core i5 2nd generation is used as a processor because it is fast than other processors an provide reliable and stable and we can run our pc for longtime. By using this processor we can keep on developing our project without any worries.
- Ram 1 gb is used as it will provide fast reading and writing capabilities and will in turn support in processing

2.2 EXISTING VS PROPOSED SYSTEM

- i. Existing system does not have any facility of teachers login or student login where as proposed system will have a facility of student login as well as teacher's login
- ii. Existing system does not have a facility of online reservation of books whereas proposed system has a facility of online reservation of books
- iii. Existing system does not have any facility of online notice board where description of workshops happening in our college as well as nearby colleges is being provided.
- iv. Existing system does not has any option of lectures notes uploaded by teachers whereas proposed system will have this facility
- v. Existing system does not have any facility to generate student reports as well book issue reports whereas proposed system provides librarian with a tool to generate reports
- vi. Existing system does not has any facility for book request and sugestions where as in proposed system after logging in to their accounts student can request books as well as provide suggestions to improve library

2.3 SOFTWARE TOOLS USED

The whole Project is divided in two parts the front end and the back end.

2.3.1 Front end

The front end is designed using of html , Php ,css, Java script

- **HTML- HTML or Hyper Text Markup Language** is the main markup language for creating web pages and other information that can be displayed in a web browser. HTML is written in the form of HTML elements consisting of *tags* enclosed in angle brackets (like `<html>`), within the web page content. HTML tags most commonly come in pairs like `<h1>` and `</h1>`, although some tags represent *empty elements* and so are unpaired, for example ``. The first tag in a pair is the *start tag*, and the second tag is the *end tag* (they are also called *opening tags* and *closing tags*). In between these tags web designers can add text, further tags, comments and other types of text-based content. The purpose of a web browser is to read HTML documents and compose them into visible or audible web pages. The browser does not display the HTML tags, but uses the tags to interpret the content of the page. HTML elements form the building blocks of all websites. HTML allows images and objects to be embedded and can be used to create interactive forms. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. It can embed scripts written in languages such as JavaScript which affect the behavior of HTML web pages.
- **CSS- Cascading Style Sheets (CSS)** is a style sheet language used for describing the look and formatting of a document written in a markup language. While most often used to style web pages and interfaces written in HTML and XHTML, the language can be applied to any kind of XML document, including plain XML, SVG and XUL. CSS is a cornerstone specification of the web and almost all web pages use CSS style sheets to describe their presentation. CSS is designed primarily to enable the separation of document content from document presentation, including elements such as the layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification

of presentation characteristics, enable multiple pages to share formatting, and reduce complexity and repetition in the structural content (such as by allowing for table less web design). CSS can also allow the same markup page to be presented in different styles for different rendering methods, such as on-screen, in print, by voice (when read out by a speech-based browser or screen reader) and on Braille-based, tactile devices. It can also be used to allow the web page to display differently depending on the screen size or device on which it is being viewed. While the author of a document typically links that document to a CSS file, readers can use a different style sheet, perhaps one on their own computer, to override the one the author has specified. However if the author or the reader did not link the document to a specific style sheet the default style of the browser will be applied. CSS specifies a priority scheme to determine which style rules apply if more than one rule matches against a particular element. In this so-called *cascade*, priorities or *weights* are calculated and assigned to rules, so that the results are predictable.

- **JAVA SCRIPT- JavaScript (JS)** is a dynamic computer programming language. It is most commonly used as part of web browsers, whose implementations allow client-side scripts to interact with the user, control the browser, communicate asynchronously, and alter the document content that is displayed. It is also being used in server-side programming, game development and the creation of desktop and mobile applications. JavaScript is a prototype-based scripting language with dynamic typing and has first-class functions. Its syntax was influenced by C. JavaScript copies many names and naming conventions from Java, but the two languages are otherwise unrelated and have very different semantics. The key design principles within JavaScript are taken from the Self and Scheme programming languages. It is a multi-paradigm language, supporting object-oriented, imperative, and functional programming styles. The application of JavaScript to use outside of web pages—for example, in PDF documents, site-specific browsers, and desktop widgets—is also significant. Newer and faster JavaScript VMs and platforms built upon them (notably Node.js) have also increased the popularity of JavaScript for server-side web applications. On the client side, JavaScript was traditionally implemented as

an interpreted language but just-in-time compilation is now performed by recent (post-2012) browsers.

- **PHP- PHP** is a server-side scripting language designed for web development but also used as a general-purpose programming language. PHP is now installed on more than 244 million websites and 2.1 million web servers. Originally created by Rasmus Lerdorf in 1995, the reference implementation of PHP is now produced by The PHP Group. While PHP originally stood for *Personal Home Page*, it now stands for *PHP: Hypertext Preprocessor*, a recursive backronym. PHP code is interpreted by a web server with a PHP processor module, which generates the resulting web page: PHP commands can be embedded directly into an HTML source document rather than calling an external file to process data. It has also evolved to include a command-line interface capability and can be used in standalone graphical applications. PHP is free software released under the PHP License. PHP can be deployed on most web servers and also as a standalone shell on almost every operating system and platform, free of charge.

2.3.2 **BACK END-** The back end is designed using mysql which is used to design the databases

- **MYSQL- MySQL** ("My S-Q-L", officially, but also called "My Sequel") is (as of July 2013) the world's second most widely used open-source relational database management system (RDBMS). It is named after co-founder Michael Widenius daughter, My. The SQL phrase stands for Structured Query Language. The MySQL development project has made its source code available under the terms of the GNU General Public License, as well as under a variety of proprietary agreements. MySQL was owned and sponsored by a single for-profit firm, the Swedish company MySQL AB, now owned by Oracle Corporation. MySQL is a popular choice of database for use in web applications, and is a central component of the widely used LAMP open source web application software stack (and other 'AMP' stacks). LAMP is an acronym for "Linux, Apache, MySQL, Perl/PHP/Python." Free-software-open source projects that require a full-featured database management system often use MySQL. For commercial use, several paid editions are available, and offer additional functionality. Applications which use MySQL databases

include: TYPO3, MODx, Joomla, WordPress, phpBB, MyBB, Drupal and other software. MySQL is also used in many high-profile, large-scale websites, including Wikipedia, Google (though not for searches), Facebook, Twitter, Flickr, and YouTube

SYSTEM DESIGN

3.1 TABLE DESIGN

VARIOUS TABLES TO MAINTAIN
INFORMATION

• BOOK TABLE FOR KEEPING TRACK OF BOOKS

| Field | Data type | Default | Key | Extra |
|--------------|--------------|----------|---------|----------------|
| Code | INT(11) | Not Null | Primary | Auto increment |
| Bookname | VARCHAR(255) | Null | | |
| Author | VARCHAR(255) | Null | | |
| Publication | VARCHAR(255) | Null | | |
| Subject | VARCHAR(255) | Null | | |
| No of copies | INT(10) | Null | | |

• STUDENT TABLE FOR STUDENT INFORMATION

| Field | Data type | Default | Key | Extra |
|-----------|--------------|----------|-------------|----------------|
| libid | INT(11) | NOT NULL | Primary key | Auto increment |
| regno | INT(10) | NULL | | |
| branch | VARCHAR(255) | NULL | | |
| section | VARCHAR(255) | NULL | | |
| semester | VARCHAR(255) | NULL | | |
| section | VARCHAR(2) | NULL | | |
| yearofadm | INT(5) | NULL | | |

• TEACHER TABLE TO KEEP TEACHER INFORMATION

| Field | Data Type | Default | Key | Extra |
|-------------|--------------|----------|-------------|----------------|
| Tid | INT(11) | NOT NULL | Primary key | Auto increment |
| Name | VARCHAR(255) | NULL | | |
| Designation | VARCHAR(255) | NULL | | |
| Branch | VARCHAR(255) | NULL | | |
| Contactno | INT(13) | NULL | | |
| Lectures | LONG BLOB | NULL | | |

- Issue table to keep track of books issued

| Field | Data Type | Default | Key | Extra |
|------------|-----------|----------|-------------|--------------------|
| bookid | INT(n) | NOT NULL | Foreign key | References book |
| stuid | INT(11) | NOT NULL | Foreign key | References Student |
| issuedate | DATE | NULL | | |
| returndate | DATE | NULL | | |

- STUDENT LOGIN TABLE

| Field | Data type | Default | Key | Extra |
|----------|--------------|----------|-------------|--------------------|
| logid | INT(11) | NOT NULL | Foreign key | References Student |
| Username | VARCHAR(255) | NULL | | |
| Password | VARCHAR(255) | NULL | | |
| numbooks | INT(1) | NULL | | |

• EVENT TABLE FOR EVENT INFORMATION

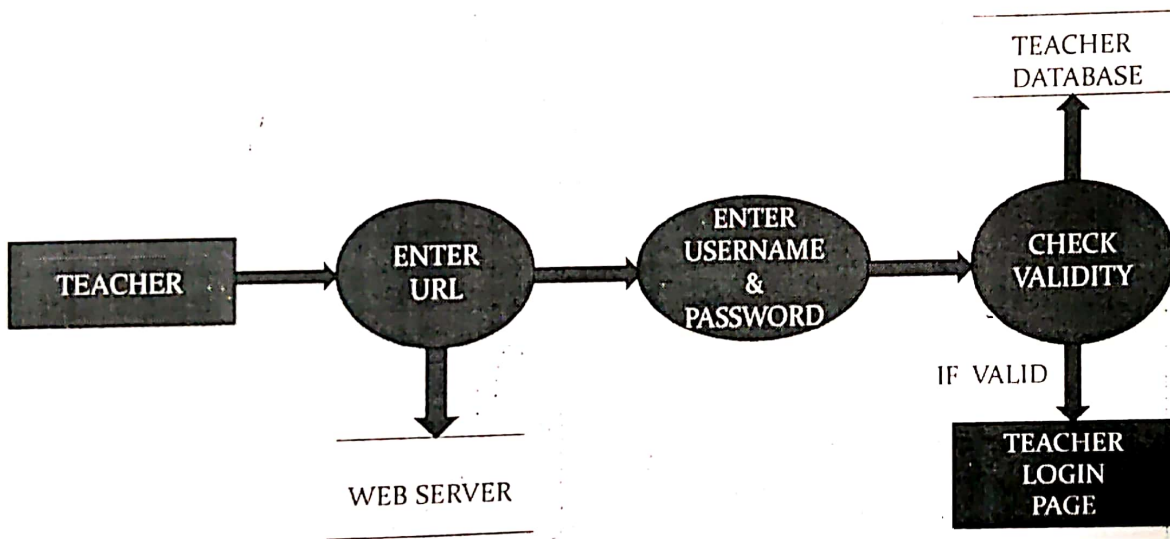
| Field | Data type | Default | Key | Extra |
|------------|------------------|---------|-----|-------|
| Name | Varchar(255) | NULL | | |
| Date | Date(yyyy/mm/dd) | NULL | | |
| Time | VARCHAR(255) | NULL | | |
| Mname | VARCHAR(255) | NULL | | |
| Contactno. | Int(30) | NULL | | |
| Email | VARCHAR(255) | NULL | | |
| Venue | varchar(255) | NULL | | |

• TEACHER LOGIN TABLE

| Field | Data Type | Default | Key | Extra |
|----------|--------------|----------|-------------|--------------------|
| Loginid | INT(11) | NOT NULL | Foreign key | References teacher |
| Username | VARCHAR(255) | NULL | | |
| Password | VARCHAR(255) | NULL | | |

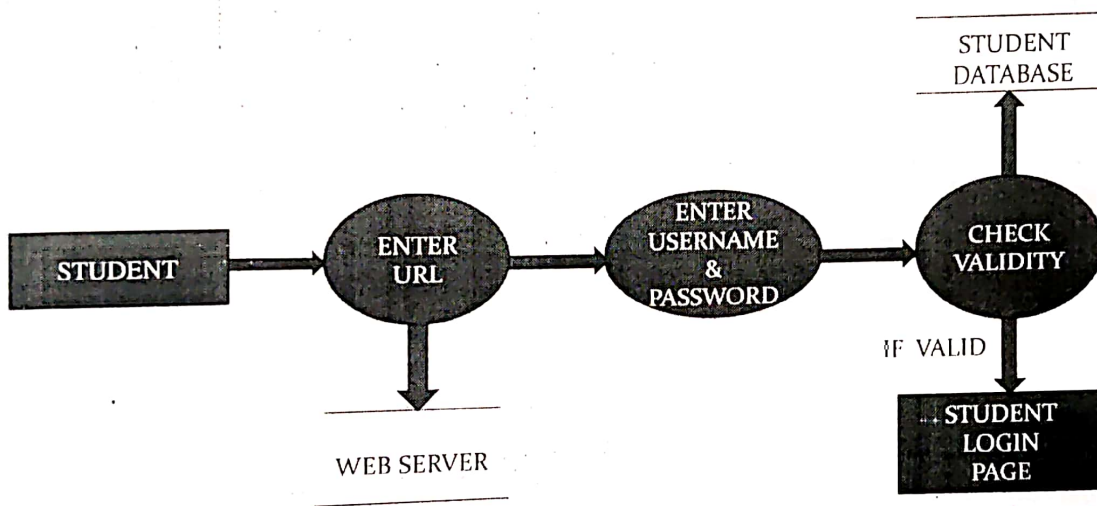
3.2 DATA FLOW DIAGRAMS (Er diagrams)

DATA FLOW DIAGRAM FOR TEACHER LOGIN



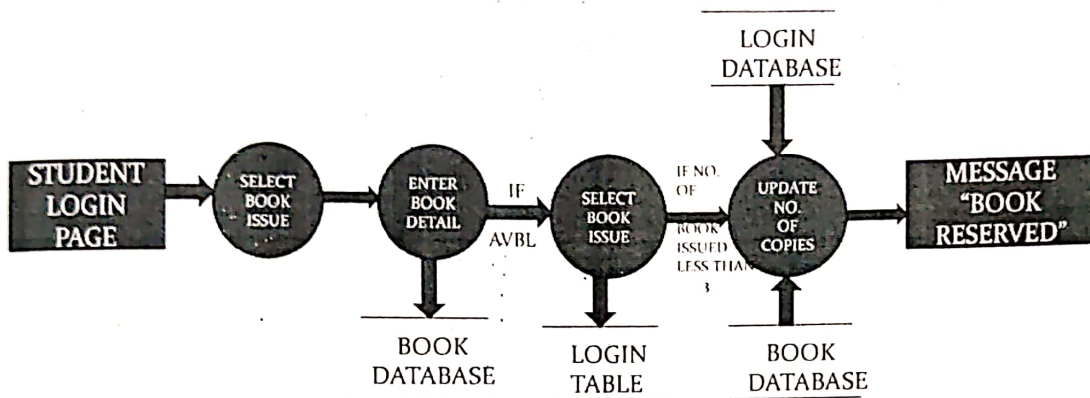
After entering to the home page of the website , teacher can choose the TEACHER LOGIN option where they are asked to enter username & password , and if he/she is a valid user then a teacher login page will be displayed.

DATA FLOW DIAGRAM FOR STUDENT LOGIN



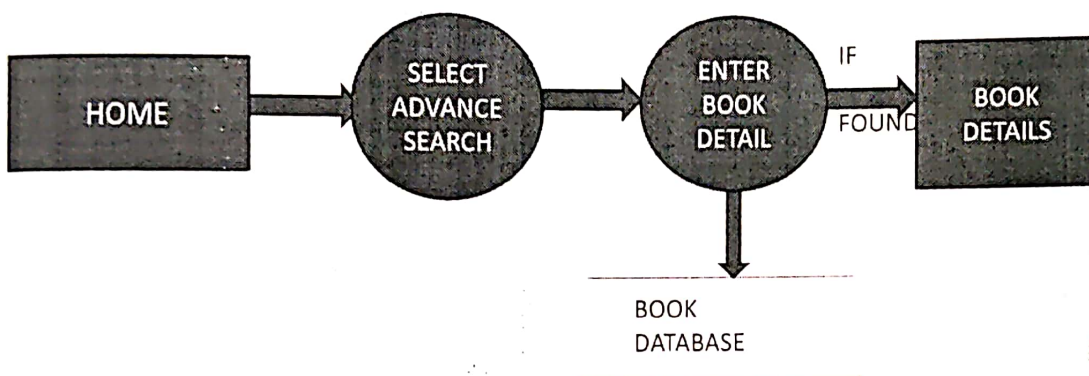
After entering to the home page of the website, student can choose the STUDENT LOGIN option where they are asked to enter username & password, and if he/she is a valid user then a student login page will be displayed.

DATA FLOW DIAGRAM FOR BOOK ISSUE



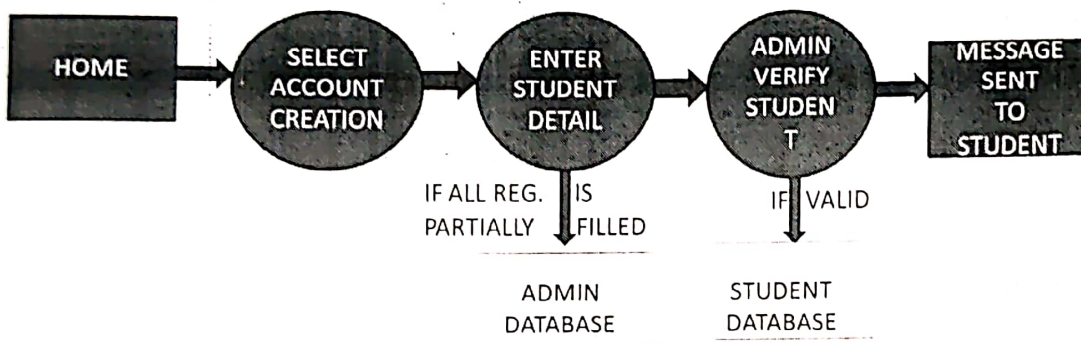
It is a 2nd level Data Flow Diagram where after entering STUDENT LOGIN page he/she can select a book issue option where after entering the book detail, he/she can select the book issue option and if the maximum no of books issued limit is not crossed then a request will be sent to the librarian who will approve the book issue.

DATA FLOW DIAGRAM FOR BOOK SEARCH



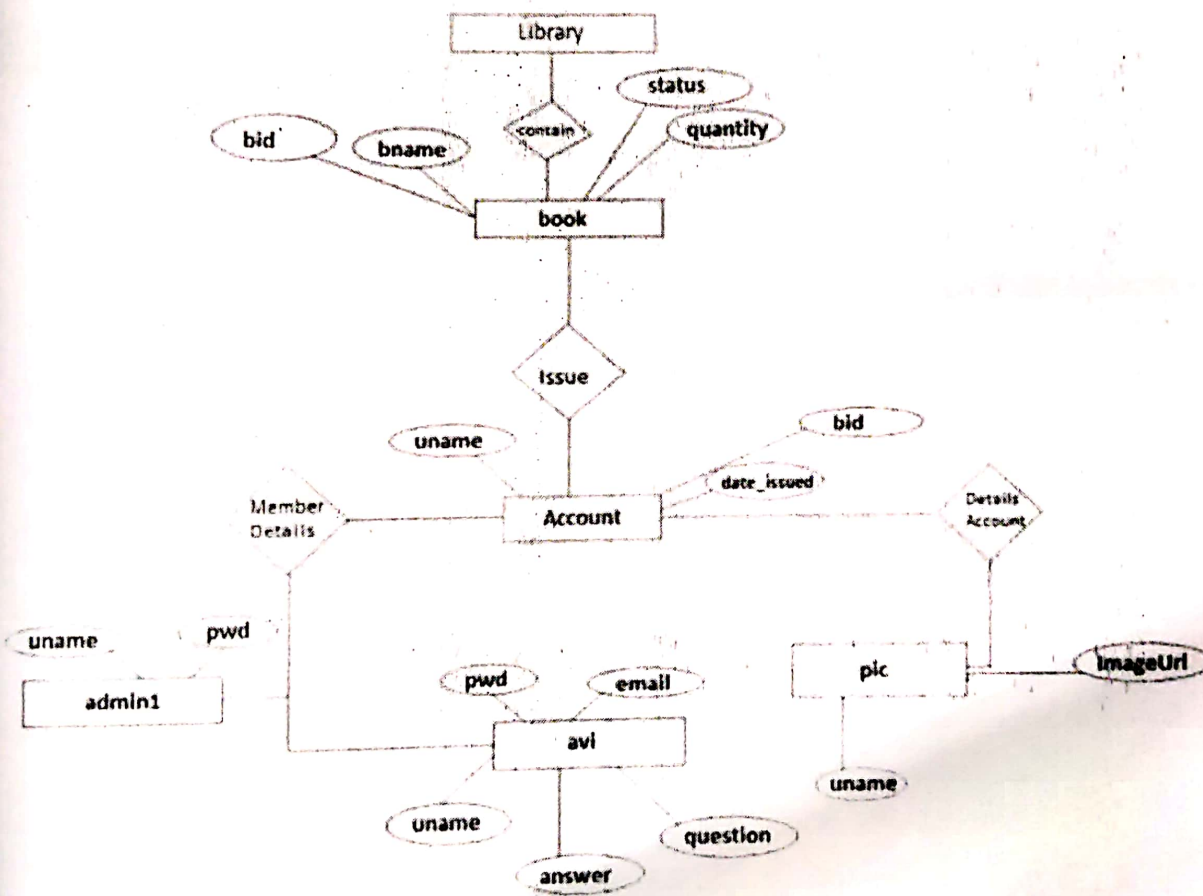
After the home page login there will be an option of the book search where after entering book detail like author name, publication, book name etc book details will be displayed.

DATA FLOW DIAGRAM FOR ACCOUNT CREATION



After the home page login there will be an option of CREATE AN ACCOUNT where after entering student detail ,if all the fields are filled then a request will be sent to the librarian who will approve him as a registered member of the library.

ER DIAGRAM



SYSTEM IMPLEMENTATION

4.1.1 Screenshot for homepage



Welcome sachin@123

Published Announcements

NewsId Announcement

- | | |
|---|--|
| 1 | Welcome to Our Online Library Management System. You can have access to all our e-books at a really good affordable price! |
| 2 | Man don't dance |
| 3 | Godfrey Okoye is going Places |

Delete

DELETE

DELETE

DELETE

Publish New Announcements

Announcement

Download Fleet and soft... SOE LIBRARY INFORMATION


localhost:8080/soe-library/homepage.php

SOE LIBRARY MANAGEMENT SYSTEM

Home | Contact Us | E-Gateway | Student Login | Teacherlogin | Adminlogin

SEARCH:

NEW ARRIVALS | ONLINE BOOKS | E-GALLERY | QUESTION PAPER | ABOUT US | BOOK ISSUE | RETURN BOOKS



E-Repository


School of Engineering Library has a collection of 4000 ebs and 2800 online journals and also has a section, where teachers upload their lectures notes and student can download them.

[Continue Reading](#)

ALL ABOUT THE LIBRARY | EXISTENCE | COLLECTION OF BOOKS | **E-REPOSITORY** | LATEST NEWS & EVENTS

Latest News & Events

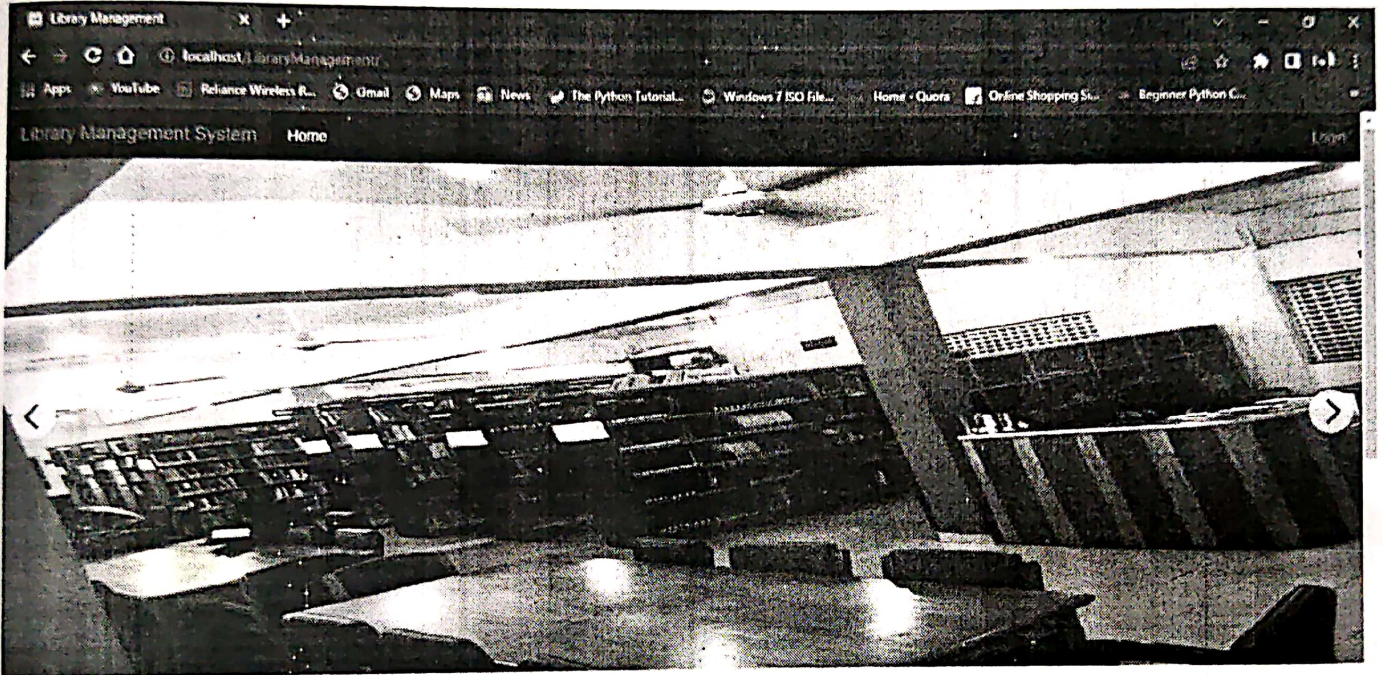
Advanced Search

| Event Name | Date | Time | Venue | Manager Name | Contact No | Email |
|---|------|------|-------|--------------|------------|-------|
|  | | | | | | |

Books Table

[Add Book](#)

| BookId | book Title | author | ISBN | bookCopies | publisherName | available | categories | callNumber | Delete |
|--------|-----------------------------|----------------|---------------|------------|--------------------|-----------|------------|------------|------------------------|
| 1 | How to Become a Billionaire | James Fitch | 1900-124-3242 | 30 | Robert Muller | YES | Morals | 0902334 | DELETE |
| 2 | Oliver Twist | Charles Dickey | 123-423-4-13 | 12 | African Books Inc. | YES | Fairy Tail | 0216230 | DELETE |
| 3 | Death of a million starts | Breakthrough | 123 | 3 | Rexxon | YES | 123 | 12 | DELETE |
| 4 | James | James | 123 | 4 | James | YES | Story | 0000221014 | DELETE |

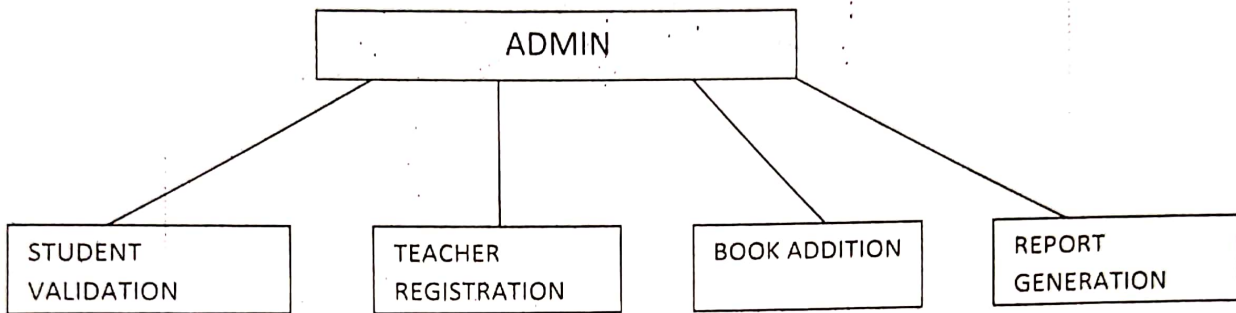


Published Announcements

4.1 MODULE DESCRIPTION Diagrams

For Library Management System it is divided into the following Modules:

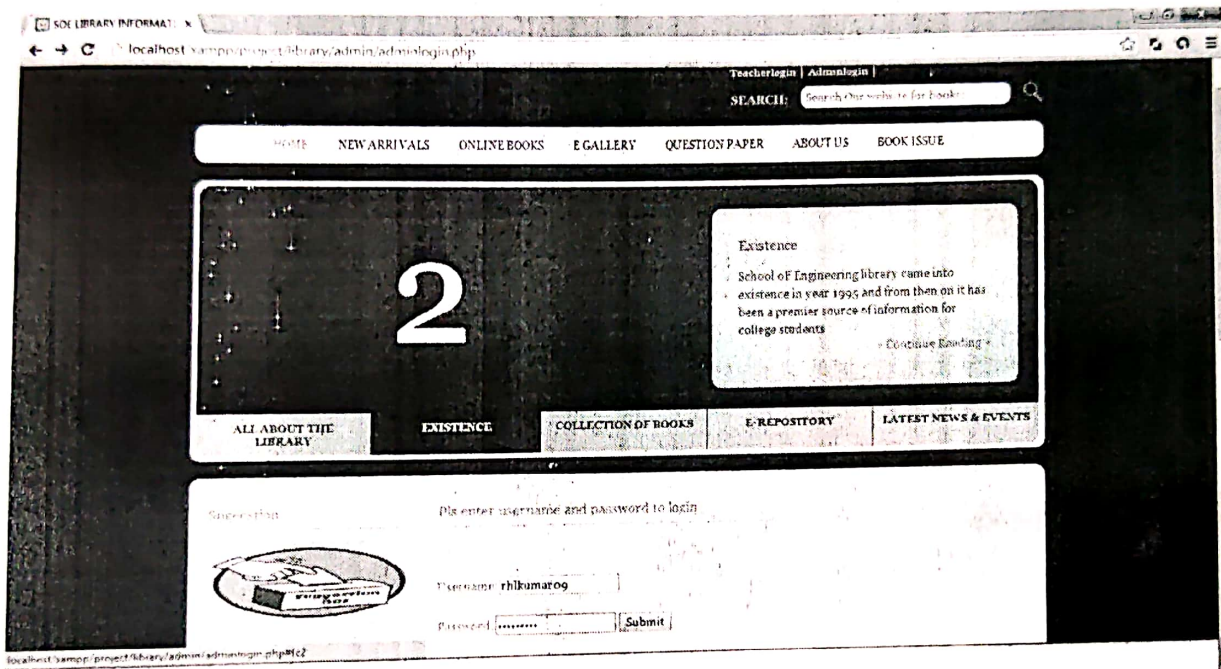
4.1.1 Admin Module



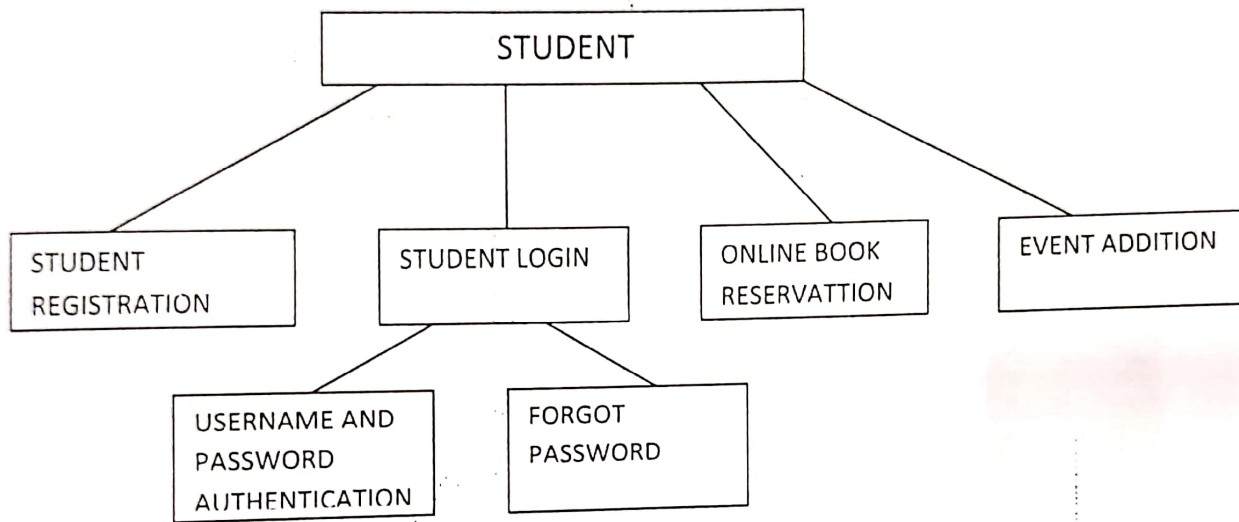
The following module contains various facilities like student validation, teacher registration, book addition, and report generation.

Library Management System

4.1.1 Screenshot for Admin login



4.1.2 Student Module



The following module contains various facilities like student registration, student login, online book reservation, and event addition. Any student if at any moment forgets his password he can retrieve it from forgot password option.


4

E-Repository
School of Engineering Library has a collection of 6000 ebs and 3500 online journals and also has a section where teachers upload their lectures notes and student can download them.
[Click Here for E-Repository](#)

- ALL ABOUT THE LIBRARY
- EXISTENCE
- COLLECTION OF BOOKS
- E-REPOSITORY
- LATEST NEWS & EVENTS

Registration

Please enter username and password to login



Library Id:

Username:

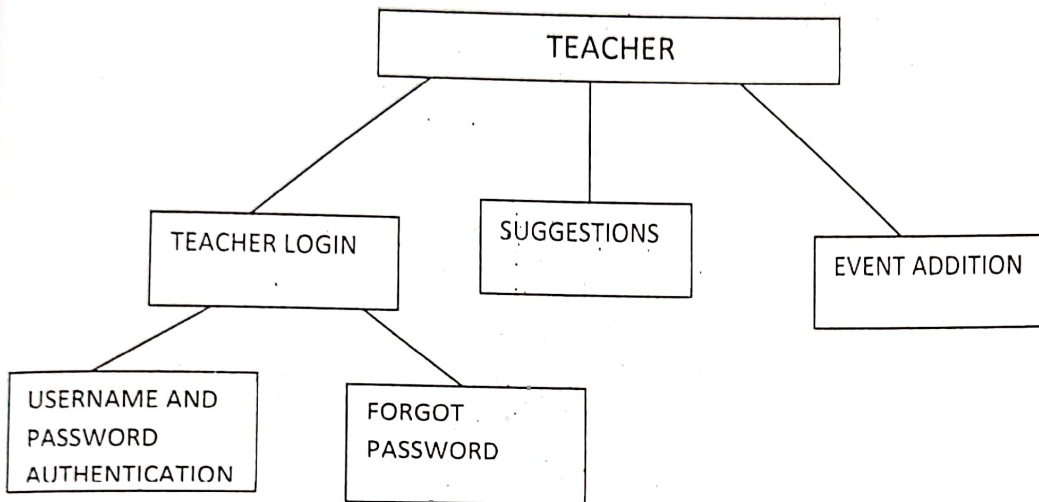
Password:

Book request

Book Request

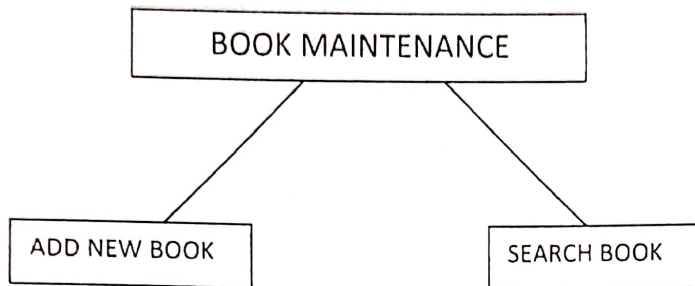
Annual creation

- 4.1.3 Teacher Module



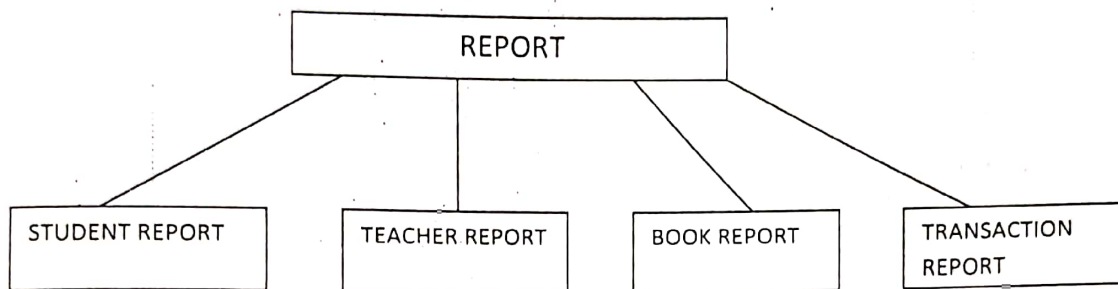
The following module contains various facilities like teacher login, suggestions, and event addition. Further any teacher if at any moment forgets his/her password he/she can retrieve it from 'forgot password' o

- 4.1.4 Book Module



The following module contains various facilities like add new book and search book. In the 'add new book' section if any new book comes in the library then the librarian can add its specifications. Similarly if the user wants to search for a specific book then he/she can use search book option to do it.

- **4.1.6 Report Module**



The following module contains various facilities like student report, teacher report, book report, and transaction report.

SYSTEM 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 successfully reviewed. In order to test a single module we need to provide a complete environment i.e. 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 that is described under module description of chapter 4

1. Test For the admin module

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- 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 other wise if any of data is wrong it will get redirected back to the login page and again ask for username and password
 - Student account addition- In this section the admin can verify student details from student academic info and then only add student details to main library database it contains add and delete buttons if user click add button data will be added to student database and if he clicks delete button the student data will be deleted
 - 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 .

2. Test for Student login module

- Test for Student login Form-This form is used for log in of Student .In this we enter the libraryid, username and password if all these are correct student login page will open other wise if any of data is wrong it will get redirected back to the login page and again ask for libraryid, username and password.
- Test for account creation- This form is used for new account creation when student 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.

3. Test for teacher login module-

- Test for teacher login form- This form is used for logg in of teacher .In this we enter the username and password if all these are correct teacher login page will open other wise if any of data is wrong it will get redirected back to the login page and again ask for username and password.

INTEGRATION TESTING

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.

CONCLUSION & FUTURE SCOPE

This website provides a computerized version of library management system which will benefit the students as well as the staff of the library.

It makes entire process online where student can search books, staff can generate reports and do book transactions. It also has a facility for student login where student can login and can see status of books issued as well request for book or give some suggestions. It has a facility of teacher's login where teachers can add lectures notes and also give necessary suggestion to library and also add info about workshops or events happening in our college or nearby college in the online notice board.

There is a future scope of this facility that many more features such as 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

Refrence

http://www.w3schools.com/html/html_intro.asp

http://www.w3schools.com/css/css_background.asp

http://www.w3schools.com/js/js_datatypes.asp

http://www.w3schools.com/sql/sql_insert.asp

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