A

PROJECT REPORT

ON

"[[Library management system]]"

Submitted in partial fulfillment for the Course of

Database Management System Laboratory

Submitted by:

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CHAPTER 1
INTRODUCTION

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:
- Book reading.
- A search column to search availability of books.
- Facility to download required book.
- Video tutorial for students.
- An Admin login page where admin can add books, videos or page sources
- Open link for Learning Websites

1.2 BACKGROUND OF THE PROJECT

E-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 add new books, videos and Page sources.
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.

CHAPTER 2

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 timesaving.

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 accdent 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 SYSTEM REQUIREMENTS
2.1.3.1 NON FUNCTIONAL REQUIREMENTS
 Product Requirements
EFFICIENCY REQUIREMENT
When a library management system will be implemented librarian and user will easily acess 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 REQUIREMNTS
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 acess 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 enterd
- System must be able to show the filtered book in table view
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.
Existing System:
 Early days Libraries are managed manually. It required lot of time to record or to retrieve the details. The employees who have to record the details must perform their job very carefully. Even a small mistake would create a lot of problems. Security of information is very less. Report generations of all the information is very tough task.
 Maintenance of Library catalogue and arrangement of the books to the catalogue is very complex task. In addition to its maintenance of member details, issue dates and return dates etc. manually is a complex task.
 All the operations must be performed in perfect manner for the maintenance of the library with out any degradation which may finally result in the failure of the entire system.
Proposed System:
To solve the inconveniences as mentioned in the existing system, an Online Library is proposed. The proposed system contains the following features:
 The students will register them through Online
 Individually each member will have his account through which he can access the information he needs.
 Book details like authors, number of copies totally maintained by library, present available number of books, reference books, non-reference books etc. all this information can be made handy.
 Regarding the members designation, number of books was issued.
 Issue dates and returns of each member is maintained separately and fine charged if there is any delay in returning the book.
 Administrator can add, update the books.
 Time consuming is low, gives accurate results, reliability can be improved with the help of security.

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,c# ,css, Java script

HTML- HTMLorHyper Text Markup Languageis the main markuplanguage 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 <img>. 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 fordescribing 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

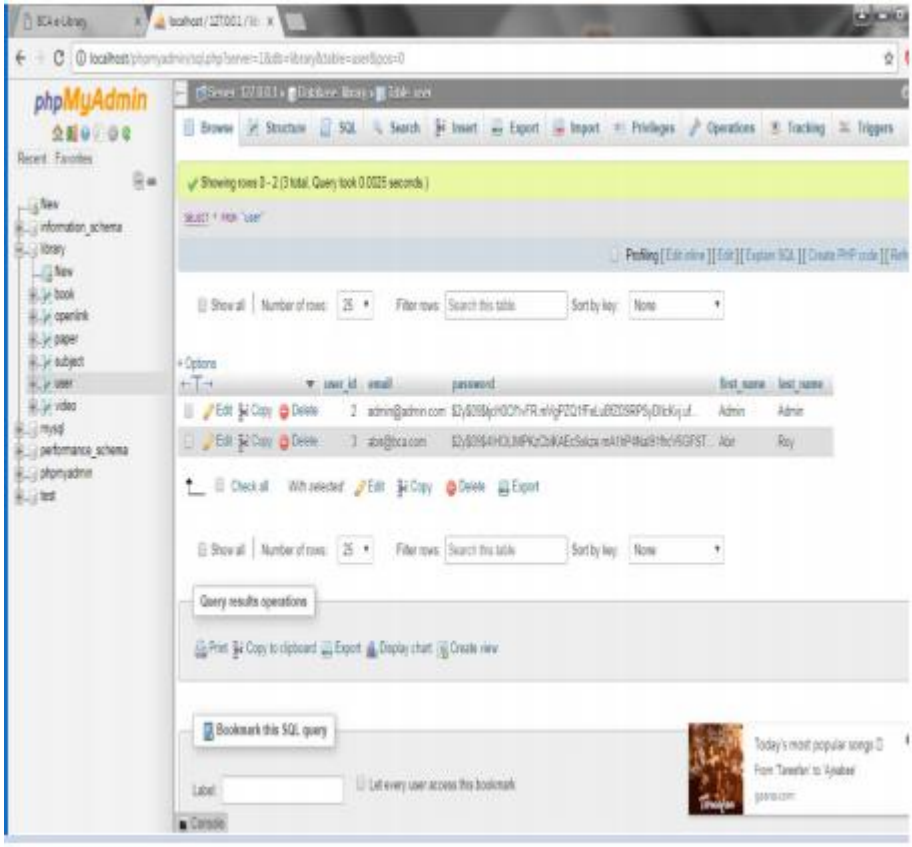
of XML document, including plain XML, SVG and XUL. CSS is a cornerstone specification of the web and almost all web pages use CSS style sheets to describe their presentation.CSS is designed primarily to enable the separation of document content from document presentation, including elements such as the 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

CHAPTER 3

SYSTEM DESIGN

Admin Table from Database



ER Diagram:


Issue problem
User-ID
Reg-no
Report
Book-no
Password
Login-ID
Authentication System
1
N
Manage
Log in
1
N
Name
Staff
Staff-ID
Fear of publisher
Publisher-ID
Publisher
Name
N
1
Keep Track of
Maintain
Publication
N
Reserve-Date
Phone
Readers
1
Reserve return date
N
Books
Price
User -ID
Category
Address
Edition
Return date
Due date
Name
Email
Auth-no
Title
F-name
L-Name
LASN

CHAPTER 5
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 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 that is described under module description of chapter 4

1. Test For the admin 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 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 academinc 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 thelibraryid, 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 moduleTest 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.

CHAPTER 6

CONCLUSION AND FUTURE SCOPE

This software 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.

CHAPTER 7
REFERENCES

https://www.w3schools.com/cs/

https://www.youtube.com/watch?v=ES5lrr-DvK8&list=PLoUymbA7OmikLx-qmy6FqaIEiHuAqEW4F