CHAPTER 1

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:

-New user registration.

-Online book issue by students and faculty.

-Online book return by students and faculty.

-students or faculty can search books by name.

-students or faculty can search books by author.

- Provision for librarian for providing new books.

-Student login page where he/she can find books issued by him/her and date of returnand fine.

-Faculty login page where he/she can find books issued by him/her and date of return and fine.

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 no 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.

1.3 OPERATION ENVIRONMENT

- PROCESSOR INTEL CORE PROCESSOR OR BETTERPERFORMANCE
- OPERATING SYSTEM -WINDOWS VISTA ,WINDOWS7, UBUNTU
- SERVER WAMP And PHPMYADMIN
- MEMORY 1GB RAM OR MORE
- HARD DISK SPACE MINIMUM 3 GB FOR DATABASE USAGE FORFUTURE
- DATABASE MY SQL

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 nonfunctional 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.

The Problem occurred before having computerized system includes:-

File lost - when computerized system is not implemented file is always lost because of human environment. Sometimes 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. Beside 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 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. It Save cost after computerized system is implemented less human force will be required to maintain the library thus reducing the overall cost.it Save time as Librarian is able to search record by using few clicks of mouse and few search keywords thus saving his valuable time. Lecture Notes -Teacher have a facility to upload lectures notes in a Pdf file having size not more than 10mb in the later version.

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 access library as searching and book transaction will be very faster.

RELIABILITY REQUIREMENT

The system should accurately perform 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 i.e. the database part is developed using MySQL.

DELIVERY REQUIREMENTS

The whole system is expected to be delivered in one semester 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 allow 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.

1.4 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 booksand 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

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 10 is used as the operating system as it is stable and support more features and is more users 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 tounderstand 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 4-generation is used as a processor because it is fast than other and Processors and 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 teacher's login or student login whereas 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 different fine for different user but in proposed system there will be different fine rate for different user.

iv. Existing system does not have any option of different day allotment of books for the different user but in proposed system there is this advantage.

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 suggestions 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 (Basic)

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 <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 webpages.

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 Rasm us 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 opens source web application software stack (and other 'AMP' stacks). LAMP is an acronym for "Linux, Apache, MySQL, and 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.