Software Requirements Specification

For **E-Library Management System**

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IT-2K19-08

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Table of Contents

Introduction

We will discuss and analyze the developing process of Library Management systems including software requirement specification (SRS) and comparison between existing and proposed systems. The functional and non-functional requirements are included in the SRS part to provide a complete description and overview of system requirements 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.

Product Description

Library Management System is a computerized system that helps users (librarians) to manage the library's daily activity in electronic format. It reduces the risk of paperwork such as file loss, file damage, and time-consuming.
It can help users to manage the transaction or record more effectively and is time-saving.

Problem Statement

The problem occurred before having a computerized system includes:

● File lost: When a computerized system is not implemented file is always lost
because of the human environment. Sometimes due to some human error, there
may be a loss of records.

● File damaged: When a computerized system is not their file is always lost due
to some accident like spilling of water by some member on file accidentally.
Besides some natural disasters like floods or fires may also damage the files.

● Difficult to search records: When there is no computerized system there is always
a difficulty in searching for records if the records are large in number.

● Space consuming: After the number of records becomes large the space for
physical storage of files and records also increases if no computerized system is implemented.

● Cost consuming: As there is no computerized system to add each recording
paper will be needed which will increase the cost for the management of the library.

System Objectives

● Improvement in control and performance: The system is developed to
cope up with the current issues and problems of the library. The system
can add users, validate users, and is also bug-free.

● Save cost: After a 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 records by using a few clicks of a
mouse and a 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 Teachers: have a facility to upload lectures notes in a pdf
file having a size not more than 10Mb.

SYSTEM REQUIREMENTS

ORGANIZATIONAL REQUIREMENT

Implementation Requirements : In implementing the whole system it uses Html in the 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 six months of time with a weekly evaluation by the project guide.

FUNCTIONAL REQUIREMENTS
1. NORMAL USER
1.1 USER LOGIN
Description of feature
● This feature is used by the user to login into the system.
● They are required to enter their user id and password before they are allowed to
enter the system. The user id and password will be verified and if an invalid id is
there the user is allowed to not enter the system.
Functional requirements
● The user id is provided when they register
● The system must only allow users with valid id and passwords to enter the
system
● The system performs an authorization process that decides what user level can
access it.
● The user must be able to log out after they finished using the system.

REGISTER NEW USER

Description of feature

- This feature can be performed by all users to register new users to create accounts.

Functional requirements

- The system must be able to verify information
- The system must be able to delete information if the information is wrong.

REGISTER NEW BOOK

Description of feature

- This feature allows adding of new books to the library

Functional requirements

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

SEARCH BOOK

Description of feature

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

Functional requirements
● The system must be able to search the database based on select search type
● The system must be able to filter book based on keywords entered
● The system must be able to show the filtered book in table view Functional
requirements
● The system should be able to add detailed information about events.
● The system should be able to display information on the notice board available
on the homepage of the site.

Other Non-functional Requirements

PRODUCT REQUIREMENTS

● EFFICIENCY REQUIREMENT: When a library management system will be
implemented librarian and the user will easily access the library as searching and
book transactions 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 students and staff of the library can perform the various
tasks easily and in an effective way

Other Requirements

SOFTWARE AND HARDWARE REQUIREMENTS

● This section describes the software and hardware requirements of the system

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 a database as it was easy to maintain and
retrieve records by simple queries which are in the 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 web pages with CSS, javascript for styling work, and PHP for
severe side scripting.

HARDWARE REQUIREMENTS

● Intel Core i5 2nd generation is used as a processor because it is fast than other
processors and provides reliability and stability 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 processing.

Existing System

● Early days Libraries are managed manually. It required a 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 are a very tough task.
● Maintenance of the Library catalog and arrangement of the books to the catalog
is a 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 a perfect manner for the maintenance of
the library without 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 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 the library,
presently available number of books, reference books, non-reference books, etc.
all this information can be made handy.
● Regarding the members' designation, the number of books was issued. Issue
dates and returns of each member are maintained separately and fine charged if
there is any delay in returning the book.
● Administrators can add, update the books.
● Time-consuming is low, gives accurate results, reliability can be improved with the help of security.