



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Daffodil
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Project Report

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Project Report

On

“Online Library Management System”

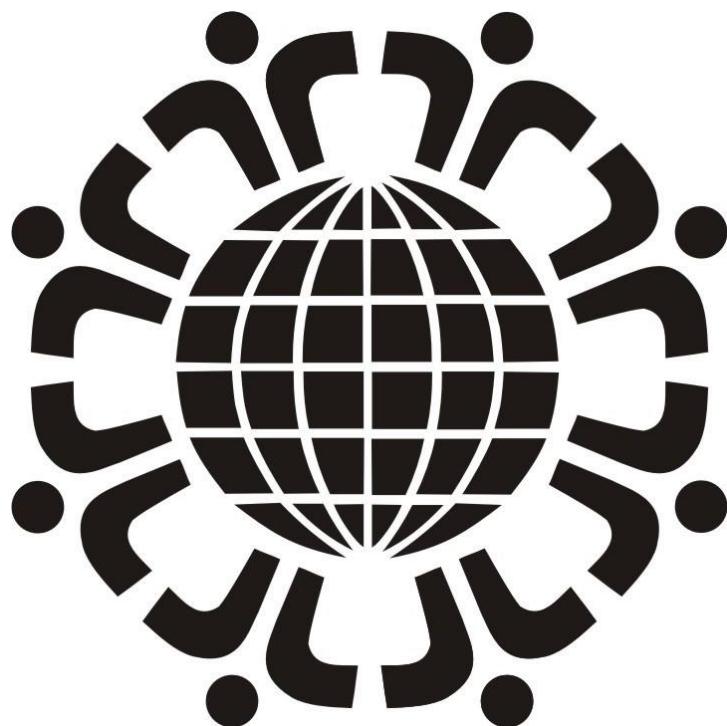




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Online Library Management System

Abstract:

Online Library Management System is a system which maintains the information about the books present in the library, their authors, the members of library to whom books are issued, library staff and all. This is very difficult to organize manually. Maintenance of all this information manually is a very complex task. Owing to the advancement of technology, organization of an Online Library becomes much simple. The Online Library Management has been designed to computerize and automate the operations performed over the information about the members, book issues and returns and all other operations. This computerization of library helps in many instances of its maintenances. It reduces the workload of management as most of the manual work done is reduced

SYNOPSIS



Introduction:-

Purpose:-

The purpose of this application are as follows :

- The software is for automation of library.
- It provides following facilities to

Operator :

- Can enter details related to a particular book.
- Can provide membership to members.

Admin :

- Can read and write information about any member.
- Can update, create, delete the record of membership as per requirement and implementation plants.

2.) Scope :

The different areas where we can use this application are :



- Any education institute can make use of it for providing information about author, content of the available books.
- It can be used in offices and modifications can be easily done according to requirements.

3.) Technology Used :

Front End : Servlets, HTML, Java script.

Back End : MS Access, Apache Tomcat server.

4.) Assumptions

- This application is used to convert the manual application to the online application.
- Customized data will be used in this application.
- User does not have right to enter information about books.

5.) Overview :

Project is related to library management which provides reading services to its members. 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.

6.) Functionality :

- Online membership.
- Keeps the track of issues and submission of books .

Feasibility Study

In feasibility study phase we had undergone through various steps which are describe as under :

1. Identify the origin of the information at different level.
2. Identify the expectation of user from computerized system.
3. Analyze the draw back of existing system (manual) system.

WORKING OF PRESENT MANUAL SYSTEM



The staffs of library are involved in the following tasks.

1. Membership process : person have to fill membership form and they are provided with member id.

DRAWBACKS OF PRESENT SYSTEM

Some of the problems being faced in manual system are as follows:

1. Fast report generation is not possible.
2. Tracing a book is difficult.
3. Information about issue/return of the books are not properly maintained.
4. No central database can be created as information is not available in database.

PROPOSED SYSTEM



There will be three major components :

1. Stock maintenance.
2. Transaction entry.
3. Reports.

Proposed system provides with following solutions :

1. It provides "better and efficient" service to members.
2. Reduce the workload of employee.
3. Faster retrieval of information about the desired book.
4. Provide facility for proper monitoring reduce paper work and provide data security.
5. All details will be available on a click.

Data Tables:

Table : Members

S.no.	Coloum Name	Data Type	Length	Description
1	Id_no	Text	50	Unique identification of the members



2	Name	Text	70	Name of members
3	Address	Text	100	Location of Members
4	Date of Issue	Date/Time		Date of Registration
5	Date of Expiry	Date/Time		Registration expiry date
6	Status	Text	50	Permanent/Temporary

Table : Add Books

s.no.	Column Name	Date-Type	Description
1	Book_name	Text	Title of the book
2	Book_code	Text	Book identification number
3	Author	Text	Author of books



4	Date of arrival	Date/time	Date on which book was received
5	Price	Text	Cost of books
6	Rack_no	Text	Almirah no
7	No_of_books	Text	Quantity of books
8	Subject_code	Text	Unique identification no of particular subject

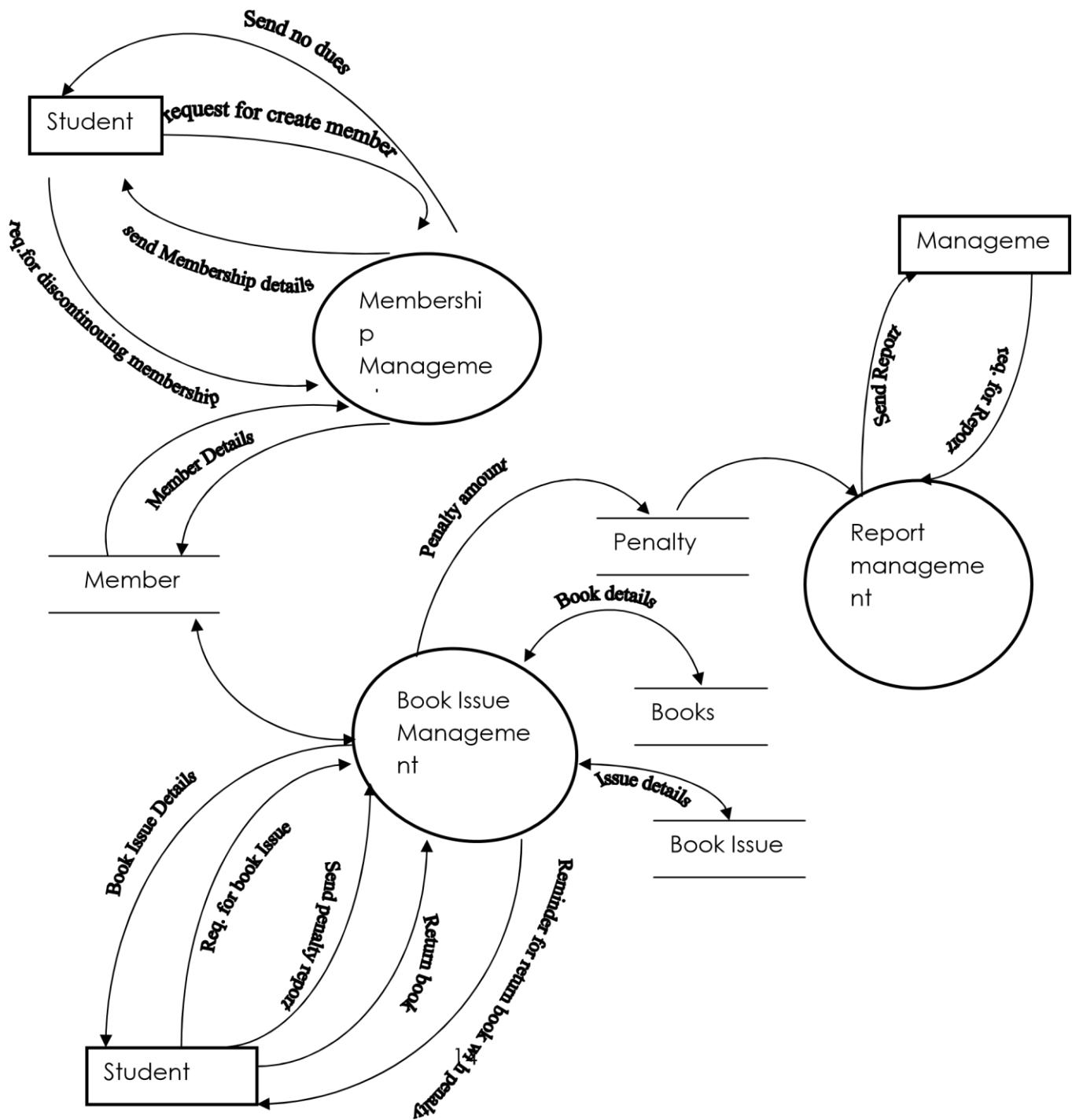
Table: issue

s.no.	Column Type	Date Type	Description
1	Id_no	Text	User identification number



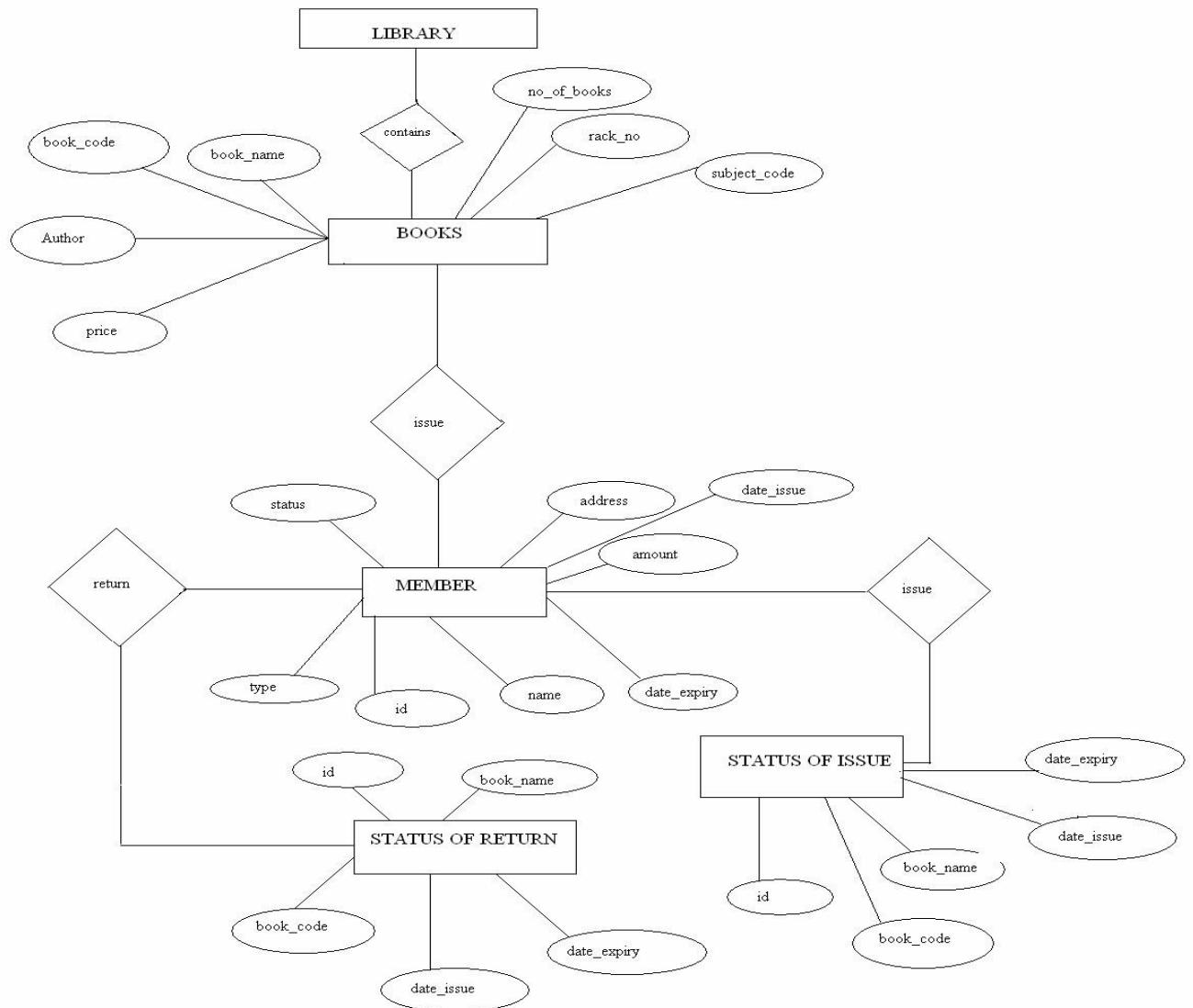
2	Book_name	Text	Title of books
3	Issue_date	Date/time	Date on which book is issued
4	Due_date	Date/time	Due date on which book is to be returned

Data Flow Diagram (DFD)



E-R DIGRAM

It is clear that the physical objects from the previous section – the member, books, library – correspond to entities in the Entity-Relationship model, and the operations to be done on those entities – holds, checkouts, and so on – correspond to relationships. However, a good design will minimize redundancy and attempt to store all the required information in as small a space as possible.



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 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



BACKGROUND OF 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.

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

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.



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.

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

SYSTEM REQUIREMENTS

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.

FUNCTIONAL REQUIREMENTS

1. NORMAL USER

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.

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



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.

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

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

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 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.

HARDWARE REQUIREMENTS

- Intel core i5 2 generation is used as a processor because it is fast than other 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.

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.

SOFTWARE TOOLS USED

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

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 clientside 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 multiparadigm 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 webserver 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.



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



VARIOUS TABLES TO MAINTAIN INFORMATION

- **Library Table from Database**



The screenshot shows the phpMyAdmin interface for the 'library' database. The left sidebar lists databases: information_schema, library, mysql, performance_schema, phpmyadmin, and test. The 'library' database is selected. The main area displays the 'Structure' tab for the 'library' database, showing six tables: book, openlink, paper, subject, user, and video. A 'Filters' bar at the top allows searching by table name. Below the table list are 'Print' and 'Data dictionary' buttons. At the bottom, there is a 'Create table' section with fields for 'Name:' and 'Number of columns: 4'.

Table	Action	Rows	Type	Collation	Size	Overhead
book		14	InnoDB	latin1_swedish_ci	32 kB	-
openlink		1	InnoDB	latin1_swedish_ci	32 kB	-
paper		6	InnoDB	latin1_swedish_ci	16 kB	-
subject		15	InnoDB	latin1_swedish_ci	16 kB	-
user		1	InnoDB	latin1_swedish_ci	32 kB	-
video		14	InnoDB	latin1_swedish_ci	48 kB	-
6 tables	Sum		InnoDB	latin1_swedish_ci	176 kB	8 kB



Admin Table from Database

The screenshot shows the phpMyAdmin interface for a MySQL database named 'library'. The left sidebar lists databases: information_schema, library, mysql, performance_schema, phpmyadmin, and test. The 'user' database is selected. The main area displays the 'user' table with the following data:

	user_id	email	password	first_name	last_name
Edit Copy Delete	2	admin@admin.com	\$2y\$09\$gH0Ch1vFR mVgPZQ1fEluBfZ0SRPSyDlkKvj uf...	Admin	Admin
Edit Copy Delete	3	abir@bca.com	\$2y\$09\$4iHOLIMPKzCbKAECsolze mA1hP4naI91fhcV6GFST...	Abir	Roy

Below the table, there are buttons for 'Check all', 'With selected', 'Edit', 'Copy', 'Delete', and 'Export'. The bottom section contains links for 'Print', 'Copy to clipboard', 'Export', 'Display chart', and 'Create view'. A 'Bookmark this SQL query' section is at the bottom left, and a 'Today's most popular songs' section from gaana.com is at the bottom right.



➤ Subjects Table from Database

The screenshot shows the phpMyAdmin interface for the 'library' database. The left sidebar lists databases: information_schema, New, library, New, book, poenlinks, paper, subject, user, video, mysql, performance_schema, phpmyadmin, and test. The 'subject' table is selected under the 'library' database. The table structure has two columns: 'subject_id' and 'subject_name'. The data contains 24 rows:

subject_id	subject_name
1	Operating System
3	C++
10	Unix & Shell Programming
12	Data Structure
13	Computer Network
14	C Programming
15	Computer Architecture
16	Java
17	Graphics
18	Database Management System
19	Mathematics for Computing
20	Windows Programming
21	Visual Basic
22	Software Project Management & Quality Assurance
24	Udemy learning



□ Videos Table from Database

The screenshot shows the phpMyAdmin interface for the 'library' database. The 'video' table is selected. The table structure includes columns: video_id, video_name, video_description, subject, topic, file_name, on_youtube, youtube_link, and video_url. The data consists of 15 rows, each representing a video entry with its details.

	video_id	video_name	video_description	subject	topic	file_name	on_youtube	youtube_link	video_url
	1	C tutorial	Student Information	14	Language C	1 -CpG3ATQs	1	120c53695d9a407faeb0411	
	2	C++	Student Information	3	Language C++	1 mUQZ1qmKLY	1	9f157a37f15530b668da980	
	3	Java	Student Information	16	Java tutorial	1 qQVqfs3p48	1	7b12b7adfa45777da89f0fa	
	4	Windows	Programming	20	Windows for Beginners	1 PT18pQn5whQ	1	0bc395f1045c341c11ce6fe	
	5	Introduction to OS	Brief Description on Operating System	1	Operating System Database Management System Tutorial	1 22N_Qo_FyM	1	7793999df4408c2a2890328	
	6	DBMS Tutorial	DBMS tutorial for Beginners	18		1 zQMj76_gCUU	1	78bd56463baa35ede997a	
	7	Data Structure & Algorithms	Complete Tutorial On Data Structure	14	Data Structure	1 YWnBbNl_G-U	1	6a354f46474d90eab8b903K	
	8	Computer Graphics Tutorial	Graphics Tutorial	17	Computer Graphics	1 NpByzsUZLPc	1	ac653dc7c6abe4bf1735a2d	
	9	Unix Shell Programming	Shell Scripting for beginners	10	Shell Programming for Beginners	1 iEheCuuf7IA	1	c194a02b443c96cd295ee83	
	10	Software Project Management	Software Project Management	22		1 SPt4PULKGX8	1	0889990681e223976c71465	
	11	Visual Basic Tutorial 2017	Visual Basic Tutorial Computing Logic	21	Visual Basic for Beginners	1 3FWWd6ODLno	1	7a67e5361797340b96c18c	
	12	Maths Using Logic	Computing Mathematics	19	Discrete Mathematics	1 404GpNRm-JE	1	81195b469e98bf71767d295	
	13	Introduction to Computer	Computer Architecture for	15	Computer Architecture	1 4Tz2MyXmzL8M	1	ed14774da902fb5d534813	
	14	Console It				1 ConsoleIt	1		

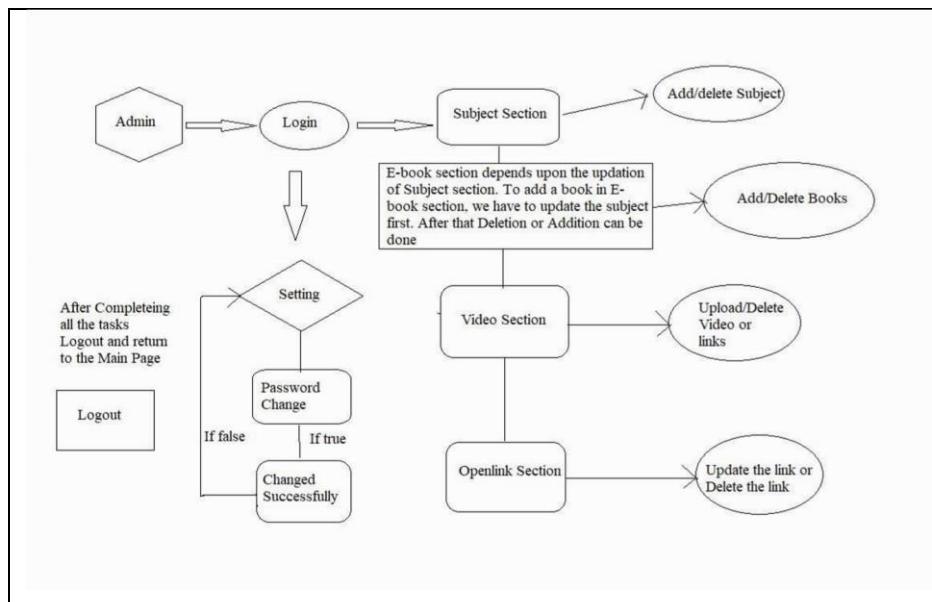


➤ Open link Table from Database

The screenshot shows the phpMyAdmin interface for a MySQL database named 'library'. The left sidebar lists databases: information_schema, library, mysql, performance_schema, phpmyadmin, and test. The 'library' database is selected, and its tables are listed: New, book, openlink, paper, subject, user, and video. The 'openlink' table is currently selected. The main panel displays the table structure with columns: link_id, link_title, link_description, subject, topic, and link. A single row is shown: link_id 2, link_title 'Udemy', link_description 'Student information', subject '24', topic 'Online Courses', and link 'https://www.udemy.com/courses/development/'. Below the table, there are 'Query results operations' buttons for Print, Copy to clipboard, Export, Display chart, and Create view. At the bottom, there is a 'Bookmark this SQL query' section with a Label input field and a checkbox for 'Let every user access this bookmark'. The URL at the bottom of the window is localhost/phpmyadmin/sql.php?server=1&db=library&table=openlink&pos=0.



DATA FLOW DIAGRAM FOR ASMIN LOGIN



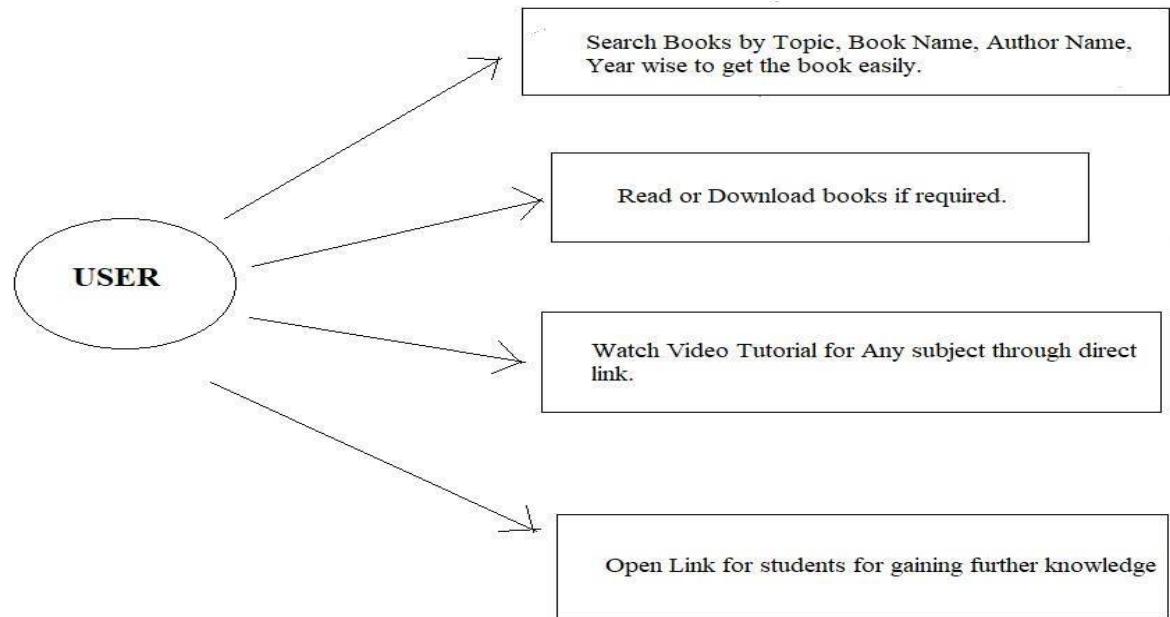
After entering to the home page of the website , Admin can choose the Admin Login option where they are asked to enter username & password , and if he/she is a valid user then a teacher login page will be displayed.





Online Library Management System

USE CAESE DIAGRAM FOR USER



After entering to the home page of the website , student can choose the **USER 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.

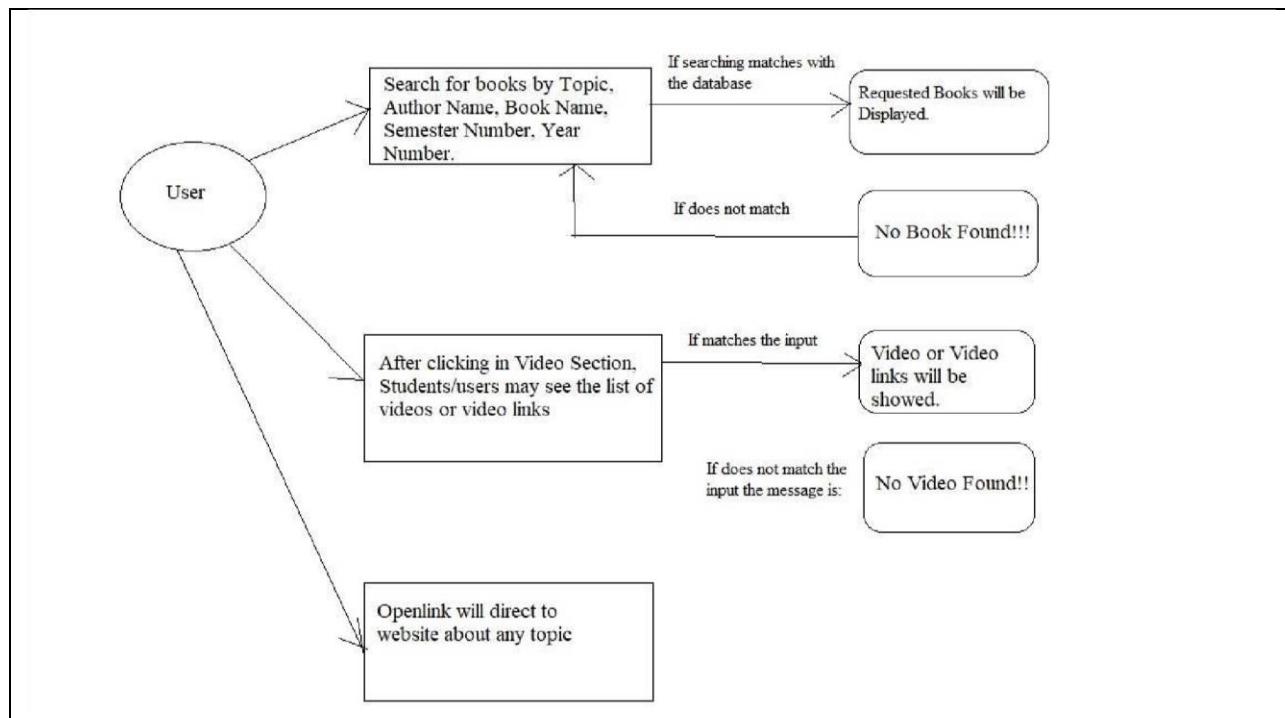


Online Library Management System

DATA FLOW DIAGRAM FOR USER



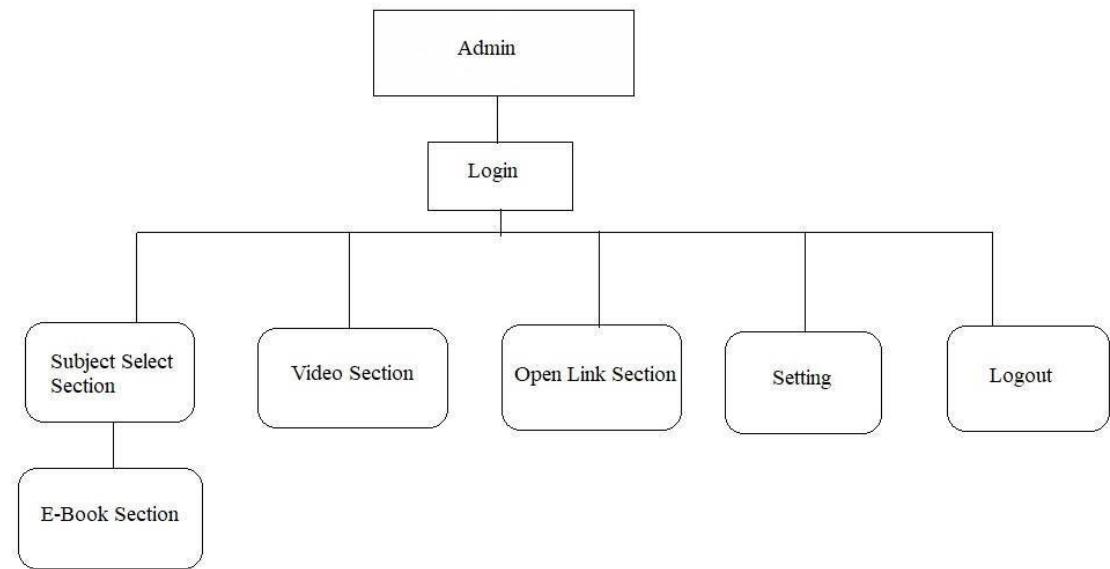
Online Library Management System





Online Library Management System

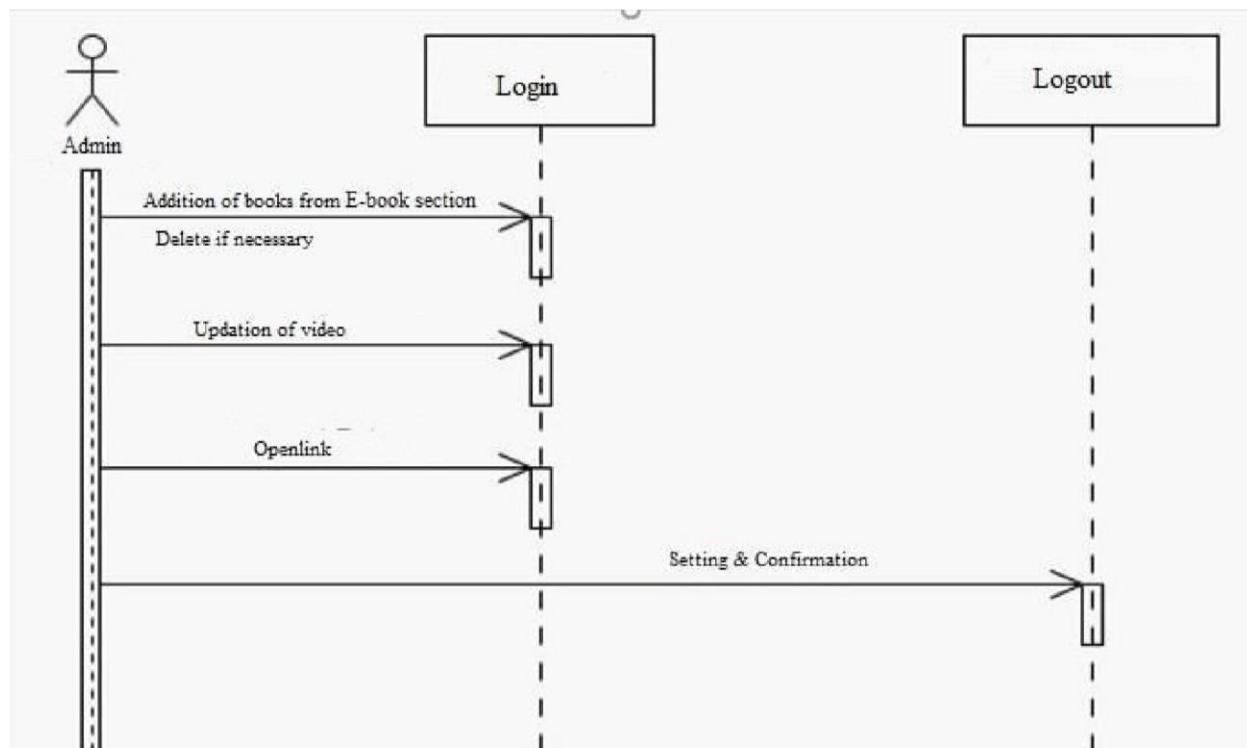
USER CASE DIAGRAM FOR ADMIN





Online Library Management System

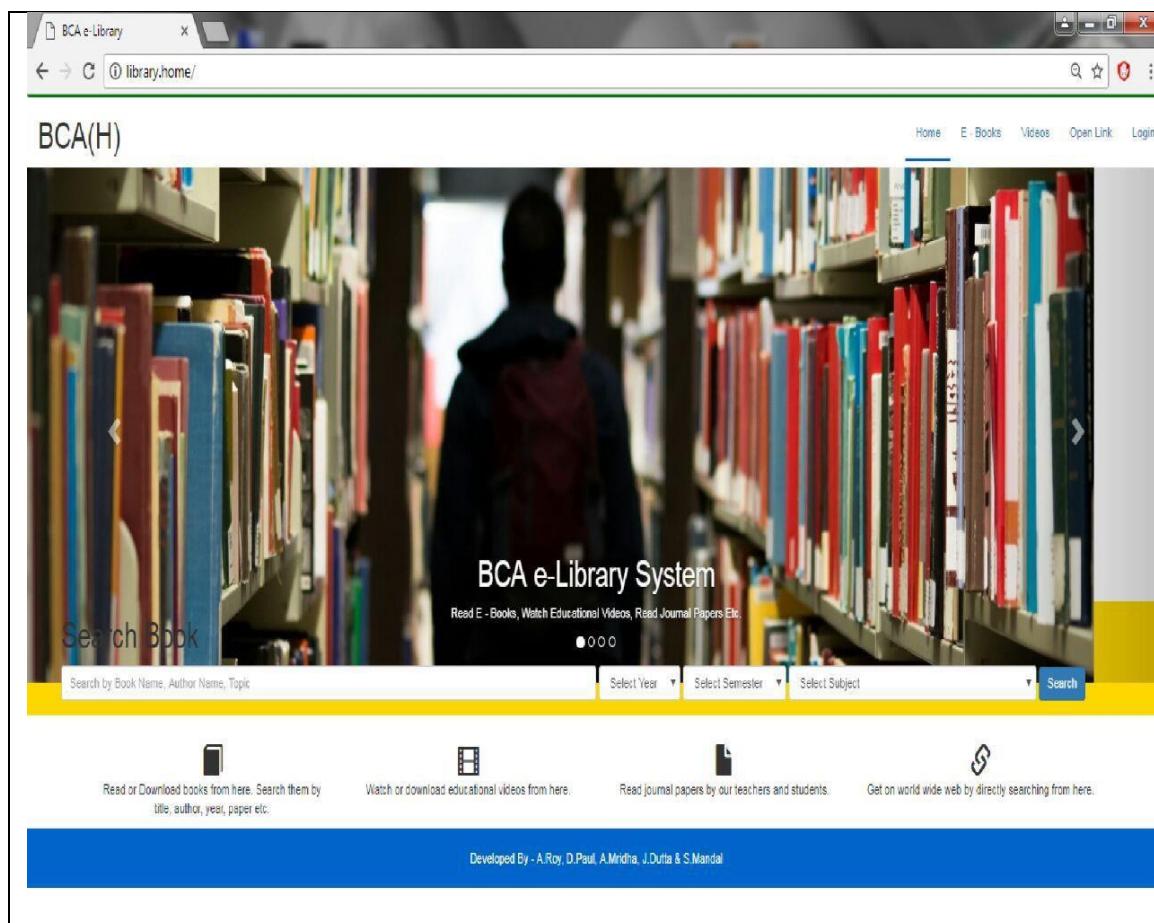
SEQUENCE DIAGRAM





Online Library Management System

Screenshot for homepage



The screenshot shows the homepage of the BCA e-Library System. The page has a header with the title "BCA(H)" and a navigation bar with links for Home, E-Books, Videos, Open Link, and Login. Below the header is a large image of a library aisle with bookshelves filled with books. In the center of the image, a person's silhouette is visible, facing away from the camera. The text "BCA e-Library System" is displayed prominently over the image. Below the image, there is a yellow search bar with the placeholder "Search Book" and a search button. To the right of the search bar are dropdown menus for "Select Year", "Select Semester", and "Select Subject". At the bottom of the page, there are four icons with corresponding text: a book icon for "Read or Download books from here. Search them by title, author, year, paper etc.", a video camera icon for "Watch or download educational videos from here.", a document icon for "Read journal papers by our teachers and students.", and a magnifying glass icon for "Get on world wide web by directly searching from here." A blue footer bar at the bottom contains the text "Developed By - A.Roy, D.Paul, A.Mindha, J.Dutta & S.Mandal".



Online Library Management System

BCA e-Library

library.home/ebook

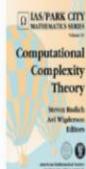
Home E - Books Videos Open Link Login

Search by Book Name, Author Name, Topic

Select Year Select Semester Select Subject Search

BCA(H)

Computational Complexity Theory
Author: Avi Wigderson, Steven Rudich
Semester: 3 / Subject: Mathematics for Computing / Year: 2
Topic: Mathematics for Computing



Read

Computer Graphics
Author: David J. Eck
Semester: 3 / Subject: Graphics / Year: 2
Topic: Introduction to Graphics



Read

Computer Networking
Author: Olivier Bonaventure
Semester: 5 / Subject: Computer Network / Year: 3
Topic: Computer Networking



Read

Computer System Architecture
Author: Gurusaran Singh
Semester: 2 / Subject: Computer Architecture / Year: 1
Topic: computer architecture



Read



Online Library Management System

Screenshot of videos from user

A screenshot of a web browser window titled "BCA e-Library". The address bar shows "library.home/videos". The page header includes "BCA(H)", "Home", "E-Books", "Videos" (which is underlined), and "Login". A search bar at the top has the placeholder "Search By Video Name or Video Description or Video Topic...". To its right is a dropdown menu labeled "Select Subject".

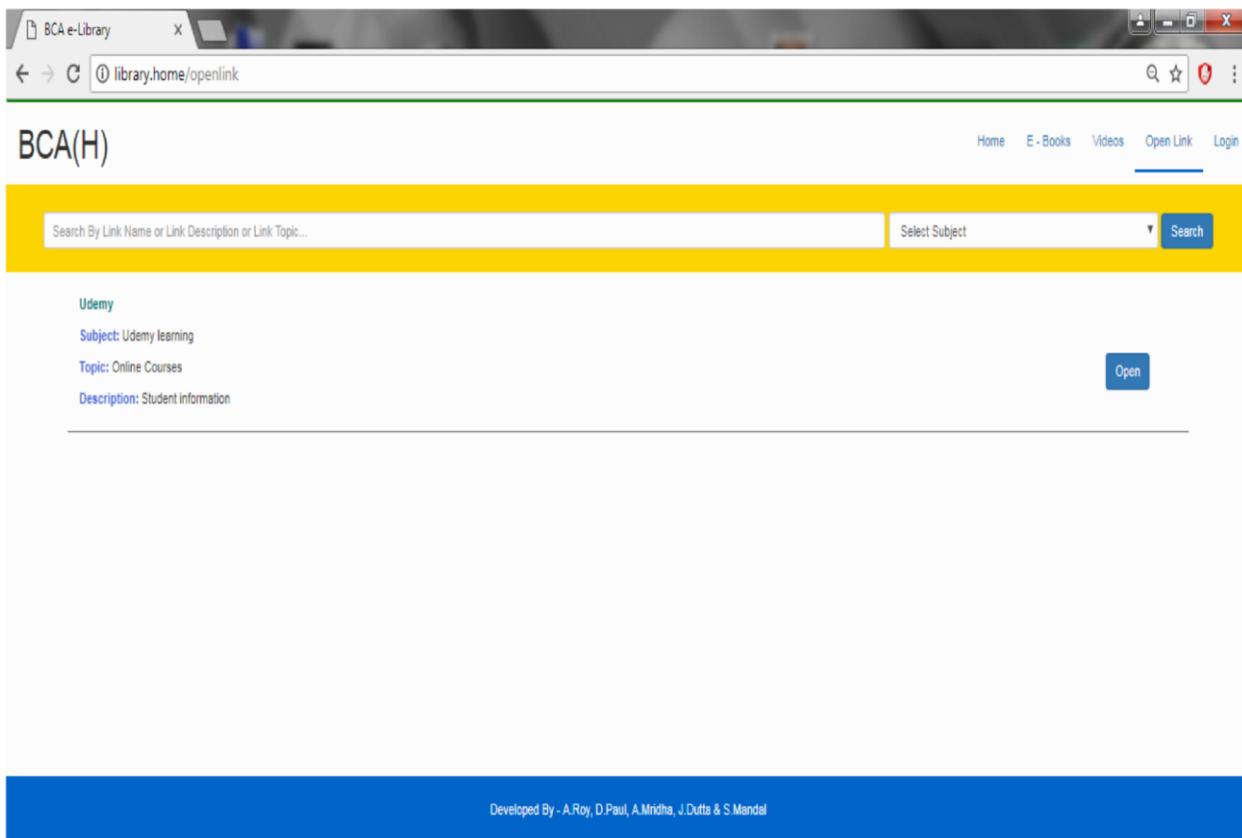
The main content area displays four video entries:

- C tutorial**
Views: 1
Subject: C Programming
Topic: Language C
Description: Student Information Play
- C++**
Views: 1
Subject: C++
Topic: Language C++
Description: Student Information Play
- Computer Graphics Tutorial**
Views: 0
Subject: Graphics
Topic: Computer Graphics
Description: Graphics Tutorial Play
- Computer Networking**
Views: 0
Subject: Computer Network
Topic: Computer Networking for Beginners
Description: Fundamental Networking Play



Online Library Management System

Screenshot of open-link from user



The screenshot shows a web browser window titled "BCA e-Library" with the URL "library.home/openlink". The page has a yellow header bar with the text "BCA(H)" on the left and navigation links "Home", "E - Books", "Videos", "Open Link", and "Login" on the right. Below the header is a search bar with the placeholder "Search By Link Name or Link Description or Link Topic...". To the right of the search bar are dropdown menus for "Select Subject" and a "Search" button. The main content area displays a single link entry for "Udemy". The entry includes the subject "Udemy learning", topic "Online Courses", and description "Student Information". A blue "Open" button is positioned to the right of the details. At the bottom of the page, a blue footer bar contains the text "Developed By - A.Roy, D.Paul, A.Mridha, J.Dutta & S.Mandal".



Online Library Management System

Screenshot of login for admin

A screenshot of a web browser showing the login interface for an Online Library Management System. The browser title bar reads "BCA e-library" and the address bar shows "library.home/auth". The page has a yellow header bar with the text "BCA(H)". Below it is a blue navigation bar with links for "Home", "E - Books", "Videos", "Open Link", and "Login". The main content area is titled "Authentication" and contains a "LOG IN" form. The form has two input fields: the first is filled with "abir@bca.com" and the second is filled with a series of dots representing a password. A green "Log In" button is at the bottom of the form. At the bottom of the page, there is a blue footer bar with the text "Developed By - A.Roy, D.Paul, A.Mridha, J.Dutta, S.Mandal & S.Giri".

BCA(H)

Home E - Books Videos Open Link Login

Authentication

LOG IN

abir@bca.com

.....

Log In

Developed By - A.Roy, D.Paul, A.Mridha, J.Dutta, S.Mandal & S.Giri



Online Library Management System

Screenshot of e-book from admin

The screenshot shows a web-based library management system. The top navigation bar includes links for Home, E - Books, Videos, Open Link, and Login. The main content area is titled "Admin Book". On the left, there's a sidebar with a green header "Ebook Section" containing links for Video Section, Openlink Section, Subject Section, Setting, and Logout. The main content area is titled "E - Book" and lists four books:

- Computational Complexity Theory**
Author: Avi Wigderson, Steven Rudich
Topic: Mathematics for Computing
Buttons: Read (blue), Delete (red)
- Computer Graphics**
Author: David J. Eck
Topic: Introduction to Graphics
Buttons: Read (blue), Delete (red)
- Computer Networking**
Author: Olivier Bonaventure
Topic: Computer Networking
Buttons: Read (blue), Delete (red)
- Computer System Architecture**
Author: Gurusaran Singh
Topic: computer architecture
Buttons: Read (blue)



Online Library Management System

Screenshot of videos from admin

A screenshot of a web browser showing the "Admin Video" section of the Online Library Management System. The browser title bar reads "BCA e-library" and the address bar shows "library.home/admin_video".

The main content area is titled "Admin Video" and displays a list of videos. On the left, there is a sidebar with navigation links: "Ebook Section", "Video Section" (which is highlighted in green), "Openlink Section", "Subject Section", "Setting", and "Logout".

The main content area has a header "Video" with a "Add New video" button. Below it, there is a table-like structure listing five video entries:

Video	
C tutorial Views: 1 Subject: C Programming Topic: Language C Description: Student Information	Play Delete
C++ Views: 1 Subject: C++ Topic: Language C++ Description: Student Information	Play Delete
Computer Graphics Tutorial Views: 1 Subject: Graphics Topic: Computer Graphics Description: Graphics Tutorial	Play Delete
Computer Networking Views: 1 Subject: Computer Network Topic: Computer Networking for Beginners	Play Delete



Online Library Management System

Screenshot of open-link from admin

The screenshot shows a web browser window for the BCA e-library. The URL in the address bar is `library.home/admin_openlink`. The page title is "Admin Openlink". On the left, a sidebar menu includes "Ebook Section", "Video Section", "Openlink Section" (which is highlighted in green), and "Subject Section", "Setting", "Logout". The main content area is titled "Openlink" and displays a single item:

Udemy
Subject: Udemy learning
Topic: Online Courses
Description: Student information

Buttons for "Add New Openlink" (blue), "Visit" (blue), and "Delete" (red) are visible. At the bottom, it says "Developed By - A.Roy, D.Paul, A.Mridha, J.Dutta, S.Mandal & S.Giri".



Online Library Management System

Screenshot of subjects from admin

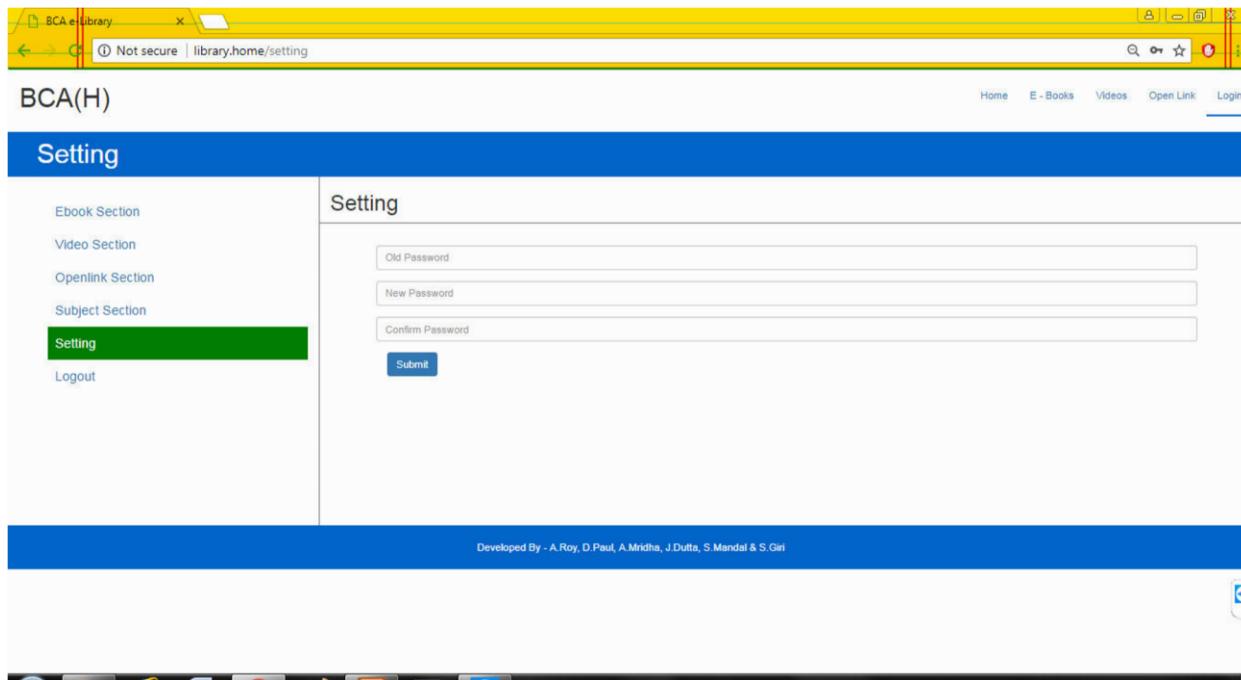
A screenshot of a web-based library management system. The browser title bar reads "BCA eLibrary" and the URL is "library.home/admin_subject". The page has a blue header bar with the text "Admin Subject". On the left, there is a sidebar menu with options: "Ebook Section", "Video Section", "Openlink Section", "Subject Section" (which is highlighted in green), "Setting", and "Logout". The main content area is titled "Openlink" and contains a form with a "Subject Name" input field and a "Add Subject" button. Below this is a table listing various subjects with edit and delete buttons. The subjects listed are: C Programming, C++, Computer Architecture, Computer Network, Data Structure, Database Management System, Graphics, Java, Mathematics for Computing, Operating System, Software Project Management & Quality Assurance, and Udemy learning.

Subject	Edit	Delete
C Programming	Edit	Delete
C++	Edit	Delete
Computer Architecture	Edit	Delete
Computer Network	Edit	Delete
Data Structure	Edit	Delete
Database Management System	Edit	Delete
Graphics	Edit	Delete
Java	Edit	Delete
Mathematics for Computing	Edit	Delete
Operating System	Edit	Delete
Software Project Management & Quality Assurance	Edit	Delete
Udemy learning	Edit	Delete



Online Library Management System

Screenshot of settings from admin



The screenshot shows a web browser window for the BCA e-Library. The title bar says "BCA e-Library" and the address bar shows "library.home/setting". The page has a yellow header bar with icons for user profile, search, and other functions. Below the header, the URL "library.home/setting" is visible. The main content area has a blue header "Setting". On the left, there is a sidebar with links: "Ebook Section", "Video Section", "Openlink Section", "Subject Section", "Setting" (which is highlighted in green), and "Logout". The main content area contains a form titled "Setting" with three input fields: "Old Password", "New Password", and "Confirm Password", followed by a "Submit" button. At the bottom of the page, there is a footer bar with the text "Developed By - A.Roy, D.Paul, A.Mridha, J.Dutta, S.Mandal & S.Giri".



Online Library Management System



Online Library Management System

MODULE DESCRIPTION

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

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 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

Test For the admin module



Online Library Management System

- 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 thelibraryid, username and password if all these are correct student login page will



Online Library Management System

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



Online Library Management System

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.



Online Library Management System

SNAPSHOTS

[MEMBERS](#)

[ADD MEMBERS](#)

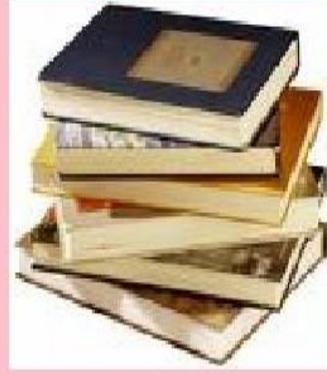
[BOOKS](#)

[ADD BOOKS](#)

[LENDING](#)

[RETURNING](#)

ONLINE LIBRARY SYSTEM

A photograph of a stack of approximately ten old, worn books. The books are of various sizes and colors, with visible dust jackets and some damage to the spines. They are stacked haphazardly, with some books leaning against others.



Online Library Management System

MEMBERSHIP

IdNo Name

Address Date Of Issue

Date Of Expiry Status of Ms

Type of Ms Amount

ADD



Online Library Management System

Stock Maintenance

Book Name Book Code

Author Date Of Arrival

Price Rack No

No Of Books Subject Code



Online Library Management System

ISSUE OF BOOKS

MemberId No Book Code

Date Of Issue Date Of Expiry



Online Library Management System

RETURN OF BOOKS

MemberId No

Book code

Date Of Issue

Date Of Expiry

RETURNING



Future Scope

FUTURE SCOPE OF APPLICATION :

This application can be easily implemented under various situations. We can add new features as and when we require. Reusability is possible as and when require in this application. There is flexibility in all the modules.

SOFTWARE SCOPE:

- **Extensibility**: This software is extendable in ways that its original developers may not expect. The following principles enhances extensibility like hide data structure, avoid traversing multiple links or methods, avoid case statements on object type and distinguish public and private operations.
- **Reusability**: Reusability is possible as and when require in this application. We can update it next version. Reusable software reduces design, coding and testing cost by amortizing effort over several designs. Reducing the amount of code also simplifies understanding, which increases the likelihood that the code is correct. We follow up both types of reusability: Sharing of newly



Online Library Management System

written code within a project and reuse of previously written code on new projects.

- **Understandability:** A method is understandable if someone other than the creator of the method can understand the code (as well as the creator after a time lapse). We use the method, which small and coherent helps to accomplish this.
- **Cost-effectiveness:** Its cost is under the budget and make within given time period. It is desirable to aim for a system with a minimum cost subject to the condition that it must satisfy the entire requirement.

Scope of this document is to put down the requirements, clearly identifying the information needed by the user, the source of the information and outputs expected from the system.



Conclusion

From a proper analysis of positive points and constraints on the component, it can be safely concluded that the product is a highly efficient GUI based component. This application is working properly and meeting to all user requirements. This component can be easily plugged in many other systems.



Bibliography

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- Introduction to Java Programming (NIIT publication)
- The Complete Reference Java(McGrawhill; Herbert Schildt- reprint 2008)
- Introduction to MS-Access(Aptech)

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2.http://www.Udemy.com/css/css_background.asp

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