

# DIGITAL LIBRARY MANAGEMENT SYSTEM

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*Abstract— Internet and Distributed Network System created scope for research in the area of information system and its related fields. Digital Library, one of the most recent development in Library and Information Science, which help its user to seek information through web browser. Digital Library is organized assortment of information, with its supported services and a place where the information is kept in digital format and can be retrieved over a networks. Since last one decade researchers are focusing on the users of Digital Library to develop more efficient and effective system to provide quality service to users. The aim of this paper is to provide literature on Digital Library with respect to its users that may be helpful for future research. The paper discusses about the users centric approach in the context of Digital Library. Researchers are working on the system upgradation by using wireless technology to connect with end users directly with libraries. Further, other areas such as user's Perception, Attitude, Adoption and Satisfaction with respect todigital library are also discussed.*

**KEYWORDS;** Digital Library, Users centric approach, Userssatisfaction, Users perception; Digital library literature

## INTRODUCTION

In an era characterized by the relentless march of technology, the landscape of information dissemination has undergone a profound transformation. The emergence of digital libraries stands as a testament to the fusion of traditional knowledge management principles with cutting-edge digital technologies, revolutionizing the way information is accessed, stored, and utilized. In this dynamic milieu, the effective management of digital libraries emerges as a critical endeavor, demanding meticulous attention to various facets ranging from content curation to user experience optimization.

The proliferation of digital content across diverse domains, including academic literature, multimedia resources, and archival materials, has underscored the pressing need for robust management strategies tailored to the unique challenges posed by the digital ecosystem. Moreover, the exponential growth of digital collections, propelled by advances in digitization techniques and content creation, has accentuated the importance of efficient organization, preservation, and retrieval mechanisms within digital library frameworks.

Against this backdrop, this research paper endeavors to delve into the multifaceted domain of digital library management, offering a comprehensive examination of its key components, challenges, and emerging trends. By synthesizing insights from scholarly literature, case studies, and real-world

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[2] Michael Hitchens, Andrew Firmage, "The Design of a Flexible Class Library Management System", in IEEE conference 1998.

## SOFTWARES NEEDED

### Software Review:

- OPERATING SYSTEM-

Windows 10 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 is 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, Bootstrap for styling work and PHP for server side scripting.

### FOR FRONT END -

- 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 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.

- BOOTSTRAP-

Bootstrap is a free and open-source tool collection for creating responsive websites and web applications. It is the most popular CSS framework for developing responsive, mobile-first websites.

Nowadays, the websites are perfect for all the browsers (IE, Firefox, and Chrome) and for all sizes of screens (Desktop, Tablets and Phones). Bootstrap is an open source front-end development framework for the creation of websites and web apps. Bootstrap provides a collection of syntax for template designs. Bootstrap is a free and open-source web development framework. It's designed to ease the web development process of responsive, mobile-first websites by providing a collection of syntax for template designs. Designed to enable responsive development of mobile-first websites, Bootstrap provides a collection of syntax for template designs.

### FOR BACKEND -

- 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 Ramus Leadoff 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 acronym. 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.

## 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). 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:

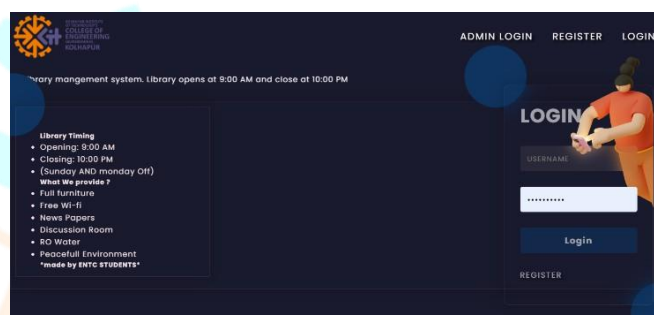
TYPO3, MODx, Joomla, WordPress, phpbb, MyBB, Drupal and other software. MySQL is also used in many high-profile, large-scale websites, including Wikipedia, Google (though not for searches), Facebook, Twitter, Flickr, and YouTube.

## RESULTS

Research into digital library management produces a wide array of results showcasing progress in technology, methodology, and user involvement. These outcomes demonstrate the varied endeavors directed at tackling the complex obstacles associated with overseeing digital collections, all while leveraging emerging technologies to improve accessibility, ease of use, and preservation efforts. Recent studies have uncovered significant insights across different aspects of digital library management, such as selecting and organizing content, improving metadata quality, optimizing user experiences, and implementing sustainable practices. Investigations into content curation and building collections underscore the significance of methodical processes in selecting, acquiring, and arranging digital materials to cater to the varying

requirements of users. Research has delved into techniques for automating the gathering of content, understanding user preferences, and assessing the caliber and pertinence of digital resources (e.g., Choi & Rasmussen, 2020; Ramesh & Ramesh, 2021). These endeavors enhance the efficacy and precision of constructing inclusive and varied digital libraries customized for distinct user demographics.

In the face of these obstacles, new directions in digital library management present fresh solutions and avenues for creative advancement. Incorporating artificial intelligence and machine learning methodologies shows potential in streamlining tasks such as metadata creation, content assessment, and tailoring personalized recommendations (Zeng & Qin, 2006). Moreover, the adoption of linked data and semantic web technologies facilitates the seamless integration and compatibility of diverse digital assets, encouraging innovative approaches to scholarly exploration and the uncovering of knowledge (Heath & Bizer, 2011).



## CONCLUSION

In conclusion, a digital library management system offers numerous advantages over traditional library systems. It provides a convenient and efficient way to store, organize, and retrieve digital resources, ensuring easy access for users. It also allows for enhanced collaboration and sharing of resources among libraries, promoting knowledge exchange and scholarly research. However, implementing a digital library management system requires careful planning and consideration of various factors, including technical infrastructure, user training, and data security.

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.

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