Chapter 1

Introduction

The purpose of a library management system is to operate a library with efficiency and at reduced costs. The system being entirely automated streamlines all the tasks involved in operations of the library. The activities of book purchasing, cataloging, indexing, circulation recording and stock checking are done by the software. Such software eliminates the need for repetitive manual work and minimizes the chances of errors. The library management system software helps in reducing operational costs. Managing a library manually is labor intensive and an immense amount of paperwork is involved. An automated system reduces the need for manpower and stationery. This leads to lower operational costs.

The system saves time for both the user and the librarian. With just a click the user can search for the books available in the library. The librarian can answer queries with ease regarding the availability of books. Adding, removing or editing the database is a simple process. Adding new members or canceling existing memberships can be done with ease. Stock checking and verification of books in the library can be done within a few hours. The automated system saves a considerable amount of time as opposed to the manual system.

The library management system software makes the library a smart one by organizing the books systematically by author, title and subject. This enables users to search for books quickly and effortlessly. Students need access to authentic information. An advanced organized library is an integral part of any educational institution. In this digital age a web based library management system would be ideal for students who can access the library's database on their smartphones.

1.1 Motivation

A University library management system boosts the effectiveness of a library by enabling all tasks to be accomplished with a single click, making the work of a librarian easier. Signing into individual accounts allows students to access the catalog, their book status, and other information.

1.2 Objectives

An integrated library management system (LMS) is ERP software that helps in simplifying the daily operations of the library.I worked for a couple years at The University of Iowa Main Library, then at European University of Bangladesh library.

I think the main objectives I saw and experienced probably were more clear to me at my second job, as I was a worker at the Information Services desk.

I had specific management expectations posted at my desk that had to do with helping to ensure checking books out was a possibility for anyone, whether we would have to find ways to send books out to students that were off campus, or non-traditional students that may be dealing with any circumstances that would make it difficult to access our database, check out books, or be connected with the librarians that were hired to help any and to help all. The ultimate goal of libraries, in my experience, is to cater to the every need of anyone that seeks information. There is not a system in the world that will work so readily and openly with you than your local library.

Sure, if you know how to research accurately, then you may not need the help. That said, you'd be amazed at the things we are taught that help us navigate a variety of literary journals, books, magazines, newspapers, and microfiche (and whether or not to use the Oxford Comma, it's happening. The purpose of a library management system is to manage & track the daily work of the library such as issuing books, return books, due calculations, etc.

Chapter 2

Literature Review

Open source software are those which permit execution, copy, read, distribution and improvement of the software without any restrictions. Library Management Software (LMS), is an enterprise resource planning system for a library, used to track items owned, orders made, bills paid, and patrons who have borrowed. Commercial library management software is very expensive. Therefore, open source library management systems can be appropriate alternatives for automatic library systems. This paper discusses features of open source library management software, criteria of selection of best open source library management software, their advantages and limitations. Open source library management software is a solution to reduce that cost. The paper describes in brief about the feature of some of the open source library management software like Koha, NewGenlib, Evergreen, SENAYAN, ABCD, and BiblioteQ.[1]

We present a novel approach to visually locate bodies of research within the sciences, both at each moment of time and dynamically. This article describes how this approach fits with other efforts to locally and globally map scientific outputs. We then show how these science overlay maps help benchmarking, explore collaborations, and track temporal changes, using examples of universities, corporations, funding agencies, and research topics. We address their conditions of application and discuss advantages, downsides, and limitations. Overlay maps especially help investigate the increasing number of scientific developments and organizations that do not fit within traditional disciplinary categories. We make these tools available online to enable researchers to explore the ongoing sociocognitive transformations of science and technology systems.[2]

To retrieve and extract the most satisfying among the library of components is important in the component library management system. The general component retrieval system seldom provides information about respect of reused actually. Data mining technology provides a feasible approach to the above problem. In the paper, how to use the application of classification method decision-tree-based to the component reuse was discussed. In accordance with the limitation of research on traditional software component library management, we proposed the idea to apply data mining technology to the management of software components,

providing auxiliary decision support to the relevant personnel of the component library. Secondly, in accordance with actual application, we built an applied model of software component retrieval management by data mining technology, and analyzed the execution step of the applied model. Lastly, the model had been verified through experiment, thus the feasibility and validity of this strategy had been verified.[3]

SUMMARY. The University of Southern California's multiple library systems function like a consortia rather than a single entity. The libraries required a system that serves multiple purposes including creating Web 90pages, sharing resources, and managing licensed resources. To meet all the needs and to deal with the issue of each library using different library systems, the libraries created a customized database. Librarians from multiple systems and a Web programmer worked as a team to develop the database. Although the smaller partner in the project, the Health Sciences Libraries played a vital role and achieved a system that met its individual needs. [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: < https://www.HaworthPress.com" xmlns:xlink="https://www.w3.org/1999/xlink">https://www.HaworthPress.com > © 2005 by The Haworth Press, Inc. All rights reserved.][4]

This study examines the factors that influence people's adoption and use of a digital library system and tests the applicability of the Technology Acceptance Model (TAM) in the context of developing countries. Using data from a survey of 16 institutions in Africa, Asia, and Central/Latin America (N = 1082), a path analysis revealed that perceived ease of use of the library system had a significant impact on perceived usefulness, which ultimately led to behavioral intention to use. In addition, the study examined the similarities and differences in the significant predictors of the digital library acceptance across countries and continents. Further, the current study suggests that external variables that affect perceived ease of use and usefulness need to be considered as important factors in the process of designing, implementing, and operating digital library systems. Such consideration will help decrease the mismatch between system design and local users' realities, and further facilitate the successful adoption of digital library systems in developing countries.[5]

Developments in network technologies, scholarly communication, and national policy are challenging academic libraries to find new ways to engage with research communities in the economic downturn. Librarians are responding with service innovations in areas such as bibliometrics and research data management.

Previous surveys have investigated research data support within North America and other research services globally with small samples. An online multiple-choice questionnaire was used to survey bibliometric and data support activities of 140 libraries in Australia, New Zealand, Ireland, and the United Kingdom, including current and planned services, target audiences, service constraints, and staff training needs. A majority of respondents offered or planned bibliometrics training, citation reports, and impact calculations but with significant differences between countries.[6]

Developments in the use of computer-based library systems have progressed by leaps and bounds in recent years. This third edition of Lucy Tedd's well-known text reflects the changes and their current and potential effect on methods of communication, information retrieval and library management. In a general overview of new methods and systems, the author describes developments in the storage and retrieval of information, including search facilities, inverted files, and the MARC format. The major impact of networks is assessed and there are numerous pointers to new sources of information, such as publicly available databases.[7]

This article aims to analyze the role of library managers as change agents when implementing Library 2.0, using transformational leadership and stakeholder management approaches. To do so, a case study in a Latin American academic library was performed. The experiences acquired for a period of six years were analyzed, during which three library managers were involved in managing change. Qualitative data from documents, interviews, and observations were collected, and qualitative analysis methods were used to obtain in-depth understanding of the change process. Results show that lack of transformational leadership and stakeholder management contribute to delayed implementation and limited adoption of innovations. Although library managers recognized the importance of different stakeholders to implement changes, they did not apply systematic and proactive strategies to define and manage them. All in all, library managers should be trained as change agents, with emphasis on transformational leadership and stakeholder management skills.[8]

The member libraries of the Committee on Institutional Cooperation (CIC) are building the CIC Electronic Journals Collection (CIC-EJC), a World-Wide Web resource that will be the largest fully managed collection of electronic journals available on the Internet. The CIC is a thirty-five-year-old collaboration among the following universities: the University of Chicago, the University of Illinois, Indiana University, the University of Iowa, the University of Michigan, Michigan State

University, the University of Minnesota, the Pennsylvania State University, Purdue University, the Ohio State University, Northwestern University, and the University of Wisconsin-Madison. The CIC libraries hold 57 million volumes, accounting for more than 17% of the collective holdings of the Association of Research Libraries. They serve over 500,000 students and 33,000 faculty. [9]

Facebook is a popular social networking site. It, like many other new technologies, has potential for teaching and learning because of its unique built-in functions that offer pedagogical, social and technological affordances. In this study, the Facebook group was used as a learning management system (LMS) in two courses for putting up announcements, sharing resources, organizing weekly tutorials and conducting online discussions at a teacher education institute in Singapore. This study explores using the Facebook group as an LMS and the students' perceptions of using it in their courses.[10]

A library must function with integrity in order to function well. This book looks at a broad range of library functions through the lens of integrity and ethics. This largely unexplored area of study is handled exceptionally well by the library and information professionals contained in these pages. This book addresses the ethical and integrity issues that may come up in the day to day workings of the library as well considerations for the ethical education of our future librarians.[11]

Management system standards, also called meta-standards, have been adopted by an increasing number of organizations across the world. Although these management system standards are based on the same type of management principles and institutional arrangements, the literature remains scattered, with diverse studies focused on specific standards and published in various journals. The main objective of this paper is to analyze the academic research on meta-standards through an integrative review intended to shed light on the main conclusions and substantial advances made in this area. This integrative review focuses more specifically on the two main meta-standards which have been adopted by more than 1.3 million organizations worldwide: ISO 14001 and ISO 9001. The paper contributes insights into the main streams of the literature and current knowledge gaps to be addressed in future research on the various issues related to meta-standards: global governance, diffusion processes, motivations, benefits of adoption and impacts on performance, internalization, integration, consultancy and auditing.[12]

This study aims to identify and assess the status and level of motivation of employees working in the Omani academic libraries at Muscat Governorate according to Maslow's hierarchy of needs.

A quantitative approach containing a questionnaire survey was used for collecting data from 111 librarians and library employees in 29 identified academic libraries. Findings pointed out that the motivation level was modest with varied attitudes for individual motivational needs. The need for security was indicated as the least motivating with an average mean score below agreement.[13]

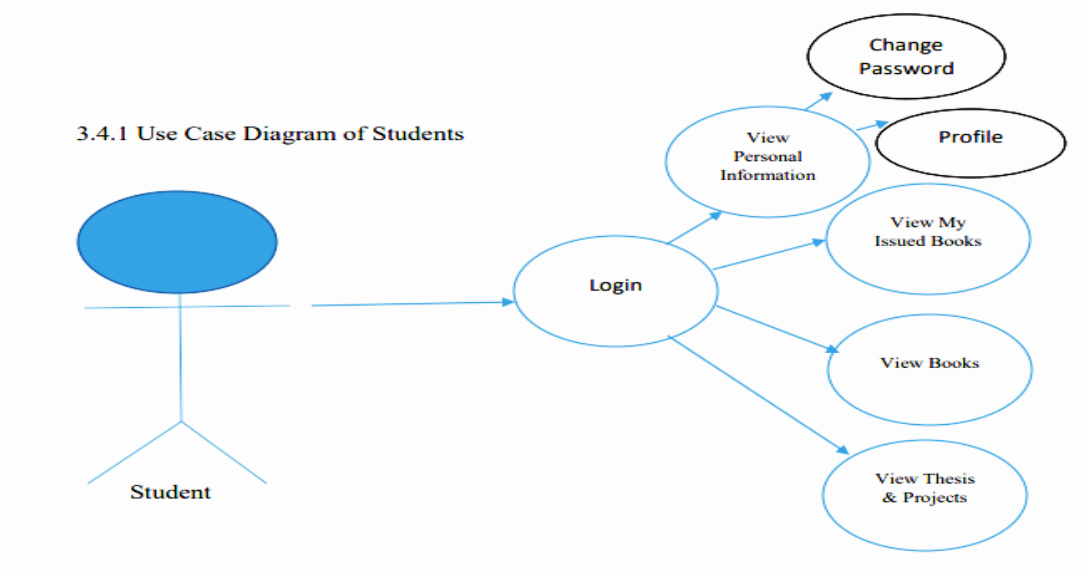
In recent years, electronic resources have become the library's important storage of a university library, and the fund purchased electronic resources also increased quickly, year after year. In order to find out the readers' present conditions, difficulties and requirement of using e-resources, The Library of Shaanxi University of Science and Technology, carried out sampling, questioning and investigating of all teachers and students at campus. The purpose of this paper is to present the findings of this investigation.[14]

The resource management system is the central component of distributed network computing systems. There have been many projects focused on network computing that have designed and implemented resource management systems with a variety of architectures and services. In this paper, an abstract model and a comprehensive taxonomy for describing resource management architectures is developed. The taxonomy is used to identify approaches followed in the implementation of existing resource management systems for very large-scale network computing systems known as Grids. [15]

Chapter 3

Implementations

The system is implemented using Prototyping Model. We create tables by code first approach and back in MySQL. The forms to take input and to perform a number of operations were designed. The basic idea here is that instead of freezing the requirements before a design or coding can proceed, a throwaway prototype is built to understand the requirements. This prototype is developed based on the currently known requirements. By using this prototype, the client can get an "actual feel" of the system, since the interactions with the prototype can enable the client to better understand the requirements of the desired system. Prototyping is an attractive idea for complicated and large systems for which there is no manual process or existing system to help determine the requirements. The prototypes are usually not complete systems and many of the details are not built in the prototype. The goal is to provide a system with overall functionality.



1.Fig: Use case diagram

Development Tools:

In this project, a number of development tools would be used to complete this project. They are listed as follows.

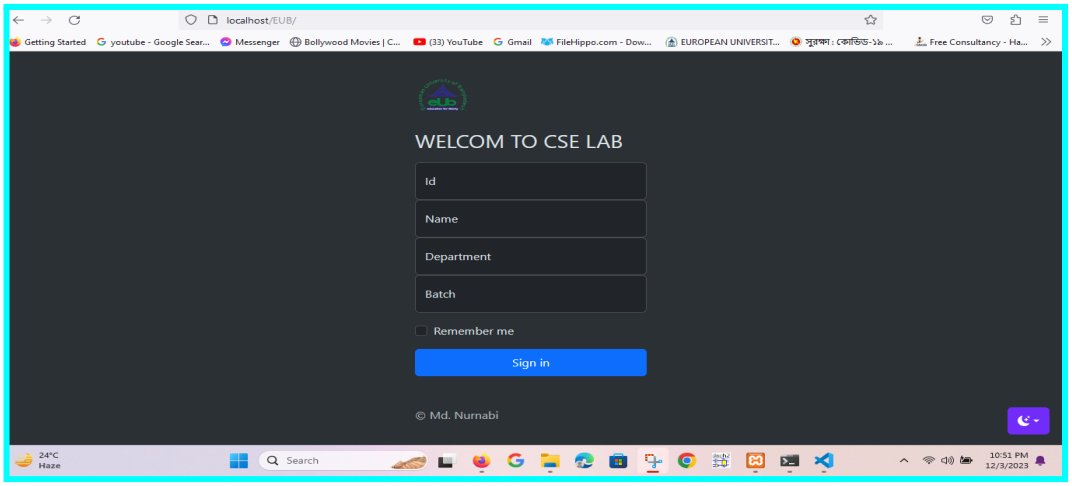
Php:

PHP (recursive acronym for PHP: Hypertext Preprocessor) is a widely-used open source general-purpose scripting language that is especially suited for web development and can be embedded into HTML. The best thing about using PHP is that it is extremely simple for a newcomer, but offers many advanced features for a professional programmer. Don't be afraid to read the long list of PHP's features. You can jump in, in a short time, and start writing simple scripts in a few hours. What distinguishes PHP from something like client-side JavaScript is that the code is executed on the server, generating HTML which is then sent to the client. The client would receive the results of running that script, but would not know what the underlying code was. You can even configure your web server to process all your HTML files with PHP, and then there's really no way that users can tell what you have up your sleeve.

HTML:

HTML (Hypertext Markup Language) is the code that is used to structure a web page and its content. HTML is used to specify whether a web content should be recognized as a paragraph, list, heading, link, image, multimedia player, form,

or one of many other available elements or even a new element that you define.



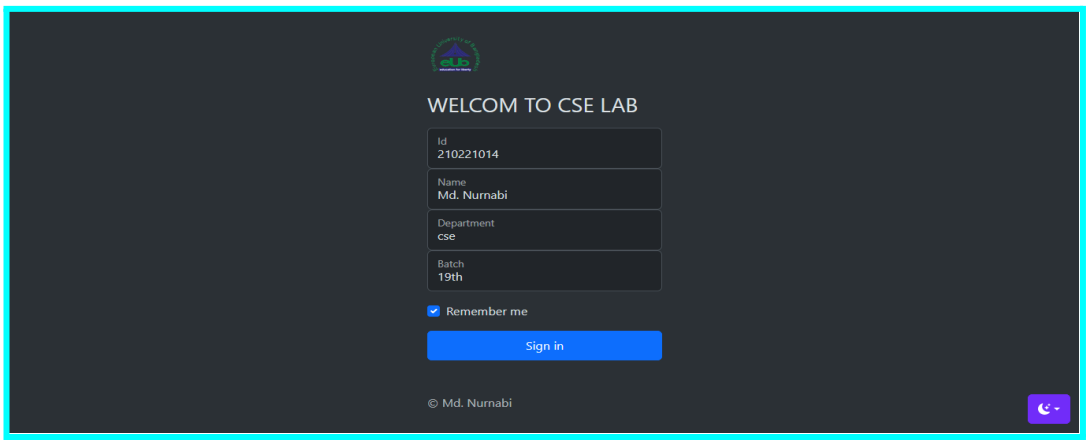
2. Fig: Login panel

CSS :

Cascading Style Sheets (CSS) is a stylesheet language used to describe the presentation of a document written in HTML. CSS describes how elements should be rendered on screen, on paper, in speech, or on other media. CSS is one of the core languages of the open web and is standardized across browsers according to the W3C (World Wide Web Consortium) specification.

JavaScript :

JavaScript is a high-level, dynamic, weakly typed, prototype-based, multi-paradigm, and interpreted programming language. JavaScript is a full-fledged dynamic programming language that, when applied to an HTML document, can provide dynamic interactivity on websites. It would be used in conjunction with Django to ensure validation rules on the front-end of the websites.

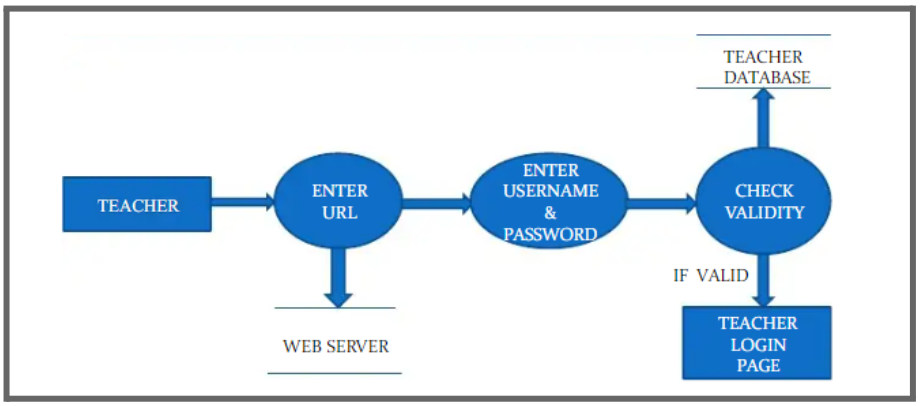


3.Fig: Login panel with information

When login part work are complet then we shift main site , but the login site backend design this –

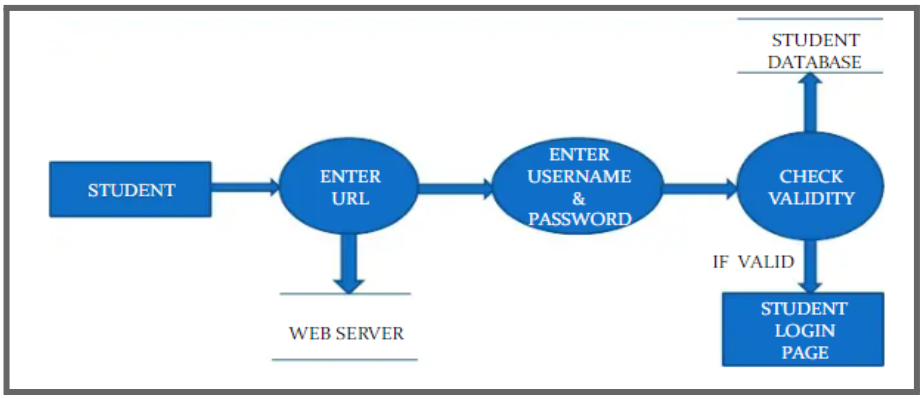
DATA FLOW DIAGRAM FOR TEACHER LOGIN :

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



DATA FLOW DIAGRAM FOR STUDENT LOGIN :

After entering to the homepage of the website , students can choose the STUDENT LOGINoption where they are asked to enter username & password , and if he/she is a valid user then student login page will be displayed.



Chapter 4

Analysis and result

With the assistance of a library management system, they can swiftly verify the records, see the history, and issue the books accordingly. They can make book issuance and return faster and smarter with the help of SMS notifications and alerts.

Access to information and resources that might otherwise be unavailable or unaffordable. It's a safe space for self-study, learning, and socializing. Library services are often free or have extremely low or minimal fees.

The primary advantage of the library is that you have complete control over the selection of books, materials, and resources that you have access to. This can enable you to curate a collection perfectly tailored to your educational and entertainment needs.

Library assessment is a process undertaken by libraries to learn about the needs of users (and non-users) and to evaluate how well they support these needs, in order to improve library facilities, services and resources.

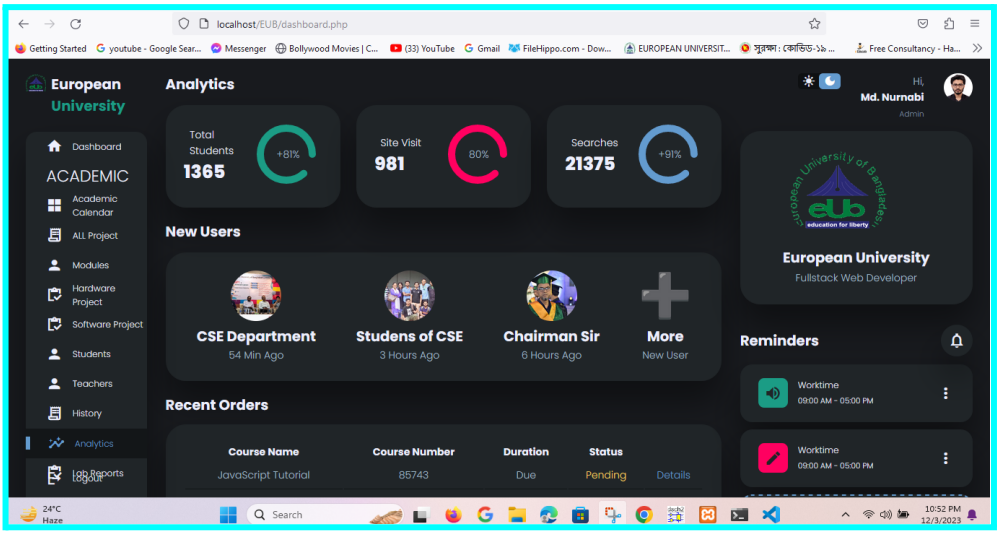


Fig: view of this project site .

Benefits of Library Management System for Education :

1. Catalog Creation and Management.
2. Easy Maintenance.
3. Automation.
4. Error-free Information Retrieval.
5. Quick and Efficient Circulation of Books and Library Materials.

Chapter 5

Conclusion

I have seen how the proprietary systems have been massively challenged by OS systems. For the latter, I have looked at Evergreen, which is particularly suited to consortia and to complex multi-site institutions, while Koha can be implemented even when the IT base and the funding levels are low.

Not to be outdone, the proprietary vendors are taking their software development to the cloud en masse, and are increasingly opening up access to their code.

Was Breeding right to forecast the demise of the LMS? Perhaps he was right in forecasting the demise of the API-based LMS as the only option; however, the trend is overwhelmingly towards the cloud.

What we are also seeing is a movement towards systems that are at once more complex and more simple. More complex in that user expectations place more and more demands on the librarian. More simple in that the systems work more seamlessly, and can be easier to implement.

Developments in LMS have made it possible for all libraries to have a good system, from the huge library consortia in the US to the small education library in Nigeria or the special library in the Australian outback.

This is software helping libraries to become truly democratic – knowledge open to all, which is what they stand for.

Future Work

The possibilities are there for systems that increas-ingly learn from user interactions and can provide users with resources, support or guidance tailored to their specific needs. The future of the library system is a constant con- versation, where the library and user can interact and learn from each other.

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