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Academic Libraries' Content Management Trends

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Abstract

The Content Management System (CMS) is a mixture of large databases and file systems used to store and retrieve vast data. The ACS preserves and maintains the PSNCET e-documents, newspapers, e-journals, e-book, and other resources to let college students and faculty members utilize the content in various ways. It is used to organize and facilitate collaborative material creation. The basic idea behind a CMS library is to separate content management from design. Page designs are saved in templates, and the contents may be stored in a database or separate files. For website administrators and authors alike, the benefits of a CMS library include. A CMS library allows students and instructors to access resources quickly and easily. A CMS library offers specific publishing processes and specific publishing rights for various individuals. All these features help users save time for training and enable more people to access the materials wherever they want.

Keywords: CMT, PSNCET, Academic Library, E-Content, E-Document

Introduction

A Content Management System (CMS) is a website content management system. The CMS usually consists of two elements: content management (CMA) and the application for content delivery (CDA). The CMA element enables the content manager or author, who cannot know Hypertext Markup Language (HTML) without the knowledge of the webmaster, to manage the creation, alteration, and removal of content from a website. This information is used and compiled by the CDA element to update the website. The characteristics of a CMS system vary, but most include web-based publication, format management, checks and indexing, and search and recovery. The Web-based publishing function enables people to utilize a template or a collection of organization-approved templates and tools for creating and modifying web content. The format management function provides HTML or Portable Document Format (PDF) to format documents, including older electronic documents and scanned paper documents on the website.

The revision control function enables the material to be changed or restored to a new version. Control of revision also monitors modifications made by people to files. Another aspect is indexing, searching, and finding. An organization's CMS system indexes all data. People may then search for data using keywords that the CMS system will find. Content Management Systems (LCMS) is a web content management system. Web content management systems. A web content management system (WCMS) is a packaged or standalone programme for creating, administering, storing, and deploying web page content. Web content comprises text and embedded graphics, images, video, audio, and code (for apps, for example), showing material or interacting with users. Web content includes A web CMS that may catalogue, index, choose or assemble content during runtime or, when asked, provide content to specific visitors, such as foreign languages. The programme for Library Content Management allows the scanning and preservation of periodicals, digital videos, and audio materials to be annotated, analyzed, evaluated, and shared by the user. Moreover, as a Web CMS, it has an online interface and can thus be accessible on any machine with an internet connection. This project is designed solely for a college or university library to save scanned copies of all the magazines, journals, video tutorials, etc. subscribed to the library. Then, those scanned copies of the magazines are accessed and read on the Internet by a dedicated bibliothèque.

Base idea

This project is focused on the administration of the content and resources of a library. This software has been created and developed to meet all the criteria and demands for preserving a library's materials. A Material Management System (CMS) is a computer software that enables content publication, editing and amending, and central interface maintenance. This Bibliothèque CMS is used to operate the main website of the Library Content Management System that contains articles, news, blogs, and alerts about and about the library. This website allows the library to avoid manual coding and to provide certain components or pages. It allows books and resources to be preserved, and ensures the safety of catastrophes, including Web-based publishing, format management, reviews, and version control, indexing, searching, and retrieval. As a result, the library content management software will enable periodicals, digital video and audio documents to be digitized and archived so that users are able to comment, analyze, evaluate and share resources. It may be accessible anywhere and anytime.

Review of Literature

Furthermost of the library works on CMS implementation contains of separate case studies specifying collection and implementation at detailed organizations. Actual few general studies of the library internet site or the public answerable for the university library websites are carried out to identify trends in CMS use. The published studies covering the use of CMS in academic libraries do not permanently react to increasing general use. In 2005, several librarians from the Georgia State University polled 63 online librarians from their pairs and, out of the seventeen answers, six (or 38 per cent) indicated that "CMS technology is being used to manage portions of their website" (Goans, D., Et al 2006). A 2006 survey of web administrators since a varied variability of organisations (Research Associates) showed a 26% percentage of CMS adoption (twenty-four of ninety-four) (Connell, R. S. 2008). A recent survey of institutions of various sizes carried out in 2008 resulted in little over half of the individuals reporting usage of CMSs, even though the authors observe that "users defined CMSs quite broadly, " (Bundza, M., Vander Meer, P. F., & Perez-Stable, M. A. 2009) including the tools Moodle and CONTENTdm. A study by Comeaux and Schmetzke in 2012 was different from the others mentioned here by reviewing the academic library sites of the 56 sites contribution ALA-accredited post-graduate degrees (usually more universities) and by using tools and page codes to attempt to find out for themselves whether the libraries used

CMSs in contrast to polling libraries in these institutions to ask for self-identification. Nineteen of 56 (34 per cent) sites were found utilising CMS. The authors give this warning: "More sites may utilize CMS than they can be easily recognised. This is especially true with 'home-grown' systems that probably do not leave an easily visible source code" (Comeaux, D., & Schmetzke, A. (2013). Given the various methods and categories of the population examined in this research, generalizations on adoption rates for CMS in academic libraries cannot be drawn over time from these findings.

As stated before, some individuals are more broadly defining CMSs than others. Springshare's LibGuides are a sample of a creation that can be used as a CMS but not essentially a CMS. Several libraries usage LibGuides to harvest directors as part of their website. However, some libraries have used the software to build their whole website, really utilising it as a CMS. A case study by two librarians at York College explains why they selected LibGuides as their CMS rather than a more restricted guidance solution (Verbit, D., & Kline, V. L. (2011). Many of the case study papers have covered many topics. One frequent concern was the lack of switch and collaboration among academic libraries and website management site organisations. Amy York, the web service librarian at the State University of Middle Tennessee, described the decision to move to a CMS in this way: "While it has been possible for us to remain outside CMS and still conform to the campus template, the IT web unit head was obvious that we are moving into the CMS" (Hebert, H., Lindsay, J. M., & York, A. 2012). Several participants in research by Bundza et al. expressed their unhappiness with web site care, including "authority and decision-making issues," as well as "surfing difficulties" (Bundza, M., Etal 2009). More good collaboration experiences were mentioned in other publications. The Morehead State University librarians Kmetz and Bailey renowned that: "It is becoming apparent that the relationship between librarians and IT staff on the campus is often far less communicative and much less positive than the [our] relationship when they attend conferences to hear the stories of other libraries. In 2003 the librarian was asked to assist in the selection of a CMS system because of the reasonably easy collaboration atmosphere" (Kmetz, T., & Bailey, R. 2006).

Kimberley Stephenson also stressed the beneficial connections that may emerge if a constructive attitude is used, "Instead of simply complaining that staff from other departments do not understand library needs, librarians should recognise with the respect that web developers want to create a campus that attracts users and think about how an attractive website that reflects the

university's brand can benefit in promoting library resources and services” (Stephenson, K. 2012). In the last piece, it acknowledged that the reiterative and cooperative development among the library and its University Families section (UF) was sometimes controversial. The web service librarian notified UF employees before making changes to their library homepage (Sivankalai, S 2014;2015;2017;2020;2021). The rationale for the move to a CMS was another frequent topic in the literature. One frequent standard was access regulator or road map administration, which allowed website managers to give editorial authority to contributors over various parts of the site or to evaluation variations earlier they were published (Black, E. L. 2011). Although many libraries see this feature as a necessity, it does have its critics. Kmetz and Bailey said that "Approval chains have been seen at Morehead State University as rather restrictive and possibly dictatorial, such that they have not been triggered" (Kmetz, T., & Bailey, R. 2006).

This research has influenced very well the questions used for this investigation and the creation of the survey tool. Increasingly, academic libraries and their parent institutions use CMSs to administer their websites. The author contacted AL (Academic Library) website administrators from 4-year universities to see whether they used CMSs, what tools they used, and how fulfilled they were. Other concerns were institutional control over library website administration.

The study found that CMS fulfilment varies by implement and that several libraries do not have encouragement on CMS collection since it is decided institutionally. These results will assist decision makers choose CMSs for academic libraries (Connell, R. S. 2013). This research looks at how 37 academic library websites (members of the Association of Southeastern Research Libraries) evolved from 2012 to 2015. Several studies have looked at library Websites for standard design components and content, but this study may be the first to look at design elements across time. This study will offer an impartial analysis of web-scale discovery tools and content management systems used in libraries. Also examined are when sites were last redesigned and if they are mobile-friendly and responsive. Web-scale discovery systems are widely used, and open-source content management systems are becoming used in responsive design. An increasing uniformity in navigation design was also noticed. The research closes with an assessment of current trends in academic library Web design (Comeaux, D. J. 2017).

CMS Architecture System Use

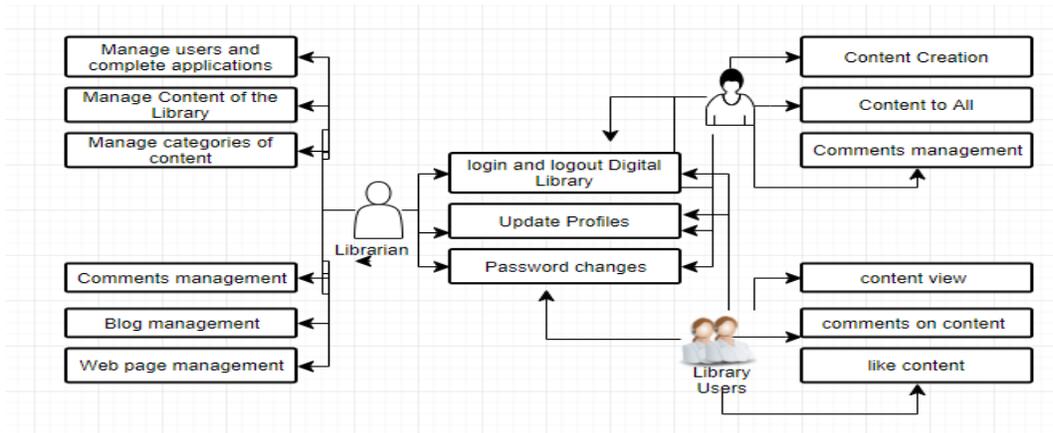


Figure 1 Use Diagram of Case

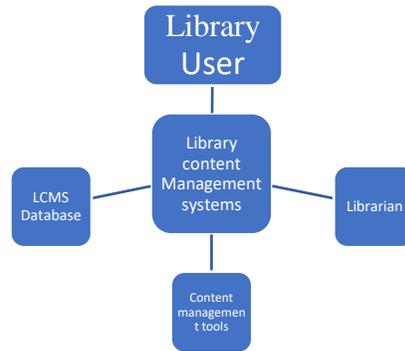


Figure 2. Flow chart of resources

Implementation

For comprehension, the user interface on the client or user side is kept as basic as possible in the early operation phases. Much of the GUI is built using PHP and MySQL. By separating this job into many stages, the implementation is readily understood. Firstly, we see how mobile clients are implemented, and then we see the webserver and database how we integrate external map services with our app.

The Client Side

An internet browser is a web client—the programming language and IDE of the client in PHP. The GUI is done using HTML and CSS. PHP was utilised for the primary language programming.

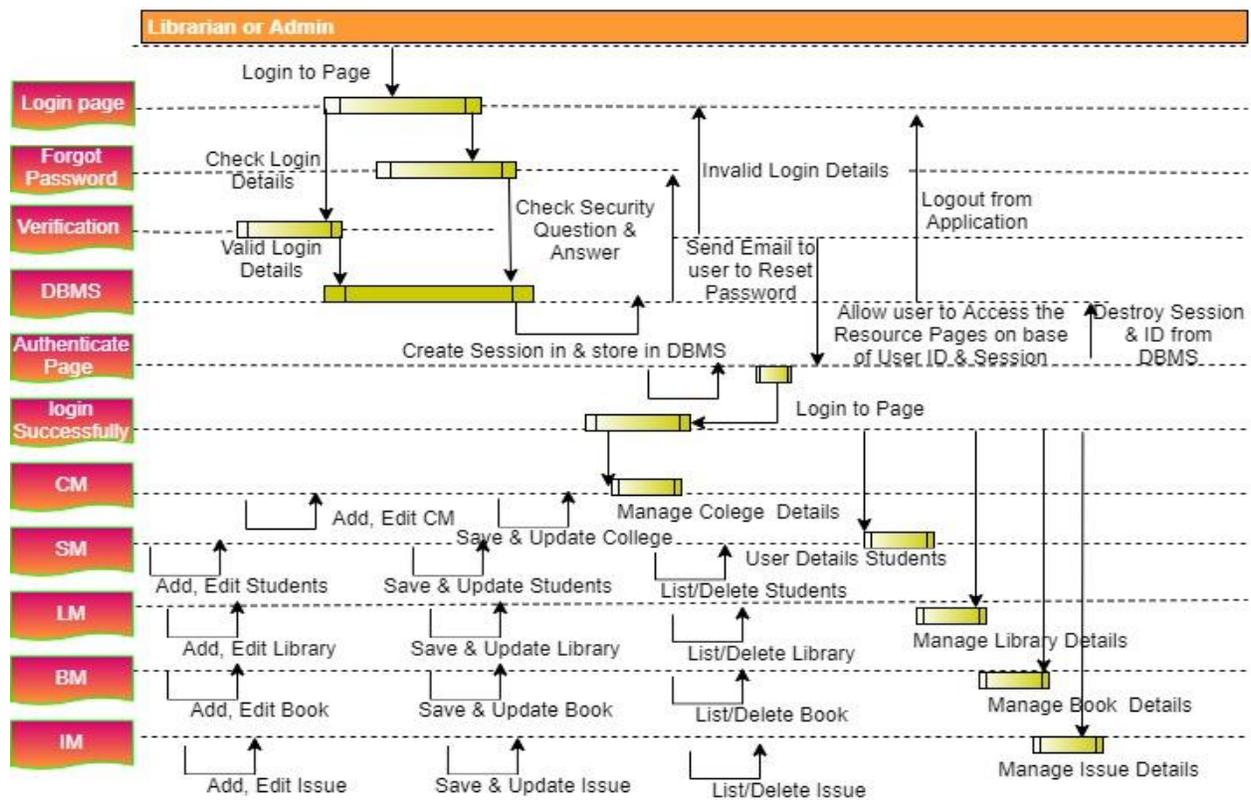


Figure 3. Diagram of sequence

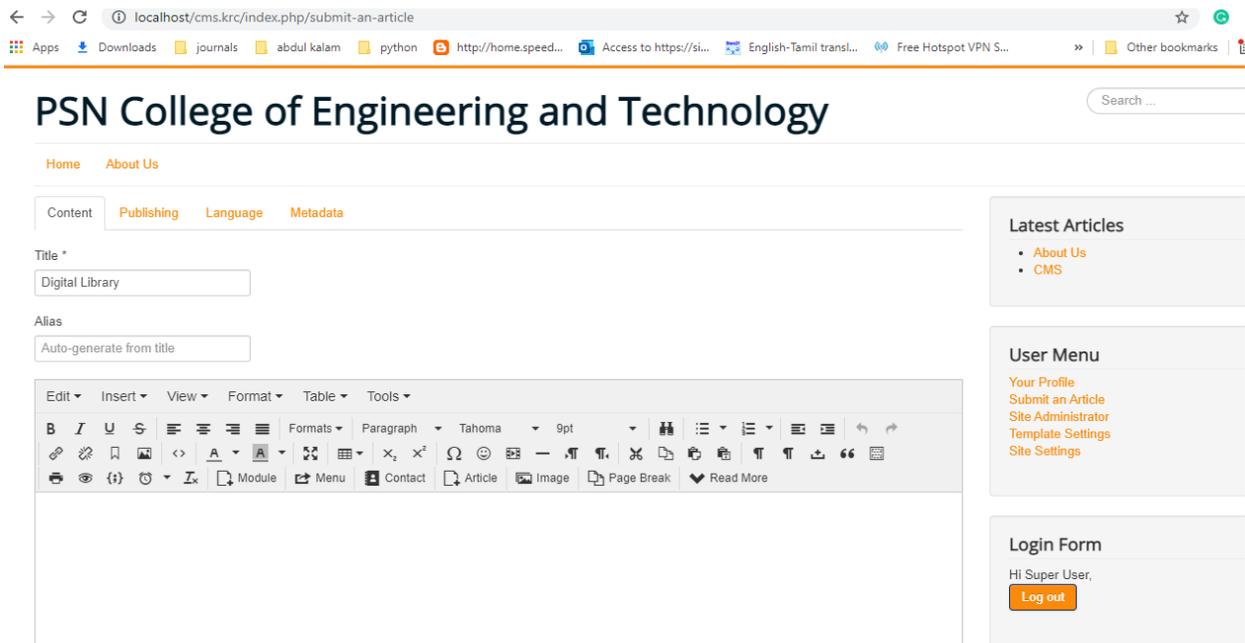


Figure 4. CMS Page in PSN College of Engineering and Technology

The server Side

For location sharing, the application requires a centralised database. MySQL was utilised for the database, and PHP was used to build server features to alter this data to meet user requirements. First, we satisfy this need by utilising local web servers on a PC (PC). For this reason, we utilised a software called MySQL in our application, and it is then up to the server to understand the request and produce a suitable answer after the client transmits the request across the network to the webserver. The receiving end of the programme is a PHP page, a regular HTML page with the addition of two elements: First, the file's name ends with the extension "PHP," so that the web server knows that it must be parsed appropriately. Second, the file contains server code instructions, such as obtaining the server's current date before delivering the page to the client side. The primary menu of the programme presented to the user displays the possible layer names for the user to choose. After selecting, the client connects to the server and sends the user's request parameters by using the GET/PUT method, which triggers the execution of PHP code on the server. The PHP code is used to access the database and create a dynamic HTML page using the data taken out of the database. The application usually includes MySQL statements in order to query the database in PHP code. The resultant data is subsequently returned to the customer. The web server communicates via the TCP/IP protocol.

Logical interface:

If the user has not registered yet, the information may be entered and logged in. If you have registered previously, you will be asked for your username and password. If either the user mistakenly types the username or the password, an error notice will appear.

Search:

Users will be able to search for an article or a specific magazine or journal by date of publication, the specific article title, or the title of the journal, etc.

Admin Control Panel:

This special panel will enable the admin to add, confirm, add, or remove the journal and magazine members.

Future of CMS

The traditional CMS is highly efficient but, with increased technology progress, a step ahead is required and advanced content management systems, i.e., the future of CMS, need to be changed. Maybe a CMS's future enables these two improvements.

Headless or Decoupled CMS

As a rookie technology, decoupled or headless CMS redefines Content Management Systems. The time saved by moving CMS to Headless CMS has proved beneficial. Moving on, the Headless CMS uses API connectivity and backend technologies to store and publish content. Nevertheless, the user does not see it. On the other hand, a Headless CMS starts content storage and distribution managed by other applications. The primary goal of a headless CMS is to separate content generation, storage, and administration from display and delivery. This includes issues like security, scalability, user experience, and frontend technology. The Headless CMS may be used for Omni-channel marketing, modifications, and security. With backend and frontend separation, content and design may be more customizable. Unlike traditional CMS, where only template designs are available.

CMS Augmented Reality

Augmented Reality is an excellent illustration of how technology is evolving. Bringing the physical and virtual worlds together has been unparalleled. The Pokemon Go and Snapchat apps are top-rated. That means AR apps will have to deal with a lot of information and media, including 3D pictures and movies. Moreover, both textual and digital material may be released passively under certain circumstances. Because every content change requires developer help, this may be very time-intensive, delaying work and negatively impacting the result. Augmented Reality (AR) Content Management Systems may be one of the most significant Augmented Reality (AR) achievements.

AR Content Management Systems extend the life of library content

AR CMS is a well-recognised source of primary or raw 3D material. In turn, this provides the basis for the AR experiments.

The sectors that can benefit from the AR Content Managements Systems are-

- Advanced management techniques
- Advertisements,
- Architecture,
- Features such as blogging, sharing, recommendations, and user-side uploading are available on the website.
- Future versions of this LCMS software may include advanced menu administration, poll management, a graphics modification tool, user management, and other features. For more information, please see the LCMS software page.
 - Management of advanced users and marketing, among other things.
 - The creation of mobile and Android applications for this LCMS.
 - Retail and shopping, as well as
 - Tours,
 - A variety of different types of content, such as videos, polls, user administration, text, blogs, podcasts, statistics, and other types of information.
 - Visualization,

We have learned a lot about Content Management Systems. Each CMS is unique, so choose the one that best fits academic library needs. So, it should include an easy-to-use dashboard with pre-configured SEO tools, security features, and sophisticated technological integration options. It allows for a unique online interactive experience for library users.

CONCLUSION

Library Content Management Software becomes a Web Content Management System that will allow users who want access to the materials kept online to have simple online access to the whole library. The Library Content Management System Software was created and developed to meet all the criteria and specifications for archiving the library's materials. This means that periodicals, digital video, and audio content may be digitalised and archived, so users can comment, analyse and exchange information. It allows books and resources to be preserved and ensures the safety of catastrophes, including Web-based publishing, format management, reviews, version control, indexing, searching, and retrieval. Students and teachers are no longer faced with a lack of resources, which means they may easily access them anytime they want. It is beneficial when resources for supervised learning are utilised elsewhere since the user may copy/print the

required articles and resources. Users may thus store articles for learning and research purposes in their area of interest. The Library Content Management System will, therefore, greatly assist students and teachers. With the effective deployment of the Library Content Management System, students who want to read periodicals or journals but cannot read them because they are not available would benefit greatly. This eliminates the central issue of unavailability of resources because all materials are accessible on the Internet, and users may read the magazines wherever and whenever they are supplied with a valid account.

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