Creating Library Website using Joomla: A Case Study on IIM Ahmedabad Library Website

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Abstract

Numbers of organizations, including the libraries, are turned to use Open Source CMS (content management system) to managing their web contains. Authors did study on Vikram Sarabhai Library, Indian Institute of Management Ahmedabad, this is a prime management Library and had successfully implemented Joomla CMS since 2008.The main objective of this study is to share authors experience with open source CMS Joomla used at Vikram Sarabhai Library, so that remaining libraries and information centers can more easily assess its appropriateness to their own environment.

Keywords: Library Website, Content Management Software, Joomla, Open Source Software, IIM Ahmedabad

1. Introduction

A Content Management System (CMS) is a software bundle that lets you develop a website that can be rapidly and easily updated by a non-technical person, who has little beat knowledge about HTML. These open source software are created and subsidized by a group & community of developers. It can be downloaded without any cost. Both their feature sets and their cost tags make open source software peculiarly fetching to nonprofits.

Previously Librarian or Library Professional has to depend upon IT professionals to make a Library Website or to make and manage table of the content of Library on the web. With the design of Open Source Content Management System, Library professional does not depend on IT professionals. So, this is the huge benefits of Open Source CMS for Library professionals and that's why they independently create, command, maintain and upload their own content easily and effectively with free of cost. There are numbers of Open Source CMS available in that Joomla, Word Press, Drupal, ModX and Plone are very famous now a day.

The below graphical representation on CMS usage statistics did by builtwith technology group Australia, highest usage of open source CMS is WordPress and followed by Joomla than Drupal, and others.

**Graph 1: (http://trends.builtwith.com/cms)**
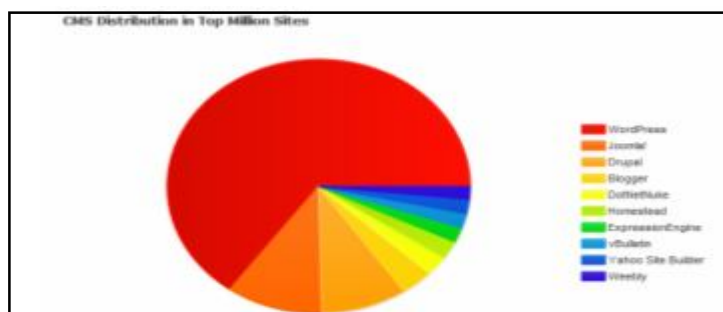
2. Background

In 2005, the first version 1.0 was launched by fork of Mambo, than after it has successful journey. Joomla CMS is now used by many libraries around the world because of its ease to use and does not require any programming aptitudes. As per Ellen Bahr and Matt Speed (2010), Many organizations, including libraries, are turning to content management systems to simplify the management of their websites, in their study they explain their practical implementation of Joomla at their University's Herrick Memorial Library.

Study by Alina-Michaela ION (2012) on CMS used in education analysis, he explained that, three of the most popular content management systems: Joomla and Drupal, distributed under GNU-GPL license, and Microsoft Sharepoint, distributed commercially.

Till March 2012, Joomla has been downloaded over 30 million times. Over 10,000 free and commercial extensions are available from the official Joomla. It is estimated to be the second most used CMS on the Internet after Word Press.

3. Objective

This case study is on Vikram Sarabhai Library (http://www.iimahd.ernet.in/library/) Indian Institute of Management – Ahmedabad, library is one of the largest management library among Indian Business Schools. The library has over the years built a robust collection of over1,77,306 books, 42,004 bound volumes, current subscription to journals (print - 226 & online - 945), 30 newspapers, 2257 working papers, and many other resources like 265 thesis, 1745 student's project reports, 2085 CDs and 132 videos. , these entire resources are managed by Joomla CMS at V S Library.

(Figure-1) http://www.iimahd.ernet.in/library/
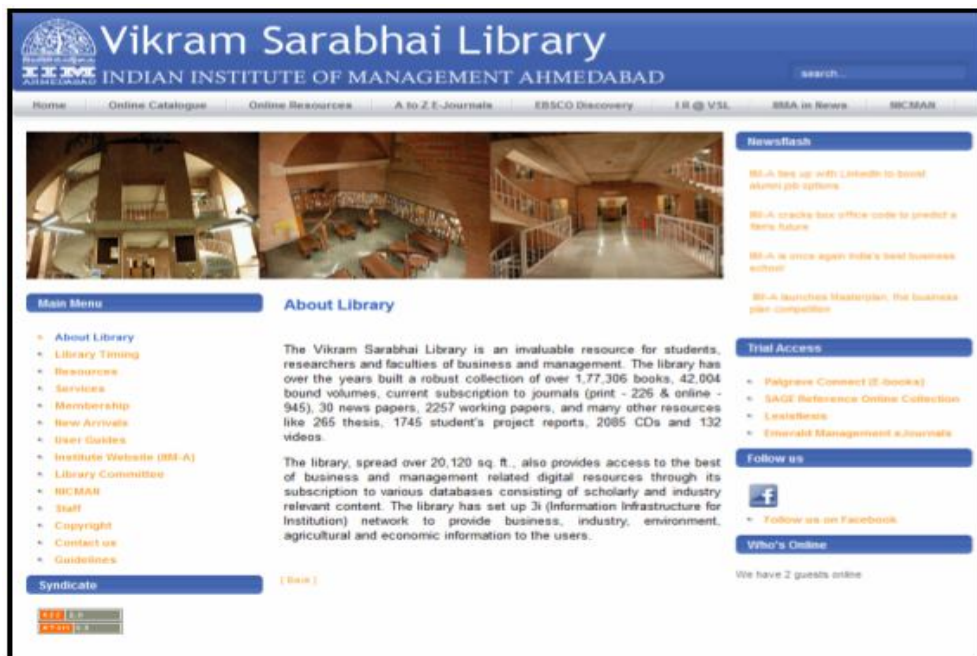
4. What is Content?

In the context of digital environment, it includes:Text, Links, Graphics, Pictures, Sounds, Videos, and Data etc.

Most of the organizations may deal with a wide number of information and formation of textual &table. This information can be categorized as:Simple pages, Complex pages (graphical layout and presentation), Dynamic pages (information sourced from databases), Brief information about organization, Online manuals, User guide, General documents and Internal linking between two or more content pages.

5. Types of CMS

There is very large number of Content Management System available. Some are free, open source and others are propriety or commercial.

1. **Portal** – Portal is what many person fill consider patch conversation roughly CMS. Portals initiate all the proportion of a website using access pages and menus. Yahoo is best example of Web portal. Joomla and Drupal are examples of such CMS.

2. **Blog** – Blog is also type of CMS in which articles/posts are organized in chronologically orders. Blogs are using for News or Bulletin Boards. WordPress is the best example of Blog.

3. **Wiki**– The another type of CMS called Wiki, that allows users with appropriate access rights to easily create and modify content. Wikipedia is an example of Wiki.

4. **Forum** - Forum (Web forum or Internet forum) is a type of CMS used for discussions among groups and users. myBB and phpBB is the best and popular forum.

5. **Groupware** - Groupware or Collaboration is an application that allows people to work collaboratively. Calendar, office documents etc. are the popular example of groupware application.

6. Why Joomla?

Presently many content management softwares are available in the web market and select one CMS is very difficult task for librarian and others. All CMS are using different programming and technological platform like PERL, Java, PHP, ASP and Python. Databases supporting are MYSQL, PostgreSQL and Oracle with Windows or Linux operating system, most of the CMS are using PHP-MYSQL-Windows/Linux platform.

Joomla has very user-friendly platform for users who has basic knowledge of computers. It has very great Design and Layout configured with extensible Hypertext markup language (XHTML) and cascading style sheet (CSS). Joomla can upload many free templates, which are able to edited and configured to user's own look and feel. Due to all above features, Joomla has won several awards include Packt Publishing Open Source CMS Award.

Joomla also has many free modules, add-on, components which are easy to install and it support to Windows and Linux operating systems.

6.1 Varied features of Joomla Content Management System

6.1.1 Summary

♦ Dynamic admin panel, Database resolute site engines

♦ Fully editable contents and othersections

♦ Permitted contributor can be added their own content

♦ Fully customizable menus

♦ Dynamic Forum/Poll

♦ Support majority all operating system

6.1.2 Wide Administration Part

♦ News, Articles and other objects like FAQs should be change automatically.

♦ Dynamic random Newsflash

♦ Remote administrator panel

♦ Add many sections, divisions and pages as per your requirement

♦ Supporting image library i.e. JPEGs, GIFs, PNGs,PNGs

♦ Supporting doc format i.e. DOC, DOCX, XLS, XLSX, PDF etc.

♦ Automatic Path-Finder.

♦ News Feeds from around the world

♦ Every article or content page - email option, Get PDF option and Print option

♦ Text editor – like word processor

♦ Dynamic Forum, Polls, Surveys etc.

♦ Download custom page Modules

♦ Template Manager - Download and install templates in few seconds

♦ Layout preview option - Before going live how its looks

6.1.3 Other Dynamic cum Core Features:

♦ GUI based administrator panel.

♦ No need to know HTML, XML codes to manage back-end.

♦ No need to know programming languages needed.

♦ Built-in site search engine, this can be customizing with Google.

♦ Create, publish and edit articles and content

♦ Easy menu creation

♦ Content hierarchy structure fully editable and manageable.

♦ User friendly media (images, documents) upload and management.

♦ Easy promotion management tools.

♦ Syndicate site contents in a variety of RSS/Atom formats.

6.1.4 Easy Templating

♦ No needed to know particular programming language to build or customize templates.

♦ Flexible Templating allows for creation of variety of looks.

♦ Edit CSS and templates through administrator panel

♦ Large number of free cost templates has beenavailable from the community.

6.1.5 User Management:

♦ Supports Membership option

♦ Enables and block the users

♦ Features of bulk mail

6.1.6 Help & Documentation

♦ An online Help file has been available on Joomal Documentation site.

♦ Online forums & support from the Joomla Community.

6.1.7 Technical & Troubleshoot Aspects:

♦ Written in PHP.

♦ Tested and benchmarked.

♦ Simple requirements which allow installation on most hosting packages, including shared and cloud hosting.

♦ Simple and fast Installation process

♦ Flexible metadata

♦ Search Engine Friendly.

♦ RSS-enabled.

♦ More then 64+ languages supported including Gujarati & Hindi

6.1.8 Security

In-built security features is available in Joomla, so that the person is easily managing the server side. For example, after installation in server or localhostJoomla will let you know if the configuration files are incorrect or pose security risks.

Post or after installation of Joomla, it mentioned that your website is staying up-to-date with the most recent stable release of Joomla and any additional extensions you've installed. Important security notifications are available on Joomla community website.

6.1.9 Joomla is used all over the world for making a websites, for example

1. Government applications
2. Universities and Educational Institutes
3. Online magazines, newspapers, and publications
4. School & College Web sites
5. Corporate Web sites or portals
6. E-commerce and online reservations
7. Small business Web sites
8. NGO Web sites
9. Community-based portals
10. Personal homepages

6.1.10 Here are just a few examples of web sites that use Joomla

♦ MTV (Social networking) - http://www.quizilla.com

♦ IHOP (Restaurant chain) - http://www.ihop.com

♦ HarvardUniversity (Educational) - http://gsas.harvard.edu

♦ The Green Maven (Eco-resources) - http://www.greenmaven.com

♦ Outdoor Photographer (Magazine) - http://www.outdoorphotographer.com

♦ PlayShakespeare.com (Cultural) - http://www.playshakespeare.com

♦ Senso Interiors (Furniture design) - http://www.sensointeriors.co.za

6.1.11 Who are using Joomla CMS?

Government & Non Profit Organizations

♦ United Nations Regional Information Centre http://www.unric.org/en/

♦ SouthKalimantanProvince - Official Website http://kalselprov.go.id

♦ Pune Municipal Corporation http://pune.aarogya.com

♦ Baltimore Police http://baltimorepolice.org

♦ University Grants Commission - Sri Lankahttp://ugc.ac.lk

Educational Institutes

♦ University of Oxford Lincoln College http://www.lincoln.ox.ac.uk

♦ SpearsSchool of Business http://spears.okstate.edu

♦ University of North Carolina Johnston Center http://johnstoncenter.unc.edu

♦ HarvardGraduateSchool of Arts & Sciences http://gsas.harvard.edu

♦ Vikram Sarabhai Library, IIM-Ahmedabad http://iimahd.ernet.in/library

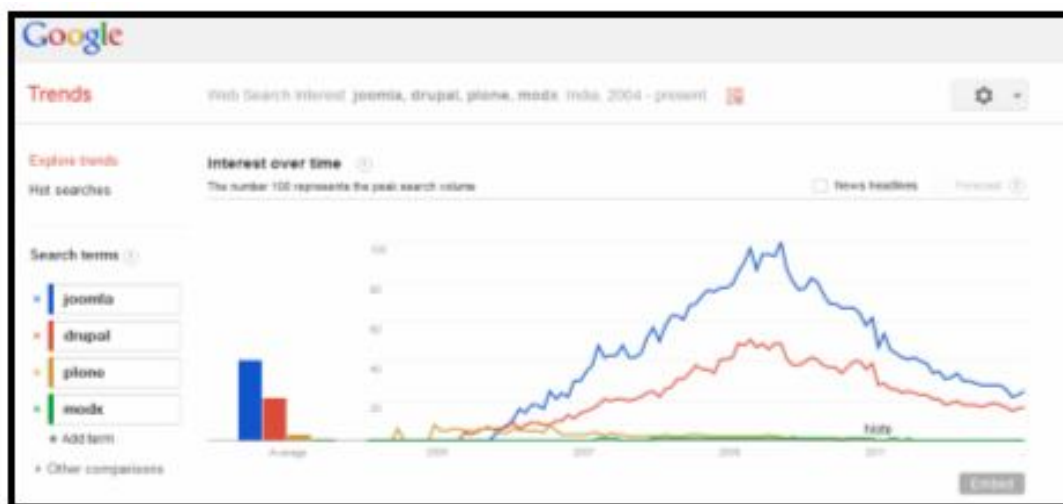**And much more**

♦ Arts

♦ Health

♦ Business

♦ New and Media

♦ Technology

♦ Society

Comparative evolution of CMS with Google trends report
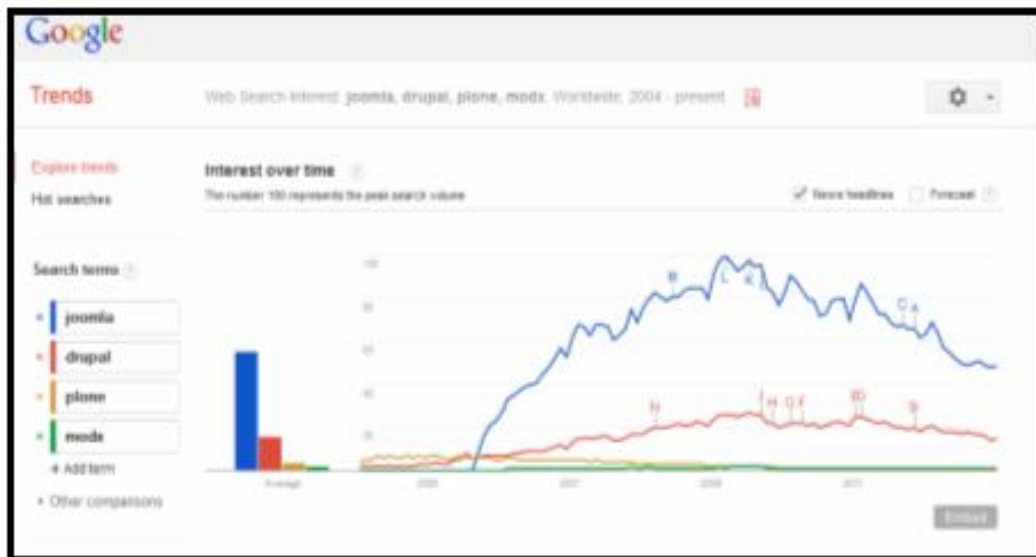
Graph-2: Google trends (All regions)

Graph 3: Google trends (India)

(www.google.com/trends/)

7. Requirements for Installation

1. Windows OS, Apache, MySQL, PHP (WAMP or XAMPP) for Windows

2. Linux OS, Apache, MySQL, PHP (LAMP) for Linux

3. MAC OS, Apache, MySQL, PHP (MAMP) for Apple MAC

4. Joomla Stable Version

8. Case study of Vikram Sarabhai Library, IIM Ahmedabad

Before 2008, the Library continued to offer its web page with technical assistance from the Computer Center of IIM Ahmedabad. Due to this, Library had frequency of maintenance and updates were limited. In early 2008 the Librarian suggested that library website must be dynamic and updated by library staff only. In response to the recommendations library staff finalized the Open Source CMS that is Joomla. It was necessary to update the web page according to the needs of researchers and other library users.

Vikram Sarabhai Library is one of the best examples for CMS which providing information about its functions, resources & services, other activities and brings together all its resources and services on a single platform for convenience of its users with search interface. In year 2008 Vikram Sarabhai Library website was built by library Professionals staff to using Joomla 1.0 version which is very stable and easy to use. Vikram Sarabhai Library Website server is on Linux platform with MySQL Database. Library web portal has 700 MB Disc Space and the size of database is 15MB, over morethan 8700 content links to important e-resources and direct links to e-journals subscribed by the library.

The web portal comprises of very large numbers of contents which includes, Static Content pages, Dynamic pages, Video links, Images link, Newsflash links, Online Library Database links, Online catalogue link and many more.

9. The library web portal enables the following modules

Before implementation of Joomla, Librarian and Professionalstaff had decided all modules and contains which they want to implemented in to Library web site, as per the requirement they choose the free estime_bluesky_advancedtemplate for Joomla. V S Library also required the integration of Web OPAC, Databases and other websites with Joomla CMS.

The V S Library web page of Joomla contains Top menu and Main menu, which has sub links of different contain.

10. Main Menu

1. About Library: On Home page of V S library, there is general information about library which explains about library collection, objective and resources.

2. Library Timing: Library Circulation timing is displayed in this menu.

3. Resources: On the Resources page, Library has different types of Databases and each database has a separate link, which goes to their database page.

4. Services: On this page, all the major services which provided by Library is explain

5. Membership: All the membership categories are explain in Tabular form and also has Pdf link of membership form.

6. Guidelines:General guidelines for users areexplained in this module.

7. New Arrivals book: Library has new arrivals books on every Monday, so there is a integration between Joomla and KOHA software. This page gives you direct new arrival list of KOHA software.

8. Institute Website (IIM-A):- This page has direct link to main Institute Web Page of IIM-Ahmedabad

9. Library Committee: This page explain the names, designation and emails of current Committee members of the Library

10. NICMAN: This Tab gives you the NICMAN (National Information Centre on Management)website page which is also build in Joomla platform.

11. Staff: This page has a list of the entire Library Staff name with their designation, email address, phone numbers and photos.

12. Copyright:Vikram Sarabhai Library – IIM Ahmedabad has a copyright of the website built by using Joomla CMS. Other details of the copyright issues are mention on this module.

13. Contact us: This page contains all the responsible section heads and their contact details with all the divisions and library staff link.

10.1 Header (Top) Menu

Header of the Web page has a Library Web OPAC, Online resource page, Federated (Discovery) search EBSCO link, IIM-A in news link and NICMAN website. Details are explained below.

1. Home: Home page and about the library page has a same details which has general information about library which explain about library collection, objective and resources

2. Online Catalogue (KOHA): V S Library has KOHA LMS which is integrated with Joomla CMS.

3. Online Resources: This module has all the databases links of the Library and divided in different categories.

4. A to Z E-Journals: This page search the library subscribed journals and duration of the each subscribed journal.

5. EBSCO Discovery: The Federated search Engine called EBSCO discovery is integrated with Joomla CMS on this page.

6. IIMA in News: Library is using Alice software for making IIM-A News archive which is available on this page.

7. I R @ VSL (DSpace): This page has Institutional Repository of IIM-A which is built in D-Space IR OPEN source software.

14. NICMAN (also developed in Joomla): Top menu and Main menu has this Tab, which gives you the NICMAN (National Information Centre on Management) website page which is also build in Joomla platform.

10.2 Syndicate

1. RSS 2.0: When we added any new information on our library website that our users might be interested in tracking for a live feed.

2. Atom 0.3: User from the Internet has been subscribing the feeds and views their respective content.

10.3 Other Modules

1. Newsflash: Daily updates of IIMA in news and media

2. Trial Database Access: The Library frequently tracks trials of new databases or online resources, and get response from the faculties, researchers and students about the database.

3. Social Network Plug-in: VSL has been already developed a Facebook page to connect with the IIM Community and other user.

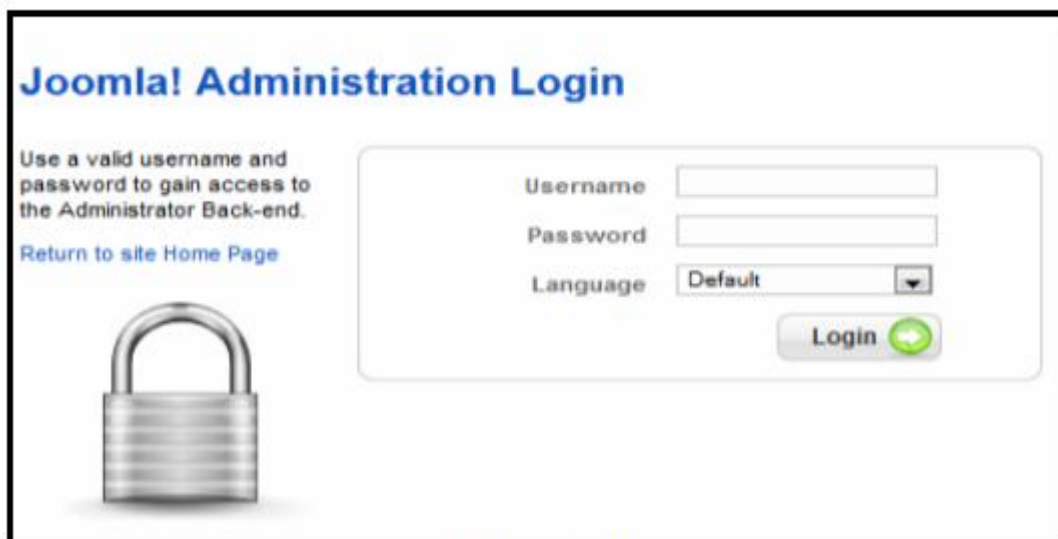4. Users Status: Live user statistics means who are using the library website.
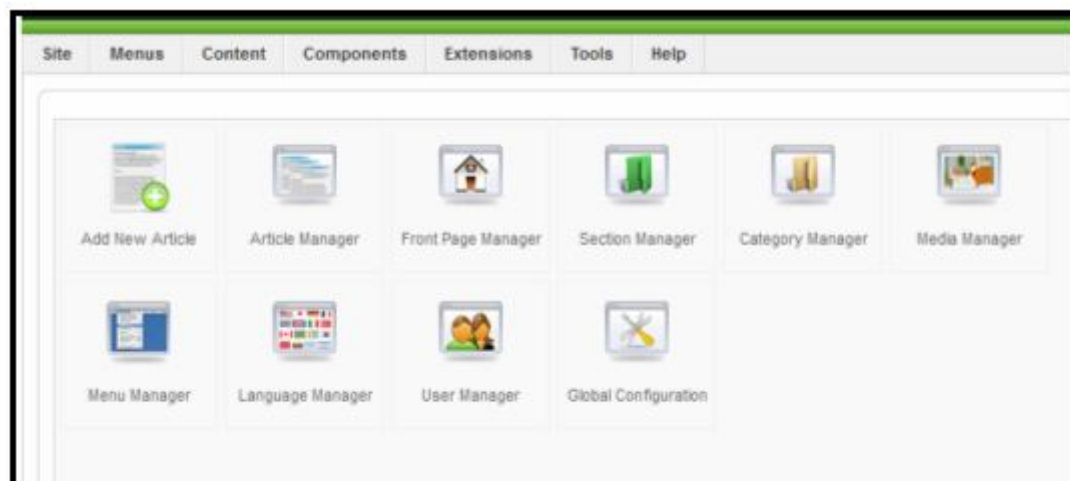
Figure 1: Administrator Log-in Page

Figure 2: Administrator Panel

11. Conclusion

The developing status of Joomla Open Source Content management software can be examined by the numerous benefits. Joomla offers Low cost, Conformism with open standards, Portability, and support to large number of available OS platforms.

With this study, authors find that any library professional can build their library web site using Joomla Open Source CMS with little bit knowledge of computer. Authors also examined that to customized advanced

features of Joomla, requires technical support in migration of localhost to live on web it includes MYSQL backup, localhost installation folder and PHP coding. To maintain the library web contain, every library professionals has to upload latest contains on Joomla web page.

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