Study of Web Content Management System

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Abstract: *Content management systems offer prime result by consolidating information, developed and maintaining user's data. Web based directory examine tool and professional intellect tools have evolved to simplify more effective access and quest tools. The large volume of content to be formation and conceptualization of new developments of Content Management Systems particularly for e-Learning arrangements. Joomla is used for e-commerce or social networking websites, but needs a basic accepting of methodological assistances. Drupal is the problematic, but the most powerful. It requires a acquainted considerate of HTML, CSS and PHP.*

Keywords - *Content, CMS, database, WCMS, Drupal, Joomla.*

I.   Introduction

A content management system (CMS) is a computer System that allows creating, organizing, publishing, editing, modifying, deleting, and maintaining content. A content management system (CMS) is a method used to manage the content of a Web site. Such systems of content management provide techniques to manage workflow in a collaborative environment. Typically, a CMS consists of two elements: CMA -the content management application and CDA-the content delivery application [1]

$$\boxed{\text{CMS = CMA + CDA}}$$

A Web Content Management System (WCMS) is a program that helps in maintaining, controlling, changing and reassembling the content on a web page. Content is mostly kept in a database and assembled using a flexible language like XML or .Net. The user interacts with the system at the front through a normal web browser. From there the webpages can be edited while maintaining control on parts of the layout.

A basic content management system is comprised of templates, a programming language, a dashboard and a database. A subsection of Content Management is Web Content Management. A Web Content Management System is a program that helps in maintaining, controlling, changing and resembling the content on a web-page. Content management system is working on functional dependency among contents (collection), management and publication of final modified contents.
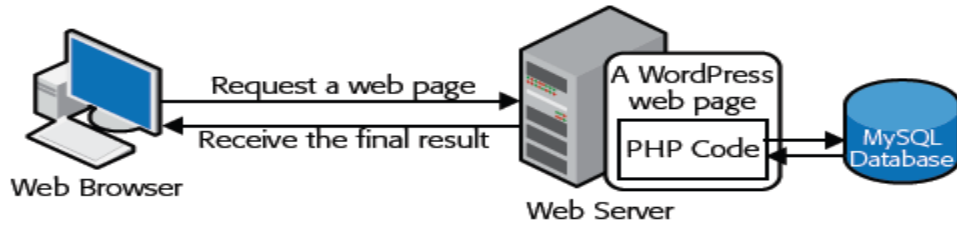
A strategy of Web Content Management [1] may be as follows:
(i).   Classifying Content requisite
(ii).   Creating uniformity assembly content for reuse
(iii). Handling Content in a ultimate source
(iv).   Confirm Content Compliers with business and government ethics and plans
(v).   Assembling content on demand to meet your customer's need.

II.   Working of Web Content Management System

A Web content management system uses a programming language to gather the content and   stored in the database and then presents it to the clients. There is various script and programming languages can be used in the background of a website. A web content management system is usually run using a database. There are different databases available and some are only compatible with certain operating systems.
The following diagram shows working of client, server and Database relationship in web Content management System. [2]

III. features of WCMS

Some of feature of web content management system are as follows: [5]

1. Automated templates

Create typical templates that can be robotically applied to new and existing content, permitting the presence of all content to be altered from one essential place.

2. Access control[5]

WCMS systems maintenance user groups. User groups allow you to controller the registered users relate with the site. A page on the site can be restricted to non member of the group. A page is restricted to, will be denied access to the page.

3. Editable content

Once content is separated from the visual presentation of a site, it usually becomes much easier and quicker to edit and manipulate. WCMS software contains WYSIWYG editing tools allowing non-technical users to create and edit content.

4. Scalable features

WCMS software includes plug-ins or elements that can be easily installed to extend present systems functionality.

5. Web upgrades

The WCMS software usually receives systematic updates that include new feature sets and keep the system up to date current web standards.
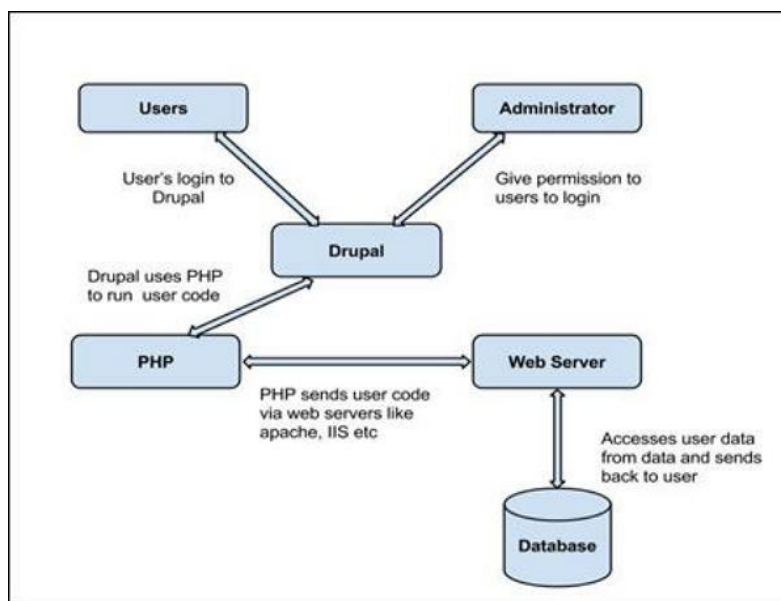
6. Workflow management

workflow is the process of creating cycles of sequential and parallel tasks that must be skillful in the CMS.

IV. Web Content Management Systems

1. Drupal

Drupal [9] is a free and open source Content Management System (CMS) that allows forming, running and broadcasting your content. It is built on PHP based environments. This is carried out under GNU i.e. General Public Licence, that means everyone have a freedom of downloading and sharing it to others.

The following diagram shows architecture of Drupal [6]

Features

It makes easy to create and manage your site. Translates anything in the system with built-in user interfaces. It connects your website to other sites and services using feeds, search engine connection capabilities etc. Drupal is open source software hence requires no licensing costs. It designs flexible, creative website to the users and display more effectively to increase the visitors. Drupal provides more number of customizable themes and base themes which are used to design own themes for developing web applications. It manages content on informational sites, member sites, social media sites and web applications.

Advantages

Drupal is a flexible CMS that allows handling content types including text, video, audio, menu handling, real-time statistics. It provides a number of templates for developing web applications. So there is no need to start from scratch if you are building simple or complicated web applications. It helps to organize, structure, find and reuse content. Drupal provides some interesting themes and templates which gives your website an attractive look. Drupal has more 6000 plug-ins. Since Drupal is an open source, you can create your own plug-ins.
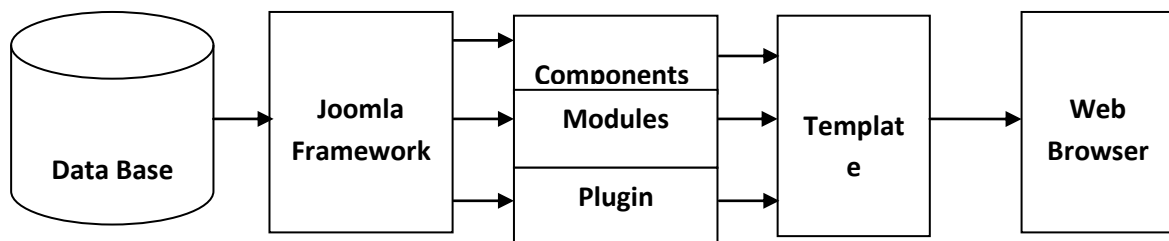
Disadvantages

The website which is built using Drupal will generate big server loads and never opens with a slow internet connection. It requires advanced knowledge and few basic things about the platform to install and modify. Drupal is new content management system. It is not compatible with other software. Performance is low compared to other CMS's. Drupal is not user friendly interface.

2.   Joomla

Joomla [8] is an open source Content Management System (CMS), which is used to build websites and online applications. It is free and extendable which is separated into front-end templates and back-end templates Joomla is developed using PHP, Object Oriented Programming, software design patterns and MySQL. This tutorial will teach you the basics of Joomla using which you can create websites with ease. The tutorial is divided into sections such as Joomla Basics, Joomla Menus, Joomla Modules and Joomla Advanced.

The following diagram shows architecture of Joomla [7]

Features

User Manager □ It allows managing the user information such as permission to edit, access, publish, create or delete the user, change the password and languages. The main part of the user manager is Authentication.
Content Manager □ It allows managing the content using WYSIWYG editor to create or edit the content in a very simple way.
Banner Manager □ It is used to add or edit the banners on the website.
Template Manager □ It manages the designs that are used on the website. The templates can be implemented without changing the content structure within a few seconds.
Media Manager □ It is the tool for managing the media files and folder in which you can easily upload, organize and manage your media files into your article editor tool.
Contact Manager □ It allows to add contacts, managing the contact information of the particular users.
Web Link Manager □ The link resource is provided for user of the site and can be sorted into categories.
Search □ It allows users to search the appropriate information on the site. You can use smart indexing, advanced search options, auto suggest searches to make Joomla search best.
Menu Manager □ It allows to create menus and menu items and can be managed subsequently. You can put menu in any style and in multiple places.

Advantages

It is an open source platform and available for free. The templates are flexible to use. It is compatible with all browsers. Joomla is designed to be easy to install and set up. It ensures the safety of data content.

Media files can be uploaded easily in the article editor tool. It is easy to edit the content as it uses WYSIWYG editor. It Provides easy menu creation tool.

Disadvantages

It gives compatibility problem when set up several modules, extensions and plugins concurrently. It makes website weighty to load and run. Joomla is not much SEO (Search Engine Optimization) friendly. Plugins and modules are not free in Joomla. Development is too hard to handle when you want to change the layout.

V. Conclusion

Some content management systems are free, such as Drupal, Joomla. A worldwide layout is created, making pages have a comparable theme and design without large code. CMS tools use a drag and drop AJAX system for their design modes. It makes it easy for beginner users to create custom front-ends. Simplicity in design of the admin UI allows website content managers and other users to update content without much training in coding or technical aspects of system maintenance.

CMSs provide the facility to control how content is published, when it is published, and who publishes it. Some WCMSs allow administrators to set up rules for workflow management, guiding content managers through a series of steps required for each of their tasks. CMS websites are also good for SEO. Brilliance of content is one factor that helps, as it is believed that some search engines give preference to website with new and updated content than outdated content. URL rewriting can be implemented easily which produces clean URLs without parameters which further help in SEO. There is plug-ins available that specifically help with website SEO.

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