

A Review on Content Management Systems of Web Development

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ABSTRACTS

Content Management System (CMS) enables a web developer to create, edit, view and deploy the websites. There are many CMS available in the web development tools market. In this research paper particularly discuss about the Typo3, Joomla, Drupal and Wordpress CMS for analysis. There are various features for web development tools for selecting best CMS as per knowledge of developer are discussed. On the basis of these available features the four CMS are comparatively analyzed. The web developers can choose best CMS according to their development environment and technological platform.

Keywords :— CMS, Web server, Wordpress, PHP, Joomla

I. INTRODUCTION

A distributed application of a web application is that runs many computers and communicates through a web network or a web server. Specially, a web application is accessed with a web browser as a client and provides the ability to modernize and keep up a program without deploying and installing software on client computers. Web applications are used for discussion boards, web mail, weblog, online retail sales, online banking, among others. A web application is platform that can be accessed and used by millions of people at the same time [1]. The initiation of the Web turned possible the form of new form of transmission ideas and contents in online environments. The Web design process uses techniques to sufficient arrangement of information, using suitable resources to serve on web pages, in a manner that the user can reach the resultant target in a direct and easy way. Web design differentiates itself from other conventional forms of design. The Web is a unique way that allows designers not to be able to control the environment around them. Fundamentals web features such as colors, shapes, and layouts can be customized, and there are no guarantees that all users will see the same Web page in the same way that it was designed and developed. In this observation, Web designer need to concept Web applications, without knowing in advance the Web browsers that will be used, the technological platform on which application will be run, such as operating systems, personal preferences of users, resolution of the access devices, and the characteristics and speed of the Internet connection.

As the World Wide Web is well known web platform, so have peoples prospect of their Web experiences. Web users becoming familiar with what they search and how to find it, web users have started to expect more and exact information from the Web sites visited. Web managers, in turn, have had to find new ways of meeting these expectations. Content Management System is not only on Web development, although that is where it is mostly practiced today. CMS is about developing web applications over the creation and delivery of information and functionality [2]. It is about

knowing what value you have to offer, who wants what parts of that value, and how they want you to deliver it. A CMS is software that enables non-information technology users to change web site content directly without help from information technology department or web master. A CMS is a platform where non-technical users can create, edit, and implement the web content web browser interface. Content management systems in the research work evaluated cost, technical and other related tools for both developers and clients [3].

Content Management System is a web application containing tools which enable you to add, edit & remove web pages and content on website from within a web browser and without any knowledge of web page design tools or other similar technologies. So develop website for an ecommerce site CMS is the best solution that you can give your business. [4].

The remainder of this paper is organized as follows. Section II describes overview of some Content Management System. Section III, we explained some features of Content Management System. The comparative result analysis of this paper is discussed in Section IV. The conclusion is given in section V.

II. CONTENT MANAGEMENT SYSTEMS

An easy way to comply with the conference paper formatting requirements is to use this document as a template and simply type your text into it. There are many number of both open source and non open source-based CMS are available for enterprise and personal use. These are a few available CMS platform provides here. The system is used to create, edit and manage digital web content. Most CMS provider offer many solutions that allow developer to design and customize web pages and set up a web site.

Software is used to create web pages, create and share, and manage websites. There are both free and paid application tools available in the market. Both types of software offer

extensions and themes that use different elements like modules, templates, widgets and plug-in, etc

A. Wordpress

A beautiful web software that can use to create website or blog is a Wordpress. Wordpress started in 2003 with a small line of code to develop the typography of everyday writing. Now it has full-fledged to be the major self-hosted web designing tool in the world, used on millions of websites and visited by millions of people every day. Wordpress is an open source and free web design tool and a content management system (CMS) based on PHP and MySQL. Many features added a plug-in architecture and a template design. Wordpress is currently the most popular website design system in use on the Internet. Wordpress relies on peer support as a free and open source platform. The website Wordpress.org provides primary support [5].

B. Typo3

TYPO3 is a free and Open Source CMS for enterprise purposes on the web source. It provides full flexibility features, functions and modules. The application has been translated into many languages and is actively being developed in a community of over millions users in different countries. Typo3 is big application, Community, adoption, list of extended features. The templating system is the concern part and very complex, compared to other solutions. It takes a small time limit to find out how to create a page. After experiencing this, it has the best template system out of all of them. Typo3 is not optimum for a project which requires being finished small time limit; this could lead to not good experience. In this CMS need a lot of time to develop first sites for beginner but for searching for a platform can use in all website projects and still is very easy to handle and fully adjustable if experience once, then Typo3 is best for experience developer [6].

C. Joomla

Joomla is a free and open source content management system (CMS), that can also be used independently which enables the user to build Web sites and powerful online application. Joomla written in PHP uses MySQL database for the backend is a class of Open Source CMSs uses object-oriented programming techniques. Joomla is a powerful content management system with the list of features User Management, Media Manager, Languages Manager, Banner Management, Contact, Polls, Search, Web Link, Content, Menu, Templates, Web services Management and Powerful Extensibility. Joomla provide dynamic formatting keeps content in its database [7].

D. Drupal

The Drupal is a CMS which provided to easily manage, organize and deploy the content, with variety of customization. Drupal is open source software developed and maintained by a community of millions users and developers. Drupal provides many number of pre-developed modules to develop and use in web site projects at free which creates fast

development easily. Drupal provides huge number of API to associate with web site such as Google Maps, payment gateways etc. Drupal customizable, we can get number of themes and template just by including them we can get the customizable layout for our site, and further more we can change it according to our experiences.. Generally user takes about to little time to make the opinion about the web portal. Therefore we have less time to hold user to stay on our site and to make him to buy products from our marketplace site. Security is a best features in drupal provides strong security features over the attacks on web data. The built-in functions such as t() and l() helps us to stop attacks like SQLIA or XSS. These functions can also be used for language translations, it means we can launch same website with multiple language options [8].

III. FEATURES OF CMS

To select the best CMS system should ensure that the enormous spread of different functions is in line with particular requirements. The first feature to implementing a CMS-supported online project is the installation of the selected software solution. The more complex the system, the more costly the installation and upkeep. Expandability through extensions, modules, widgets, or plug-in is available in all of the content management systems presented. On the basis of expansions multiple functions can be used. In CMS all open source solutions comparison can be used as a multiple user system available for user management should be central selection criteria when a website is shared by several users at the same time. To facilitate the creation and publication of online content website developer rely on CMS systems. To create and manage website content without programming knowledge a good CMS offers functionalities that enable their users.

Website users who want to overcome a top of the part in the search engine rankings also required. These concern the URL design of an online web application, the design of meta-information, and the orientation of the layout on mobile devices. For the selection of a CMS service and support are deciding factors. Personal, Small and medium-sized enterprises, in particular, can't afford to pay for the services of professional agencies in the implementation, conception, and maintenance of the web presence.

IV. RESULT AND DISCUSSION

There are list of feature to choose the CMS for web development. CMS systems are featured by category of the web development, license or not, platform of the operating system, supported web servers, supported database systems, Middleware systems, design of template, and etc.

The comparison show that Typo3 have category enterprise content management system, Wordpress is in weblog software category, Joomla and Drupal have the same category with web content management system. In license TYPO3 and Drupal has GPL licensed. Joomla and wordpress has licensed with

GNU GPL v2. All the CMS are works with the common cross-platform operating system. Apache, Nginx and MS IIS are the web server supported to Typo3 and Joomla. Wordpress and Drupal are the CMS used the webserver with PHP and Mysql. Mysql database server is used with all types of CMS. MS sql and postgre are the database server used by typo3, Joomla and Drupal. MariaDB is the database server used in

Joomla, Wordpress and Drupal. Firebird is used in particularly with Typo3. Drupal used some other database server as SQLite and Percona server. PHP is middleware that is used by all CMS where as SQL and Javascript are used in Typo3 including PHP. PHP as a template language used by Joomla, wordpress and Drupal. Typo3 is used fluid template language.

TABLE I
COMPARISON OF CONTENT MANAGEMENT SYSTEM

Features	Content Management Systems			
	TYPO3	Joomla	Wordpress	Drupal
Category	Enterprise content management system	Web content management system	Weblog-Software	Web content management system
License	GPL	GNU GPL v2	GNU GPLv2+	GPL
Operating system	Cross-platform	Cross-platform	Cross-platform	Cross-platform
Supported webservers	Apache, NGINX, MS IIS	Apache, Nginx, MS IIS	Webserver with PHP and MySQL support	Webserver with PHP support
Supported databases	MySQL, PostgreSQL, Oracle, Firebird, MS SQL Server	MySQL, MS SQL Server, PostgreSQL, MariaDB	MySQL, MariaDB	MySQL, MariaDB, Percona Server, PostgreSQL, SQLite
Middleware	PHP, SQL, JavaScript	PHP	PHP	PHP
Template language	Fluid	PHP	PHP	PHP

V. CONCLUSIONS

This paper has presented a precise description of the different Content Management Systems Typo3, Joomla, Wordpress and Drupal with their features. Detailed technical comparative analysis between content management systems that provides of information regarding various feature to selecting the platform for develop the websites. This comparative analysis shows that the content management systems have better to each other with different perspectives and scenarios. The topic of this research paper can enhanced to next level with the next generation of Content Management Systems with some new advanced features.

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