WordPress: A Versatile Tool for Managing Contents

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ABSTRACT: Nowadays, most of the websites are powered by different content management systems (CMS) that allowswebsite administrators to make changes to their websites without web programming tools knowledge. WordPress, Joomla and Drupal are popular open source CMS technologies, but WordPress has becomefar more popular among three in the past couple of years.

In this study, we present the important features of WordPress and demonstrate the benefits and problems of WordPress CMS application.The idea is to guide the novice people regarding the use of Word Press CMS Tool.

Keywords: CMS, MySQL,WordPress, GUI, HTML

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I. INTRODUCTION

AContent Management System is often described as a productive set of interrelated components that allows the user to manipulate, manageand modify the data at run time. It is an interactive tool that plays a prominent role for creating websites in a timely fashioned manner. Besides static or dynamic websites, the architecture of a Content Management Systemis quite different as it has a distributed approachi.e. different people in the world across different countries can communicate through a singleCMS.

The beauty of CMS is, it provides structured content management features such as the ability to store text documents, images, video and any other online content type. CMS platform allows multiple editors and sections and are used as the foundation on many large websites[12].Anatomy of CMS is shown in Fig.1.

Fig. 1.Anatomy of CMS

Today in the era of rapid technology wherebusiness firms require less time with greater profit, the CMS facilitates such features and aspects that provide tangible benefits and fulfill the traditional gaps among the business classes.

This paper is organized as follows. In Section 2, we give an overview & key features of WordPress. In Section 3, we discuss the interactive services of WordPress. Section 4 gives precise introduction of optimization services of WordPress. In Section 5, we present WYSWYG feature of WordPress. Section 6 is reserved for System requirement. Section 7 depicts the pros and cons of WordPress. Finally, in Section 6, we conclude the paper and discuss future work. Structure of CMS is shown in Fig.2.
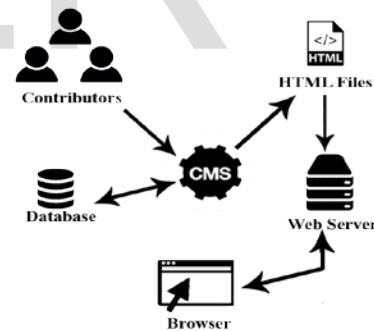

Fig. 2.CMS Structure

II. OVERVIEW & KEY FEATURES

Among the most popular CMS tools, WordPressis becoming a part of the web businesses. According to a survey on the Internet,the estimated usage of WordPress is 58.8% [1]. It is basically an open source tool i.e.source code is freely available for a person to modify the website layout, themes and configuration of the php files according to needs. It is an integrated content manager& publisher that allows the administrator to make changes in the content and publish it at run time.One of the most attractive feature of Word Press is its

ability to welcome extended functionality. Various plugins allow the ability to transform a simple website into a business forum.

Most people think why only WordPress should be used for managing contents? As there are different reasons, amongst which few are discussed. First of all, the beauty of this CMS tool is that it is available free of cost, this tool is completely compatible with the MySQL Database which is also a freely reachable database with a simple to use GUI. The WPdashboard provides such functionalities thateven a non-technical person can easily produce and manage contents with remote access through the Internet. The page design and content is somewhat separated from each other in such a manner that the website created can be accessed easily by a smart phone, laptop or any personal computer[2].Figure 3 shows that WP follows a layered architecture.
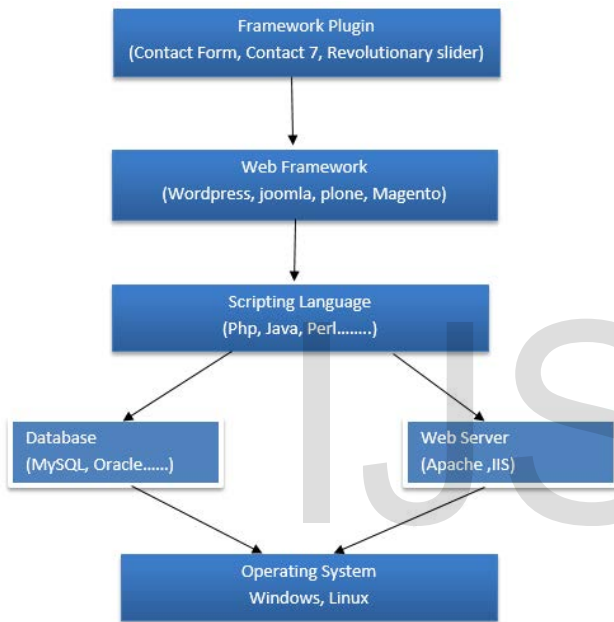

Fig.3.Layered Architecture of WordPress

WordPress is the most widely deployed CMS on web and according to one statistics given by manageWP[10] 48% of top 100 blog are managed by WordPress. Table 1 presents some comparative data about three best open source CMS platforms.

TABLE I.   COMPARISON OF THREE OPEN SOURCE CMS BY NUMBERS[11]

Feature	Open Source CMS Technologies		
	WordPress	*Joomla*	*Drupal*
# of Sites Using	17,674,102 ↑	2,522,042 ↓	772,924 ↓
# of Plug-ins	36,133	8,670	16,561
# of Free Themes	3,023	Unknown	1,303

III. INTERACTIVE SERVICES

One of the major characteristicsof the Word Press CMS is that it has the ability to shape the contents howthe user wishes. Supportivethemes andplugins have been introduced by different developers for handling the data flow across the websites more efficiently.

Nowadays knowledge based websites are easily maintainable through the interaction of several contributors across the globe.Following are the interactive services that are covered by WordPress:

A. Wikis

According to the website **"85ideas"**there are top ten plugins that support the ability to transform your contents into a Wiki. One of the top ranked plugin is **"WikiLite"**introduced by a group of developers who call themselves" **WPMUDev"**.Across more than 100 themes are included for designing phase. Collaborative content contributorsarethe key stakeholders that manipulate the data with the passage of time. The WikiLite favicon can be seen in Fig.4

Fig.4. WikiLite

B. Blogs

Mostly blogs are based on dynamic content websitesthat require updation frequently time to time.According to the WordPress statistical analysis,over 409 million people view more than 22.7 billion pages each month[3].

C. Forums

Forums are an important part in today's social media as they assist a person to express his thoughts on a specific subject throughout the community.Many individualsgather upon one platform and share their opinion through a forum. The WordPress CMS Tool can help you manage different forums in a single website by using the plugin "**bbPress**". This plugin once installed, embeds with the WordPress Dashboard and allows the administrator to create multiple forums for his website. Another factor that provides comfort to the administrator is it's automacy that manages the forums itself.Fig.5 shows the bbPress logo.

Fig.5. bbPress Logo

D. Responsiveness

WordPress is quite an interactiveCMS tool as it has the ability to shape its themes to work on multiple platform such as Smart Phones, Laptops and Desktop Computers as well. When the administrator selects a theme from the dashboard and activates it, the theme structure is set to Desktop View by default. By customizing the theme layout, one can set its responsiveness as he wishes so. Following Fig.6illustrates it as:
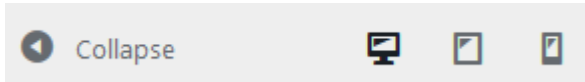

Fig.6. Desktop, Laptop or Mobile View

IV. OPTIMIZATION SERVICES

Search Engine Optimization hasa significant role for globalizing a website on search engines such as Google, Yahoo,Bing etc. The Word Press technology aims to provide such a feature for its user to rank their websites high. Following techniques are discussed below:

A. Website Analysis

The WordPress is a flexible CMS toolthat can easily be integrated with one of the most popular analysis tool i.e. Google Analytics. For a beginner and onwards, when this tool is embedded with WordPress, one can easily observe how much viewers are currently available? What the people need? How to gain more traffic? What is the current trend in today's market? All thesequestions assist the bloggers to produce better contents [4].

B. Image and Database Optimization

The MySQL database is a single repository where all the textual data is kept stored. By the passage of time, as the size of the database increases, garbage data starts to generate unexpectedly because of spam comments. WP strictly follows image and database optimization for saving memory spacesby using several add-ons [5].

TABLE II.   CHANCE OF ERROR IN DATABASE

S. No	Files	Memory	Status
1	Wp_options	8574.85 Kb	Need to Optimize
2	Wp_meta	7830.21 Kb	Need to Optimize
3	Wp_posts	41.84 Kb	Already Optimized

C. W3C& Web Compliance

WordPress is fairly supportive with the World Wide Web Consortium. It follows the standards for coding the HTML & CSS files. Plugin such as **"Theme Check"**assist in validating a website[6].

D. SEO Optimization Features

The "**YOAST**" plugin is brilliant for Search Engine Optimization as it provides an interface with in the Dashboard for prevention from keyword stuffing along with metatags. Image alternative text is one of foremost SEO feature of WordPress.Fig.7 depicts the YOAST SEO icon.

Fig.7 . YOAST SEO

V. WEBSITE DEVELOPMENT

Word Press comes with the concept of "What You See Is What You Get"(WYSWYG). This enables run time layout manipulation for the website designer. As this CMS tool is open source, therefore website developers have an open hand towards changing the functionality by coding the PHP files.

VI. SYSTEM REQUIREMENTS

WordPress is freely compatible with

- Any Operating System such as Windows.
- PHP version 5.6 or later
- MYSQL version 5.6/ MariaDB 10.0 or later
- Apache Web Server
- Minimum 256MB RAM memory

VII. ADVANTAGES

Following are the merits of WordPress [8]:

- It is an open source CMS tool with the ability to maintain websites from any PC or smartphone.
- Helps a lot for growing businesses like E-Commerce.
- There is no software requirement for HTML editing.
- It is extensible as plugins add further functionalities.

VIII. DIS-ADVANTAGES

Following are the demerits of WordPress[9]:

- Due to the use of third party plugins, there is a security risk.
- It requires constant updation.
- One has to be very careful while dealing with SEO.
- There seems to be no proper documentation.

CONCLUSION

In the concluding part, it could be said that WordPress is a leading CMS tool that is rapidly attracting people who require run time data management with flexible outcomes and large profits.

In future, we plan to investigate security holes of WordPress.

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