

## **A Guide for Selecting CMS Tools: Wordpress, Joomla, Drupal**

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### **ABSTRACT**

*This research paper aims to help in selecting content management system tool. Today in digital Era CMS play an increasingly important role in the Internet's evolution. Every one wants a website for his e-Commerce business or organization but it is difficult to maintain and update website from a professional web designer as it is time consuming and costly. Now a days trend is developing, maintaining and updating the website by their own using very simple and easy content management system (CMS) tools. But it is very difficult to select best CMS tool among hundreds of tools. Here we explain and compare the three top CMS tools :WordPress, Joomla and Drupal. We develop three websites which are equal in all aspects for comparing which are on different parameters. So it is helpful to non-technical staff or non-computer programming literate person to select the best CMS tool.*

*Keywords: CMS, HTML, WordPress, Joomla, Drupal*

### **1. INTRODUCTION**

Earlier websites were developed using Hyper Text Markup Language (HTML), and with further developments in technology website designers started using XHTML, CSS, JavaScript, DHTML, VBScript, AJAX and XML. Development of websites using such technologies involve large amount of coding and huge efforts in small tasks such as alignment of its contents.[2]

For web applications development such as portal, webshops, online bookings, weather report e.t.c the use of content management systems is increased in past few years because of less cost, easy to modify such type of advantages of CMS has compared to traditional HTML websites.[4]

CMS is used to manage website and content for information. CMS is a software package that lets you build a website, write a blogs that can be quickly and easily updated by your non-Professional staff members.[1]

A CMS can be easily embedded into a live website so as to help the owner or staff member update its content at its own having minimum knowledge about coding of the websites.[2]

As we know that a webpage's have text, graphics, photos, video, audio etc that display content or interacts with the user. CMS provides all above inbuilt features and many more.[3]

Now if we go for CMS tools, there are so many CMS tools which are free and open source to download and use for developing and designing websites and writing blogs. Now the problem is selection of easy and simple CMS tool. In this paper, I compare most common, famous, popular three tools for better selection.

### **DIFFERENT CONTENT MANAGEMENT SYSTEM TOOLS**

#### **A) WordPress**

WordPress is an open and free source content management system (CMS), WordPress was developed for creating a Blog. A blog is a type of website or part of a website that is maintained on regular basis by its owner reviews, opinions, and video. It has many features including a plug-in architecture and a template system.

**B) Joomla**

Which allows you to develop Web sites, web application and powerful online application that can also be used independently. Joomla is a class of Open Source CMSs written in scripting language PHP with using the techniques of OOP and MySQL database for the backend.[3]

**C) Drupal**

Drupal is used to develop different types of web applications which includes different community portals , business purpose sites , news-whether publishing sites, corporate sites ,educational sites, international sites for e-commerce web sites. It is easy to use , and has many modules and libraries that are very helpful. Applications developed using Drupal are robust, extensible, reliable, flexible an having good performance.[4]

**2. REVIEW OF LITERATURE**

Content Management System(CMS) is a tool used to manage website content and starring of information. It is a software package to that let you build a website that can be easily updated by your staffs- member. These systems are created and supported by community of developers without any cost. A web preserve is also non-profitable, creating website are difficult. It can take time, money, technical expertise and after creating it need to keep up with maintenance, update and features. All these things which can may be in short supply CMS is developed and gives you functions like editing, index, publishing content, customizing look of website. It balances between design code and end-user usability[1]

This paper discusses about comparative study of most widely used content management systems Joomla, Drupal and Wordpress. This study attempt to analyze each CMS on the basis of usage, design, performance, scalability, compatibility with different platforms, security purpose, and search engine visibility This study will help an individual or organization to choose an appropriate CMS for their specific web application and shows the good CMS will be helpful for users to include different features in the website using plugging and the widget. All three vary significantly in terms of features, capability, flexibility and ease of use. Joomla enables you to build a site with more structural stability and content than Wordpress, and has a fairly intuitive interface.[3]

**3) RESEARCH METHODOLOGY**

**Comparison of CMS Based On Parameters**

Below is The Comparison chart of WordPress, Joomla and Drupal Based on Parameters. Table 1: The Comparison chart of WordPress, Joomla and Drupal Based on Parameters.

| Sr.No | Parameters                                    | WordPress  | Joomla   | Drupal   |
|-------|---|--|--|--|
| 1     | Size of software                              | 40.6MB   | 35.3MB   | 66.4MB   |
| 2     | Installation and Setting Issues               | <b>One-click</b> Install or manual installation manually within <b>5 minutes</b> | <b>One-click</b> Install or manual installation manually within <b>5 minutes</b> | <b>One-click</b> Install or manual installation manually within <b>5 minutes</b> |
| 3     | Utilities of Tool-Creating Menus, Drag n Drop | Easy   | .Easy  | Easy   |
| 4     | Uploading and Managing Photos                 | Fast an Easy   | Very Easy /Fast  | Very Easy /Fast  |
| 5     | Loading Time for Webpage                      | Fast on Localhost  | Fast on Localhost  | Fast on Localhost  |
| 6     | Database Issues                               | Supports MySql   | Supports MySql   | Supports MySql   |
| 7     | Hosting and Publishing Site                   | hard   | Easy   | Hard   |
| 8     | Size of files using Tools                     | 49.8MB   | 32.5MB   | 74MB   |
| 9     | Uploading time Required                       | Using Localhost  | Using Localhost  | Using Localhost  |

| Sr.No | Parameters                                   | WordPress                  | Joomla                            | Drupal                    |
|-------|--|----------------------------|-----------------------------------|---------------------------|
| 10    | Level of skills Needed                       | Low                        | Low                               | Low                       |
| 11    | SEO(Search Engine Optimization) Friendly     | Medium                     | Low                               | High                      |
| 12    | OWASP(Open Web Application Security Project) | Not Secured due to Plugins | Secured                           | Mostly Secured            |
| 13    | Automatic Backup                             | Plugins                    | Not Provided                      | Yes                       |
| 14    | Email Integration                            | Using Plugin Elastic       | Third Party Comp Mandrill/Elastic | Third Party Comp Mandrill |
| 15    | Social Media Integration                     | Plugins                    | Plugins                           | Yes                       |

Table 1. Comparison Parameters

I compared all the parameters for analysis of content management tools –WordPress ,Joomla and Drupal on Local server .I used XAMPP Server as a local server for comparison of tools. I compared all the parameters for these three tools WordPress, Joomla and Drupal. Few of them are given here with screenshots.

**DATA ANALYSIS**

**Size of software**

WordPress : When I download WordPress the size of the software WordPress is 40.6MB.

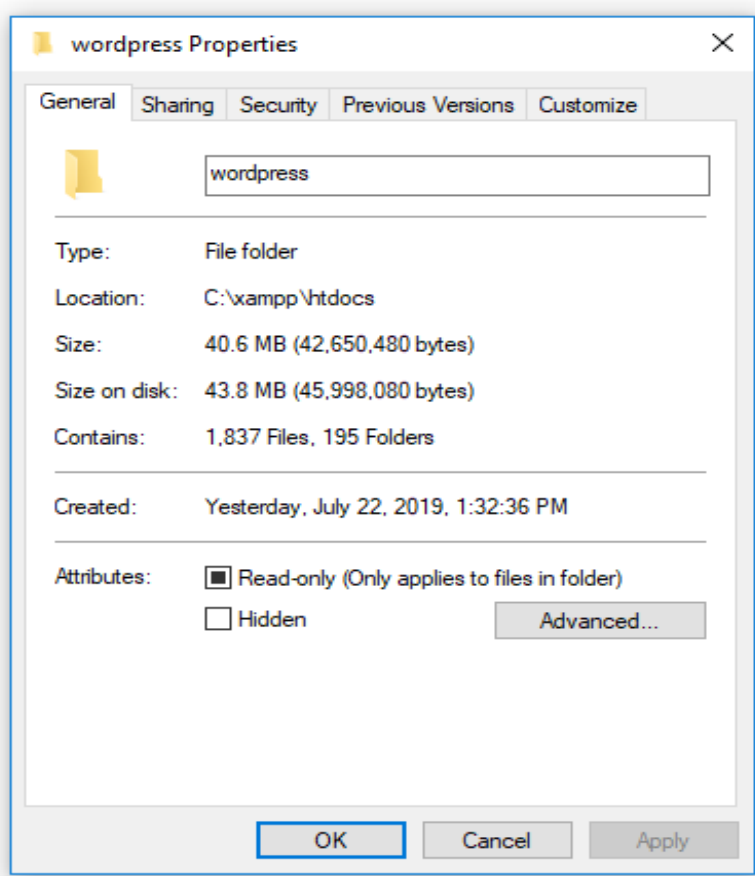


Fig.1. Size of WordPress Tool After Installation

Joomla : When I download Joomla the size of the software Joomla is35.3MB

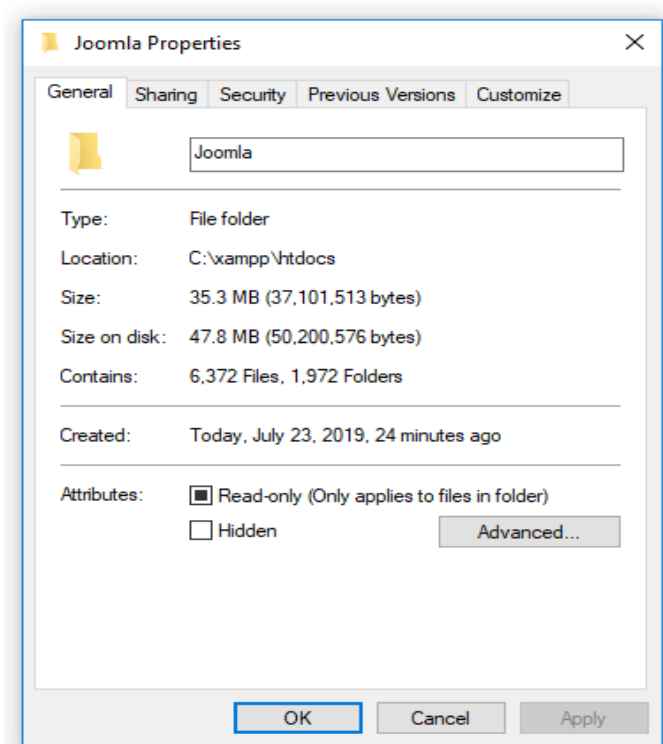


Fig.2. Size of Joomla Tool After Installation

Drupal : When I download Drupal the size of the software Drupal is 66.4MB

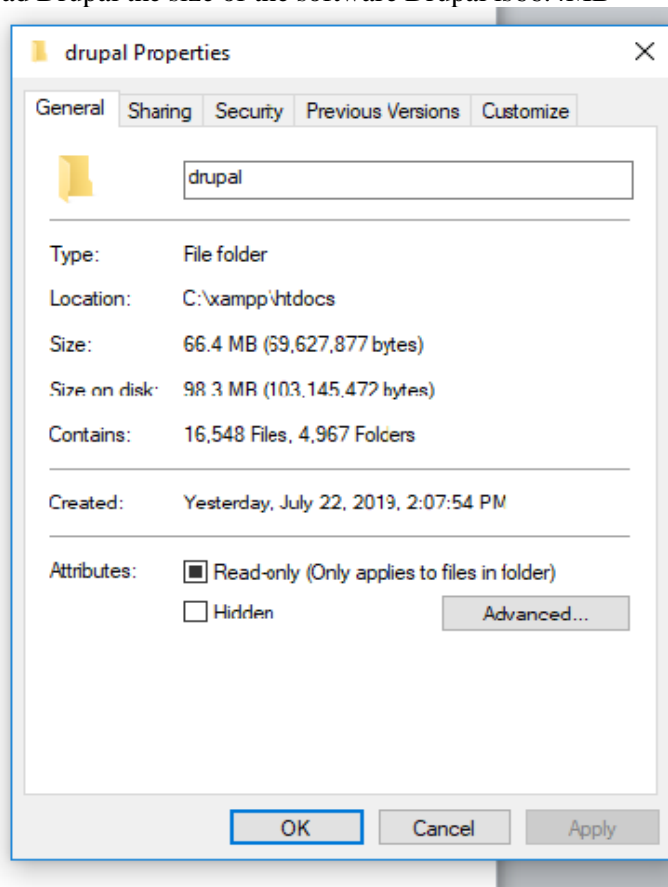


Fig.3. Size of Drupal Tool After Installation

### UTILITIES OF TOOL-CREATING MENUS, DRAG N DROP

**WordPress** :Menus are key part of any website, as it makes it easy for visitors to your site to navigate your posts and pages. While default menus are typically styled by your WordPress theme. Menus , submenus can be created very easily . To create such utilities many plugins are available for better and more advanced features

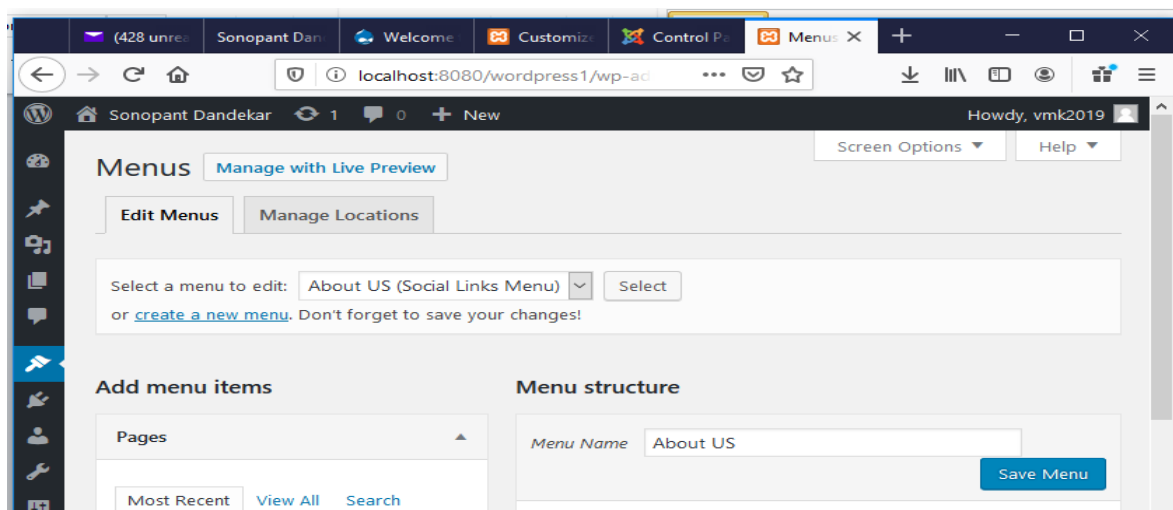


Fig.4. Menus created in WordPress

**Joomla** : In Joomla a Menu is a set of menu items used for website navigation. Each menu item defines an URL to a page on your site, and holds settings that control the contents (articles, category(ies) lists, tagged items, etc) and style (module(s), layout) of that page.

Creating menus is rather simple. From the Admin Menu, in the backend of your Joomla! site, you choose: Menus > Menu Manager > Add New Menu. On the opened to you Menu Manager: Add Menu page enter your menu title into the "Title \*" field (mandatory), your menu type into the "Menu type \*" field (mandatory) and, if you wish, your menu brief description into the "Description" field (optional). After that you can start adding new menu items to this new menu.



Fig.5. Menus created in Joomla

**Drupal** :Toolbar Menu is now compatible with Admin Toolbar module to view your different menu into a drop-down menu. it is important feature of Drupal core's Menu system. All elements or fields are placed on the Menu Item edit/add form and use core Menu link content entity for storing all data.

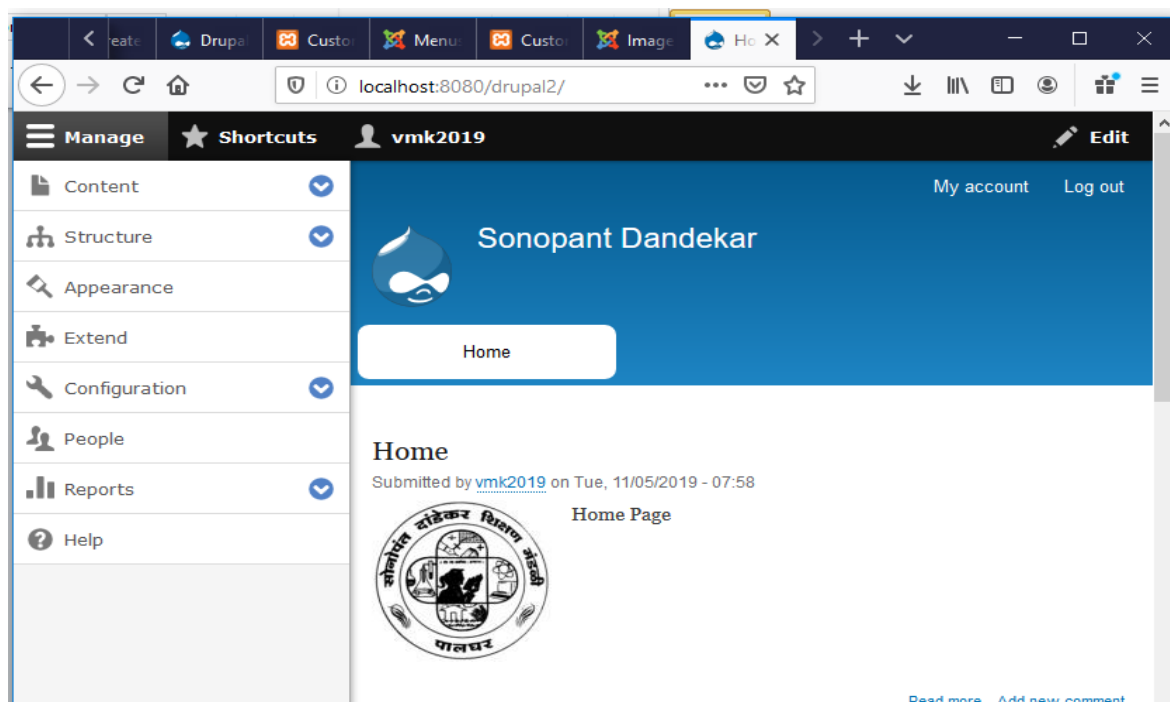


Fig.6. Menus created in Drupal

## CONCLUSION

WordPress, Joomla and Drupal are the three most popular content management systems (CMS) tools. WordPress is very easy for lay man to writer a content on internet like to write a Blogs, WordPress is mostly useful for their plug-ins.

Joomla enables you to develop website with more structural way than WordPress .If you are going for small website or e-commerce website Joomla gives you simple interface and help to develop it.But if you want develop little more complex website then go for Drupal as it gives systematic approach for your complex site , It has ability to fulfil need of your business.Free and open source content management systems can help you create apowerful website on a limited budget and time. WordPress and Joomla are well suited to build smaller sites quickly,while Drupal support robust and complex functionality. Some parameters works same in all three CMS tool.

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