**What is a Content Management System (CMS)?**

Good websites require a lot of maintenance in terms of updating and revising content and publishing it in an attractive way with cutting-edge presentation. These maintenance issues are only exacerbated as websites become bigger. Wouldn’t it be great if there were a software application that could help users to create websites and then help them organize, modify and publish changes without all of the headache of needing up-to-date web programming skills? Yes, and it exists. A Content Management System, or CMS “is software that allows users without programming knowledge to create, edit, and publish web content, such as text or multimedia elements, collectively via a graphical user interface” (“CMS comparison 2018: The 5 most popular open source systems”, June 4, 2018).

**Characteristics**

The characteristics of a content management system really depends on what type of application you need it for (“CMS comparison 2018: The 5 most popular open source systems”, June 4, 2018). Some CMSs are more geared toward blog and news publishing. Others are aimed at social publishing for communities. And some are classic web content management tools. Choosing a CMS comes down to knowing the content and goal of your web page and picking a CMS accordingly. That said, CMSs are being “used to power small business websites, blogs, large university websites, portfolios, real estate property listing site, internal communication system for companies, web directories, movie databases, application infrastructure base, arcade sites, and basically anything else you can think of" (Balkhi, 2018).

**Technology Used**

A content management system has two core components that it is made up from to make it easy to maintain a website. First, a content management application (CMA) – this is the component which allows the user to add and manage content on the website. Second, a content delivery application (CDA) – the behind-the-scenes process, or backend, that inputs the user content in the CMA, stores it, and publishes it (“What Is A Content Management System (CMS)?”, July 19, 2018).

Each CMS has a different set of system requirements, but here is a list of some of the most common technologies used:

* Webserver: Usually Apache Server with PHP and MySQL/MariaDB support.
* Middleware: PHP 7.0 or higher recommended
* Database: MySQL 5.6 or higher / MariaDB 10.0 or higher
* Hardware: 32 MB or more
* Other recommendations: DOM, GraphicsMagick, HTTPS support, mod\_gzip, mod\_deflate, mod\_rewrite

(Adapted from “CMS comparison 2018: The 5 most popular open source systems”, June 4, 2018).

**Features**

Depending on the type of application, content management systems can have different features (“CMS comparison 2018: The 5 most popular open source systems”, June 4, 2018). For example, classic CMSs should provide easy processes for multimedia content and would need to have complex sharing methods to allow multiple editors to access to the backend to make updates. Other important features could include the management of user rights, full text search capabilities, and perhaps the ability to present important content in multiple languages. CMSs devoted to new and blog publishing need to make content preparation quick and easy, ideally on a mobile device, as well as categorization, the ability to control the timing of publication entries, and interaction with the reader. Social publishing and community CMSs often have websites with user-generated content in addition to the content created by the site manager, making targeting active user groups instead of passive readers with web 2.0 functions important.

**Benefits**

You can publish content using a CMS without any technical skill whatsoever. A user can create, manage and publish their content on a graphical interface without knowing how to code a single line of HTML. Yet, a CMS gives users full control over their websites (Balkhi, 2018). Sure, you could pay for a license of Dreamweaver to generate your own websites from scratch, but it is understandable why open CMSs are more popular both for individuals and professional website deployment.

**Several Important Content Management Systems.**

There are numerous content management systems, with some of them even being free and open source. Here are some of the most popular ones ( “CMS comparison 2018: The 5 most popular open source systems”, June 4, 2018) for professional website management:

* Wordpress - Originally a blogging platform, Wordpress is the most popular CMS (with about 18 million websites published using it) which makes it a target for hackers.
* Joomla! - With 2.5 million published websites, Joomla! is the second biggest agent in the CMS market. It is more complex than Wordpress, such that users tend to access it through hosting providers rather than directly.
* Drupal - Drupal was originally developed as a student community solution and has 772,000 installations. It’s active community is its strength in developing extension modules.
* TYPO3 - TYPO3 is an enterprise-level content management system, with 425,000 installations, and is a good solution for e-commerce and big corporate websites.
* Contao - The CMS Contao is user-friendly and intuitive. It focuses on compatibility with web standards and has a multilingual backend.

(Adapted from “CMS comparison 2018: The 5 most popular open source systems”, June 4, 2018).

**References**

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