



Open Source Software Development

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Content Management System

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What is the Content Management System?

- CMS is software **running in the browser** and allowing to **create, manage and modify website and content** without knowing any programming knowledge
- You can:
 - create and edit content using visual editors,
 - add images and videos,
 - set up the overall design of the site,
 - and more



What can you create using CMS?



- CMSs these days are so flexible that you can use them for **almost any type** of project:
 - simple tutorial websites, portfolios, news sites, and more
 - with the right tools, you can even create more advanced web projects:
 - ✓ online stores,
 - ✓ private membership sites,
 - ✓ and forums

Features of CMS

- **User Management**

permits the management of user information like the roles of different users allotted to work simultaneously

- **Theme System**

allows us to modify the site view as well as functionality using stylesheets, images, and templates

- **Extending Plugins**

Different plugins are offered, which gives custom functionalities and features to create the CMS site

Features of CMS

- **Search Engine Optimization (SEO)**

It is embedded with a lot of SEO tools making content SEO more straightforward

- **Media Management**

is used for managing the media files and folder, with uploading media contents easy and effortless

- **Multilingual**

Translation of the language, as preferred by the user, is possible through CMS

What features the best CMS should include?

- **A way to easily publish new content**

A powerful editor, and plenty of options to make sure content looks top-notch

- **Content taxonomy options**

The more content website has, the more important it is to keep everything organized

→ CMS should enable you to create categories, assign tags to articles,...

- **Page editing functionality**

How to create various types of pages for website

What features the best CMS should include?

- **A high level of customizability**

CMS enables you to add almost any feature you want to create more advanced websites

- **A strong community**

To have access to updates, security patches, and help from other knowledgeable people

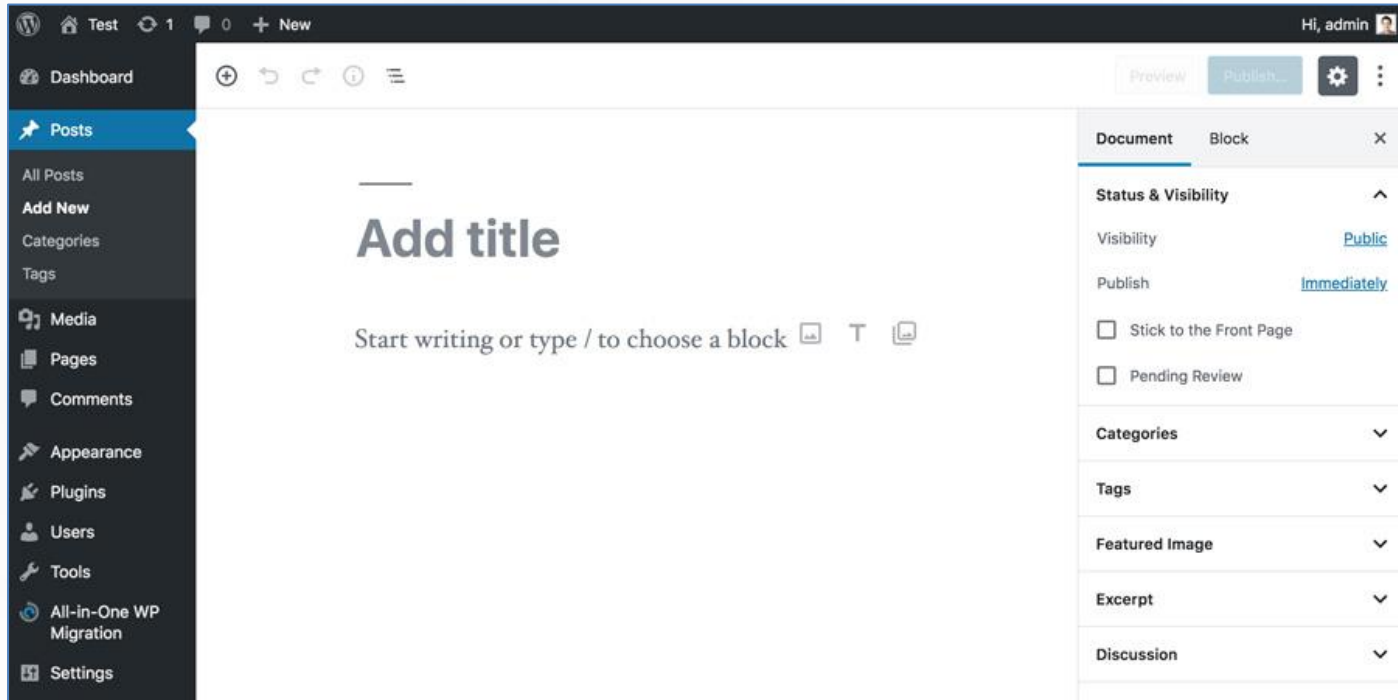
How does CMS work?

- A **modern website** consists of two main parts:
 - The **front-end** is the part visitors see in the browser
blog posts, images, videos, About and Contact pages, newsletter forms,...
 - The **back-end** consists of the database and the functionality of a website
The content is saved into the database, and it's pushed from the back-end to the front-end whenever a user requests a web page
- If use a CMS, there's no need to write either front-end or back-end code

How does CMS work?

- CMS allows you to use a content editor to create posts, pages, web shops, and push all content online
- You can also configure settings with the help of drop-down menus, checkboxes, and other controls
- With a CMS, don't need to manually upload content, as it manages the whole process for you. When content is ready, simply press the Publish button and it instantly appears on the site

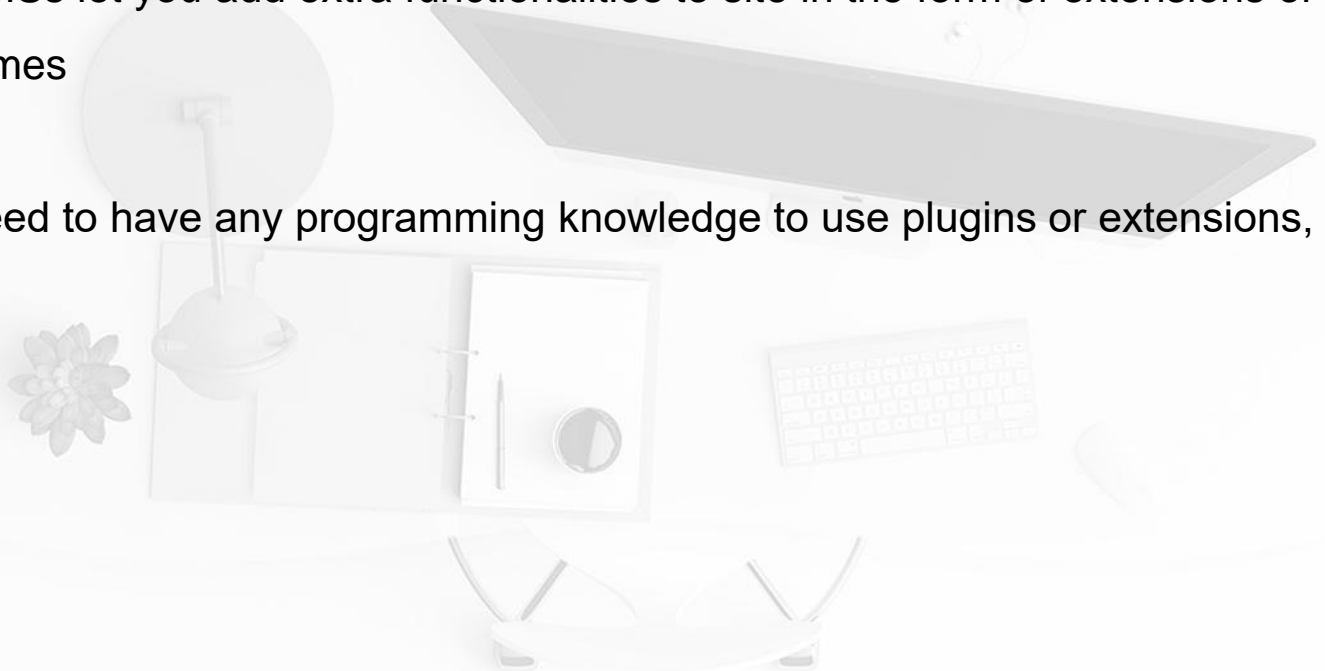
How does CMS work?



WordPress content editor

Plugins, Themes and Extensions

- Most CMSs let you add extra functionalities to site in the form of extensions or plugins and themes
- Don't need to have any programming knowledge to use plugins or extensions, either



Pros and Cons of Using CMS

▪ Pros

- Most CMSs are open source and available for free so, you only have to pay for the domain and web hosting
- Using a CMS doesn't require any programming knowledge
- You can easily install and update both the CMS and the related themes, plugins, and extensions
- You can choose from hundreds or thousands of pre-designed themes
- You can add extra functionalities using plugins or extensions, such as SEO, security, newsletters, social media buttons, and web shops

Pros and Cons of Using CMS

▪ Pros

- CMSs come with user management functionalities. You can quickly set up different user roles such as subscriber, author, editor, and administrator
- Most CMSs have a huge community around them, including support forums, online chats, Slack channels, meetup groups, and more
- CMSs are well-documented. You have access to online docs, FAQ pages, theme and plugin descriptions, tutorials, and videos

Pros and Cons of Using CMS

▪ Cons

- Pre-designed themes sometimes look cookie-cutter

Although themes are customizable if you choose a popular one you may bump into many other sites with a similar design

- CMSs have less flexibility than hand-coded websites

If you need a unique feature you may have to hire a programmer to implement it

Pros and Cons of Using CMS

▪ Cons

- Websites using popular CMSs are more frequently targeted by hackers
However, the security risks can be highly reduced by using a security plugin.

- CMSs can slow down websites

Pages usually don't load as fast as on a hand-coded website.

In most cases, to improve page load times you will need to use additional plugins and extensions

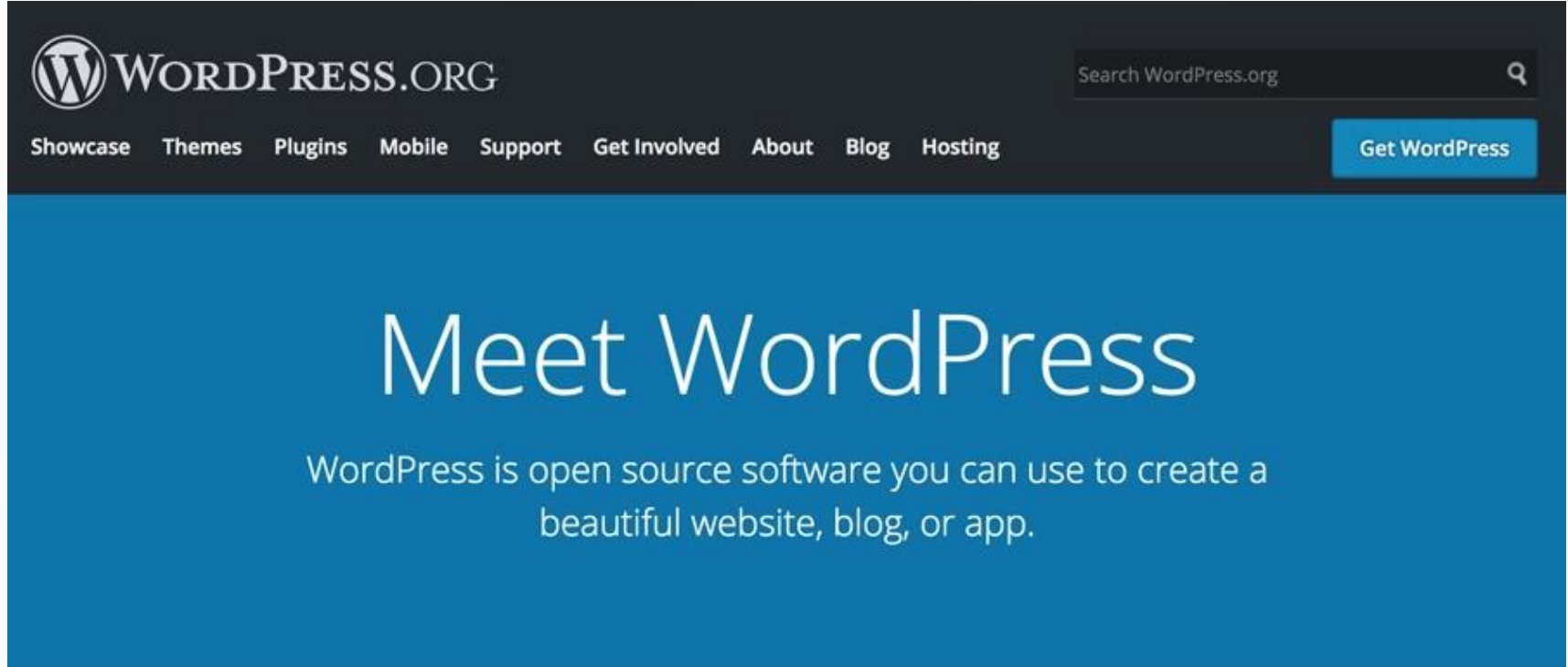
Popular CMS

Popular **CMS**
by Market Share
(Ranked & Compared)



WordPress

wordpress.org



The largest market share among its competitors by far

WordPress

wordpress.org

- WordPress was conceived as a blogging platform, it's grown far beyond that point
- The platform is easy to use, and you can customize it using plugins and themes
- When it comes to CMSs, WordPress also provides a top-notch experience
 - Publishing new posts and pages is simple, and you have a powerful editor to format content
 - The platform also supports user registration, gets regular updates, and features

WordPress

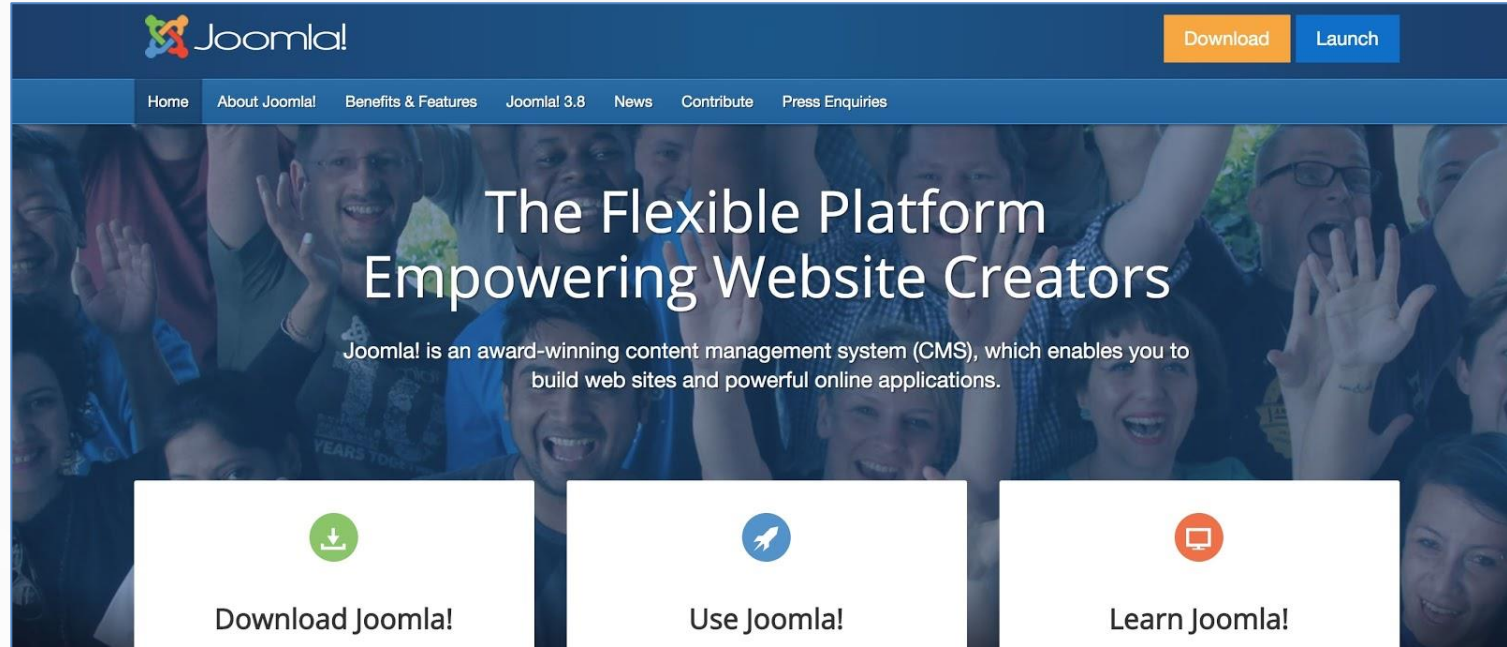
wordpress.org

▪ Key Features

- Includes intuitive publishing and content management options
 - Provides a powerful editor that enables you to format your content with ease
 - Is highly customizable, thanks to thousands of plugins and themes
 - Has a strong and vibrant community
- The **only downside** is that sometimes you'll need to mix and match a lot of plugins to add the precise functionality you need

Joomla!

joomla.org



Joomla is one of the names coming up most often alongside WordPress when people debate which is the best CMS software

Joomla!

joomla.org

- Joomla may not be as beginner-friendly as WordPress but it can be more flexible in some aspects
- Joomla also includes **multilingual support** out of the box
That means you don't need to use plugins or extensions to add more languages to your site
- Joomla also enables you to use **multiple templates or themes at once**, for different types of content

Joomla!

joomla.org

▪ Key Features

- Offers excellent support for custom post types
- Provides advanced user management options
- Includes multilingual support out of the box
- Supports using unique templates for each page type

▪ Drawbacks

- It's not as beginner-friendly as WordPress, so it may take you longer to learn how to run a website using this CMS
- It also doesn't offer as many extensions or templates as some of its competitors

Drupal

drupal.org



Drupal is another name carrying a lot of weight in discussions about the best open source CMS

Drupal

drupal.org

- Drupal shines in a lot of the same areas Joomla does
 - It offers a very flexible system for dealing with custom post types
 - It also gives you a high degree of control over users and their permissions,
 - It can even handle multilingual sites out of the box.
- Taxonomy system is much more powerful than its competitors
- Drupal is a more secure platform than both WordPress and Joomla

Drupal

drupal.org

▪ Key Features

- Offers a flexible custom post creation and management system
 - Provides advanced user management and permission settings
 - Includes support for multilingual sites out of the box
 - Has a detailed taxonomy system
 - Boasts top-notch security for your website
- Drupal is renown for scalability and security, which often makes it a better option for enterprise and business sites

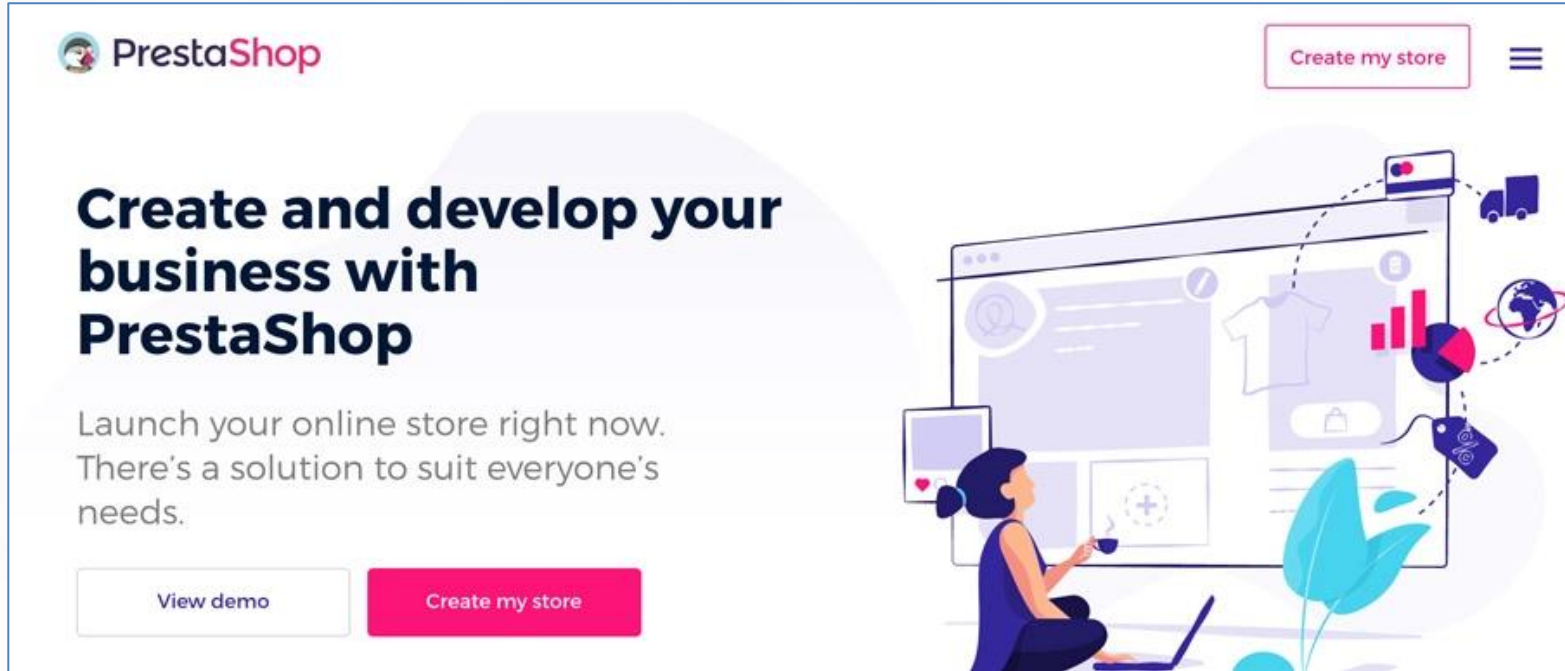
Drupal

drupal.org

- It does feature a steep learning curve
 - Don't recommend that you use Drupal unless you have web development experience
 - However, if you are comfortable with development, this is **one of the best CMS options** available today

PrestaShop

prestashop.com

The image is a screenshot of the PrestaShop homepage. At the top left is the PrestaShop logo, which consists of a small circular icon with a person and the text 'PrestaShop' in a sans-serif font. To the right of the logo is a pink button with the text 'Create my store' and a hamburger menu icon. The main heading is 'Create and develop your business with PrestaShop' in a large, bold, dark blue font. Below this is a paragraph of text: 'Launch your online store right now. There's a solution to suit everyone's needs.' At the bottom left are two buttons: a white one with a black border labeled 'View demo' and a solid pink one labeled 'Create my store'. On the right side of the banner is a large illustration. It shows a woman with dark hair in a ponytail, wearing a blue dress, sitting on the floor and working on a laptop. She is holding a cup of coffee. Behind her is a large, stylized computer monitor. The screen of the monitor displays a web interface with a shopping cart icon, a plus sign in a circle, and a t-shirt icon. To the right of the monitor are several floating icons connected by dashed lines: a credit card, a truck, a bar chart, a pie chart, a globe, and a price tag. A large blue leaf is also part of the illustration.

PrestaShop is an increasingly popular CMS for running online shops

PrestaShop

prestashop.com

- PrestaShop is an excellent solution for **small and medium-sized eCommerce** businesses
- It allows you to quickly set up an online store, customize design, and upload products.
- PrestaShop puts a great emphasis on complying with the law
You can configure taxes depending on location, make your checkout process compliant with local laws, and more

Magento

magento.com

The screenshot shows the Magento website homepage. At the top left is the Magento logo with the tagline "An Adobe Company". To the right is an orange button that says "GET A FREE DEMO". Below the logo is a dark navigation bar with links for Products, Solutions, Partners, Community, Resources, and Blog. On the right side of the navigation bar are icons for a phone, a user profile, and a search magnifying glass. The main content area is split into two columns. The left column has a white background and features the text "Magento 2.3 Now Available" in large, bold letters, with "Now Available" in orange. Below this is the sub-headline "New Tools to Fuel Your Growth in 2019" and a paragraph of text: "Magento helps merchants while empowering developers to deliver on client expectations faster and more easily. See what's new in our latest release including multi-source inventory, PWA Studio, Page Builder and more." At the bottom of this column is an orange button that says "LEARN MORE". The right column has a dark background with a large image of a hand holding a smartphone. The phone screen displays a mobile app interface for "LUMA" with a "BEST SELLERS" section. It shows four items: "Aqua Running Short" for \$40.00, "Haze Practice Tank" for \$38.99, "Crew Handled Ice Planks" for \$28.99, and "Diana Tights" for \$29.99. A finger is shown tapping one of the items. In the bottom right corner of the phone screen is a circular orange icon with a white speech bubble and a phone handset.

Magento[®]
An Adobe Company

GET A FREE DEMO

Products ▾ Solutions ▾ Partners ▾ Community ▾ Resources ▾ Blog

Magento 2.3
Now Available

New Tools to Fuel Your Growth in 2019

Magento helps merchants while empowering developers to deliver on client expectations faster and more easily. See what's new in our latest release including multi-source inventory, PWA Studio, Page Builder and more.

LEARN MORE

LUMA

BEST SELLERS

Aqua Running Short \$40.00

Haze Practice Tank \$38.99

Crew Handled Ice Planks \$28.99

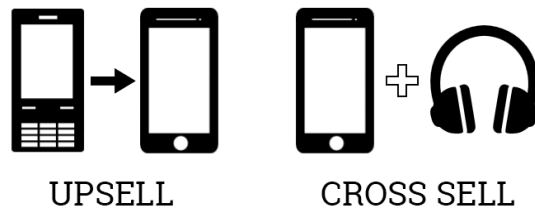
Diana Tights \$29.99

Magento is a popular eCommerce platform used by companies like Samsung, Nike, and Ford

Magento

magento.com

- It allows you to build a **complex online shop** with all kinds of eCommerce features
- You can create professional product and delivery pages, manage inventories, orders, and shipping, and more
- With Magento, you can also add coupons, landing pages, up-sell and cross-sell campaigns to an online store



How to Choose the Right CMS

The most important questions you need to answer:

1. What type of website do you need?

- For an e-shop, choose an eCommerce CMS such as WooCommerce or Magento
- For a blog or small business site, WordPress can be an ideal choice
- For a corporate site for a mid-sized business, you can also consider Drupal

2. What kind of design do you want?

Before choosing a CMS, take a look at how the themes they offer look like. Do they have any themes you can imagine for your own website?

How to Choose the Right CMS

3. What kinds of functionalities do you need?

Check out if the CMS has plugins or extensions for everything you need, including security, caching, marketing, social media sharing, ads, and SEO.

4. How much you can spend on your website?

You have to pay for the domain and web hosting. Although most plugins, extensions, and themes are free, some more advanced ones do come with a price tag. Calculate the overall cost you have to pay each year.

5. Will you have any extra needs in the future?

For instance, if you plan to create an online portfolio choose a CMS that have a decent selection of portfolio plugins

How to Start Using a CMS

Before you start to use a CMS, there are a couple of other tasks you need to do:

1. **Choose a web hosting company** that supports the CMS you want to use
2. **Choose and register a domain** (sometimes, you can also get a domain for free)
3. Start to **set up the CMS** from hosting account

These days most web hosts provide you with one-click CMS setups



Q&A