

Web Programming Open Course

YJ – Mar 2016

Why?

Permanent Residency

Permanent Residency

261311 - Analyst Programmer

135111 - Chief Information Officer

263111 - Computer Network and Systems Engineer

262111 - Database Administrator

261312 - Developer Programmer

261111 - ICT Business Analysts

135199 - ICT Managers NEC

135112 - ICT Project Manager

263211 - ICT Quality Assurance Engineer

262112 - ICT Security Specialist

263299 - ICT Support and Test Engineer NEC

26212 - ICT Support Engineer

26213 - ICT Systems Test Engineer

22311 - ICT Trainer

26111 - Multimedia Specialist

263112 - Network Administrator

263113 - Network Analyst

261313 - Software Engineer

261314 - Software Tester

262113 - Systems Administrator

261112 - Systems Analysts

313113 - Web administrator

261212 - Web Developer

261399 - Software and Application Programmer

Job

Job



Job Search


\$150k+ Jobs

Profile

3,206 jobs found

Active filters:

web developer 

All Australia 

Job

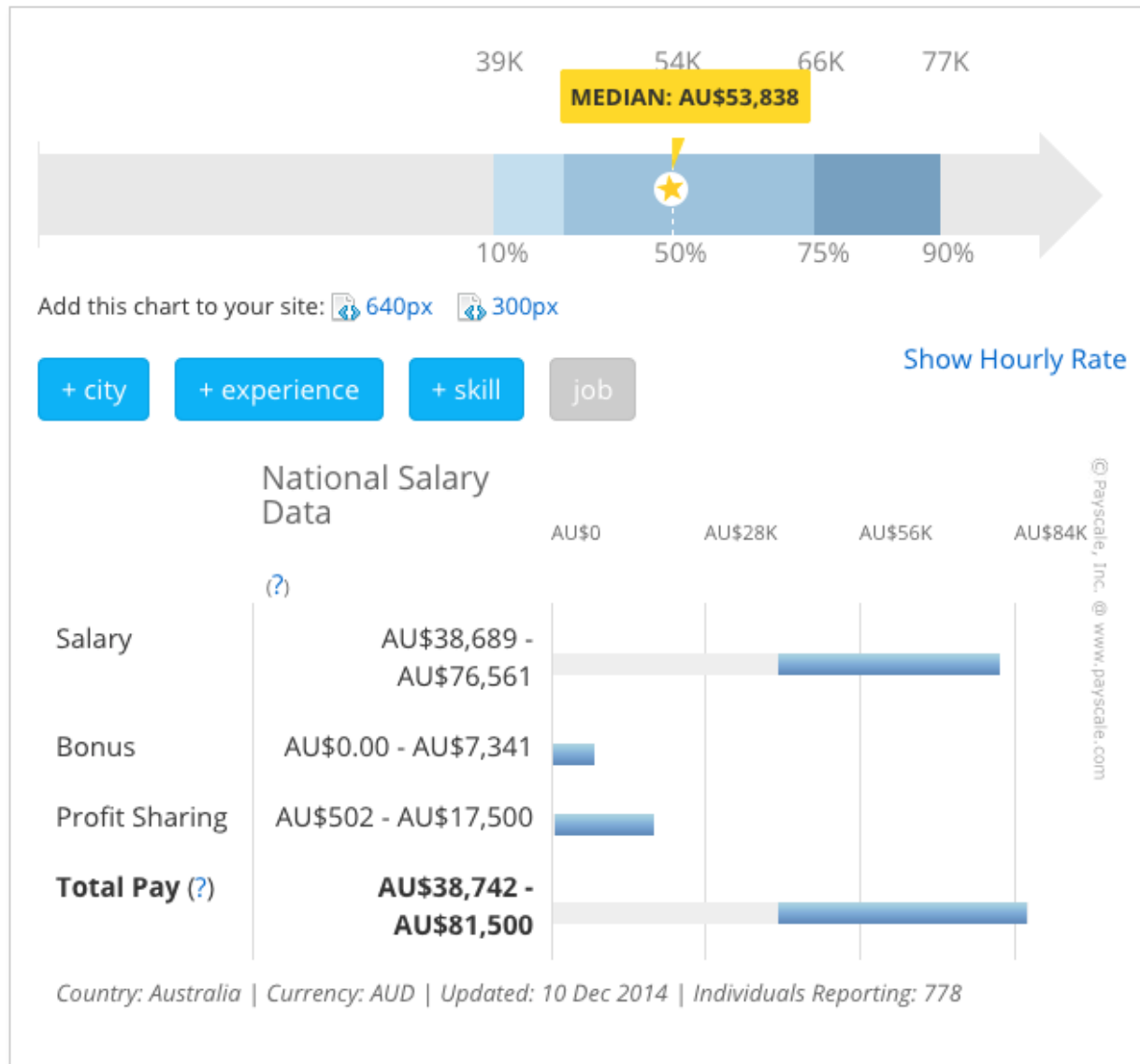
Job Trends from Indeed.com

— full stack web developer

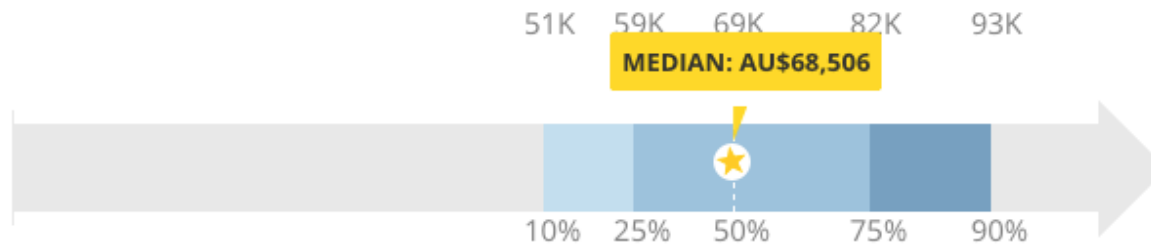


Money

Money



Money

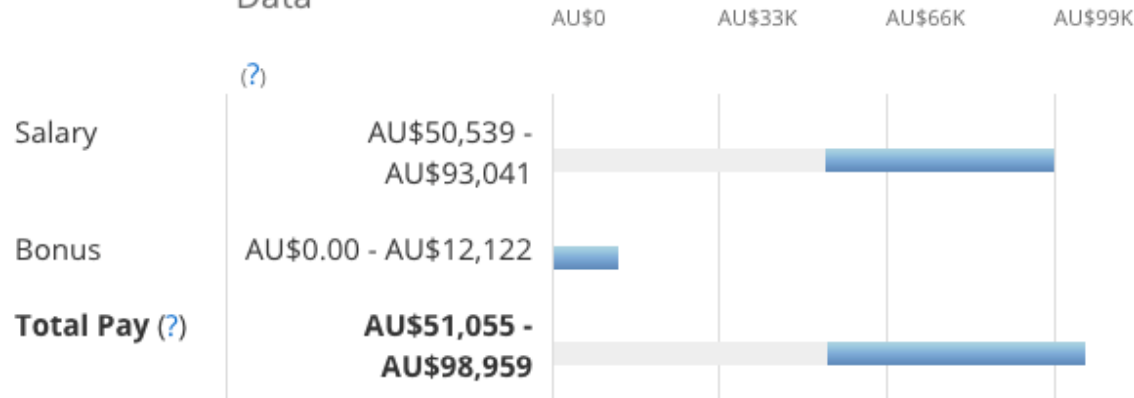


Add this chart to your site: 640px 300px

job

[Personalized Salary Report »](#)

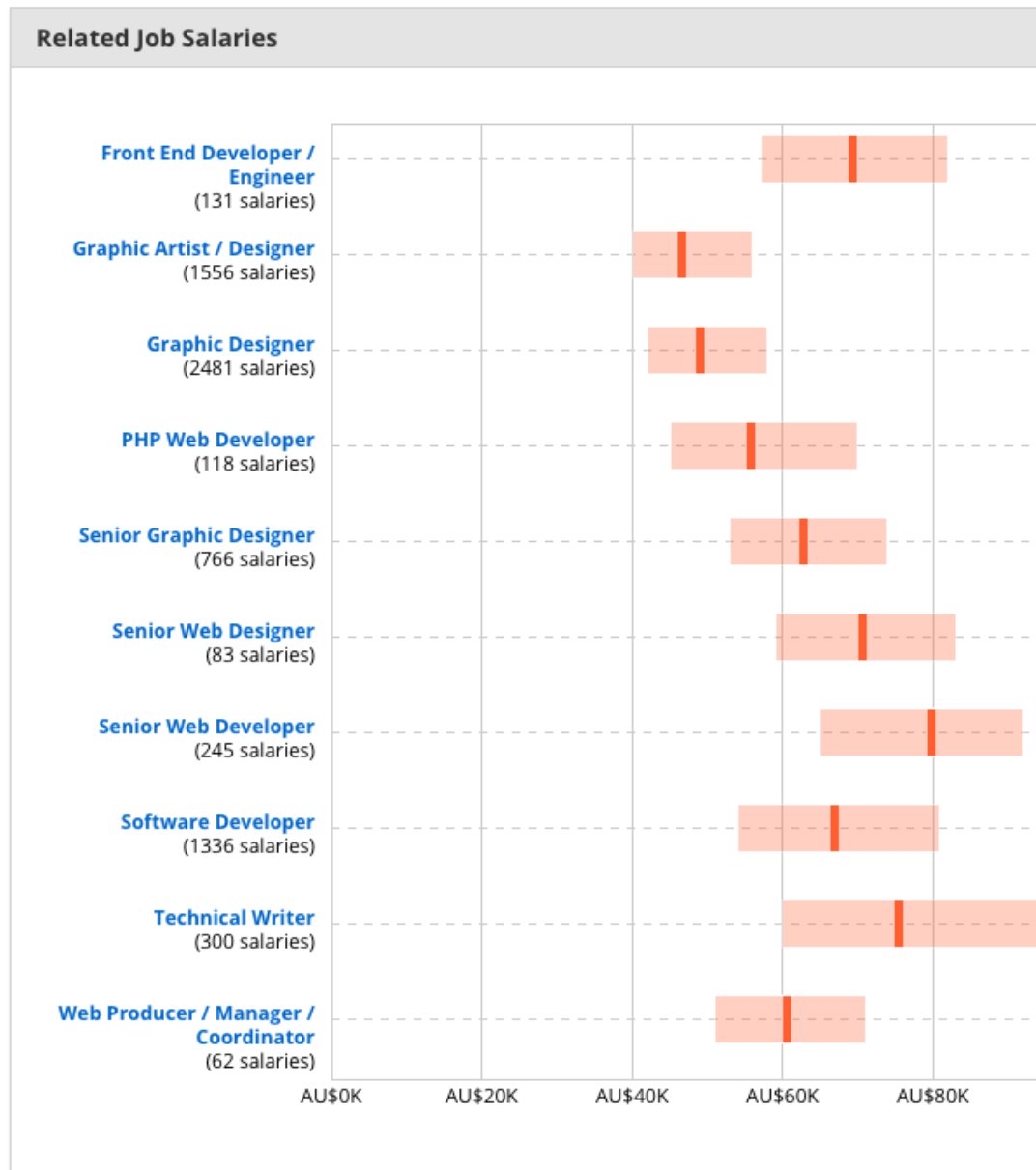
National Salary Data



© PayScale, Inc. @ www.payscale.com

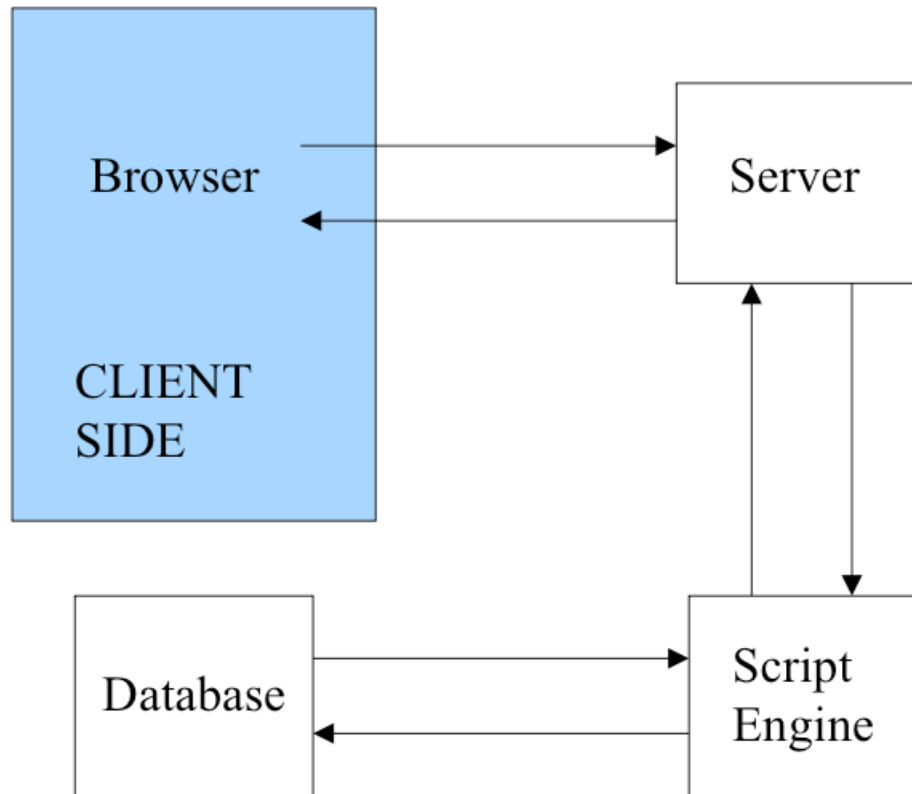
Country: Australia | Currency: AUD | Updated: 10 Dec 2014 | Individuals Reporting: 78

Money

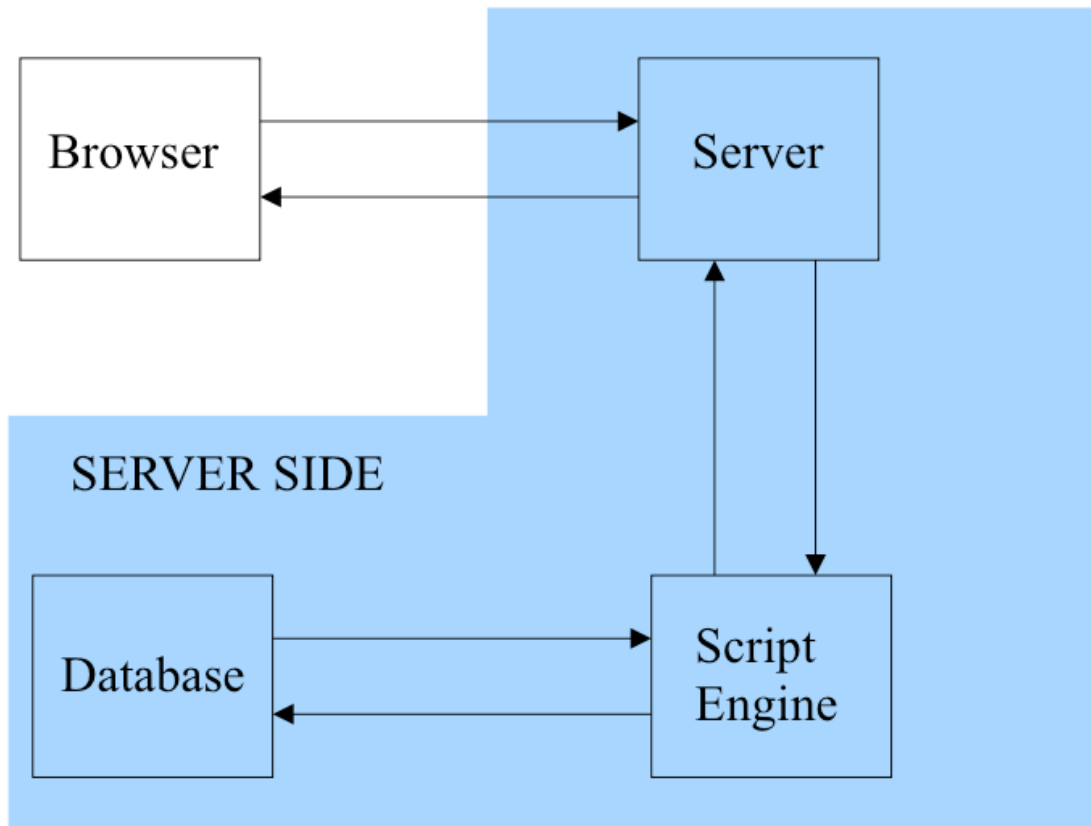


What?

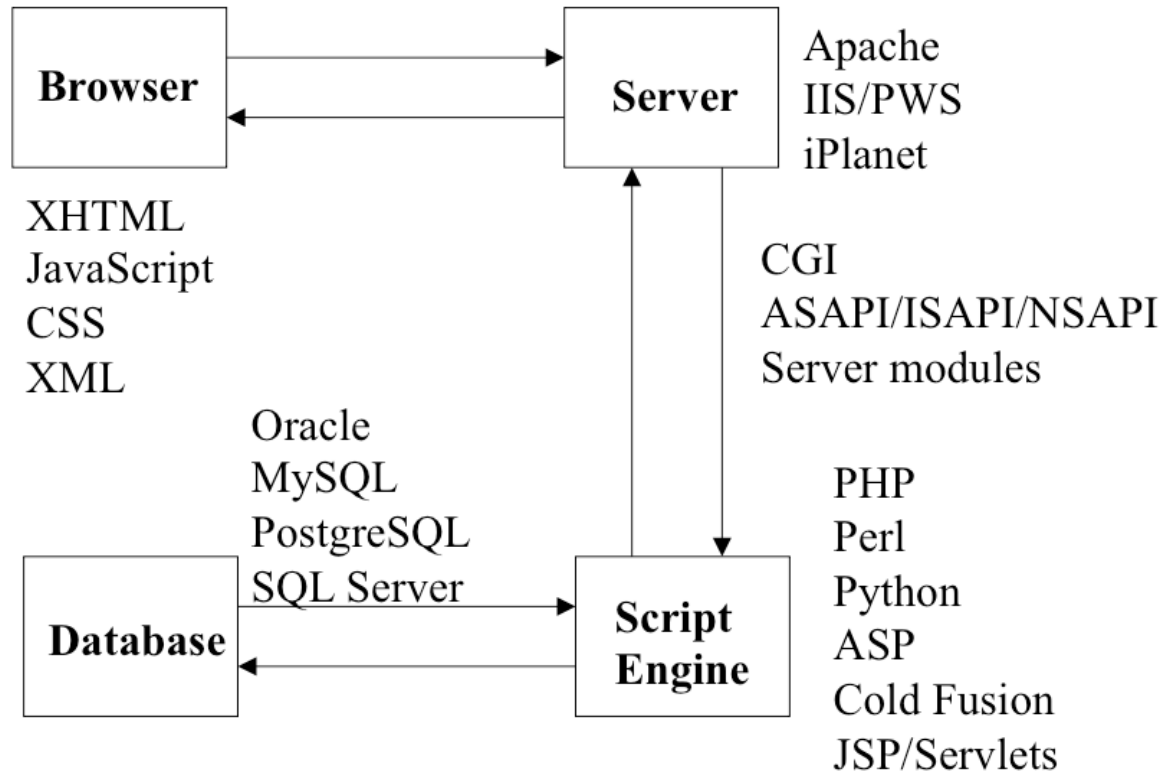
Client side



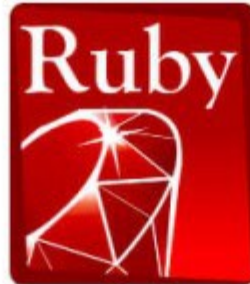
Server side



Technologies



Mainstream Languages



C#



C++



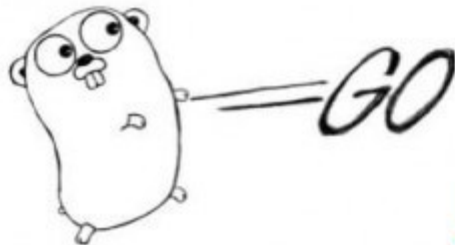
Objective-C



python



Perl



JavaScript

THE
C
PROGRAMMING
LANGUAGE





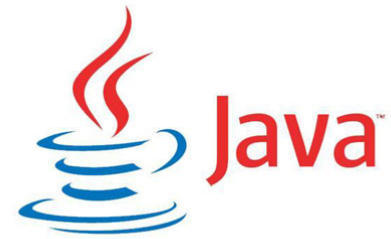
❖ What

Apart from the name, these languages have very little in common.

❖ Why

JavaScript is used by 88% of all websites.

Even though it is primarily used for front end development, frameworks like Node.js allow programmers to write backend software too.



❖ What

Java is a general-purpose programming language that can run on virtually any type of computer and is independent of both device and platform.

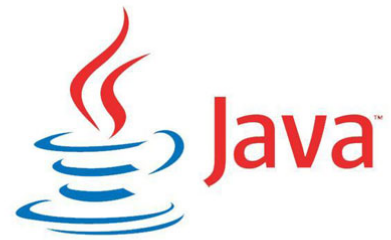
It's kind of like lego bricks, which can be used in other programs, without having to rewrite it.

❖ Why

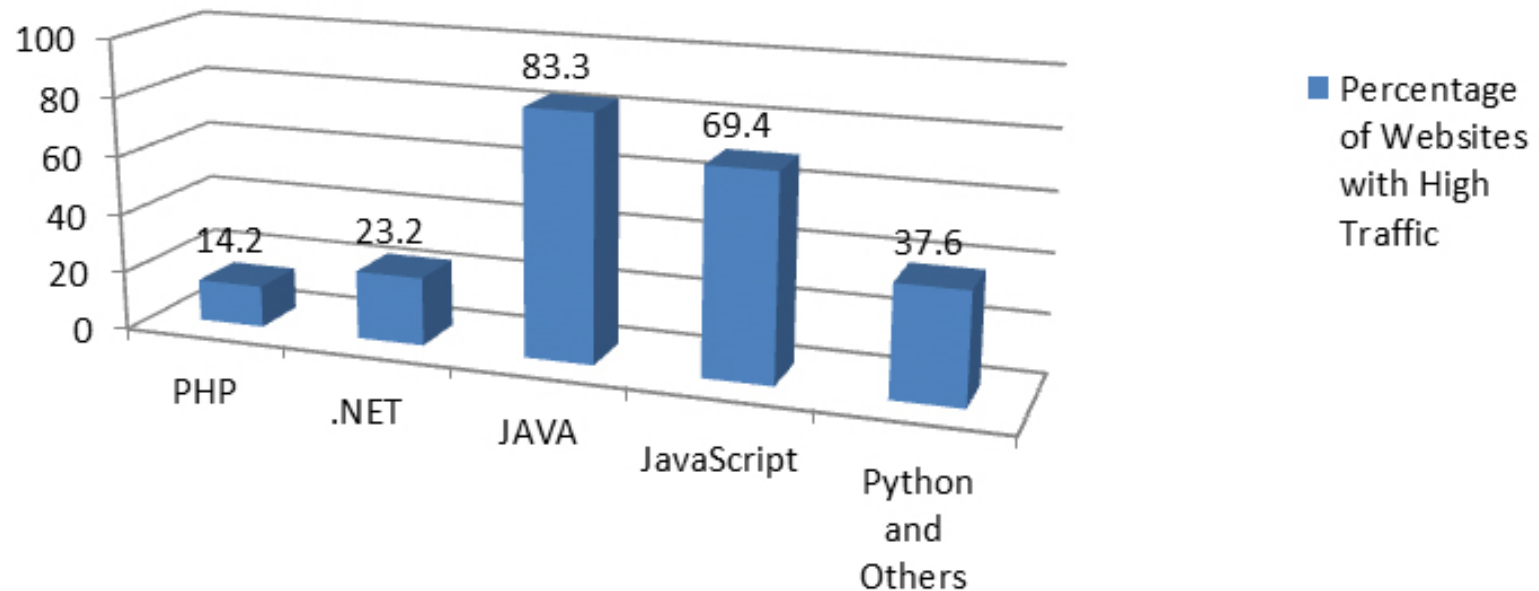
Java is regarded as the perfect language for web development.

At the moment, it is said to be the top most programming language in the industry.

Java is one of the most in-demand languages. Businesses both large and small are powered by applications written in this language.



Programming Language vs High Traffic Websites





❖ What

C# was intended to be a general purpose language for Microsoft products. C# can be used to develop standard Windows software and server side web applications. This language is a part of Microsoft's .NET family which contains many other languages that are sometimes combines with C# on big projects.

❖ Why

If you're interested in developing Windows specific applications or developing a website which will run on a Windows server, C# is a good choice.



❖ What

PHP means PHP Hypertext Preprocessor.

PHP is an HTML-embedded scripting language and it is employed to form dynamic pages promptly.

❖ Why

PHP is one of the most generally used languages for web development.

PHP controls lots of websites that are WordPress, Digg, and Facebook.



Server Side Programming Language



More than 75% of the top websites use PHP as their server side programming language.



❖ What

This language was designed to be highly readable making it very easy for beginners.

Despite its relatively small learning curve, it still packs the power to do very cool stuff like scientific computing, web development and 3D rendering.

❖ Why

Python can be picked up at a rather fast pace. This makes Python an extremely beginner friendly language.

Instagram, YouTube, and Reddit are all examples of what Python is capable of.



❖ What

Ruby (like Python) is a powerful yet easy to learn programming language.

It didn't become popular until its Rails framework was developed. Rails is a framework which makes web development in Ruby extremely intuitive.

❖ Why

As previously mentioned Ruby is very similar to Python.

Ruby is recognized for its simple and effective writable techniques and it is a user-friendly language for beginners.

Twitter is the world famous social media website which was originally developed with Ruby using its Rails framework.



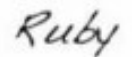
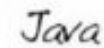
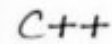
❖ What

SQL stands for Structured Query Language. SQL was designed to allow programmers to easily manage data held in database systems.

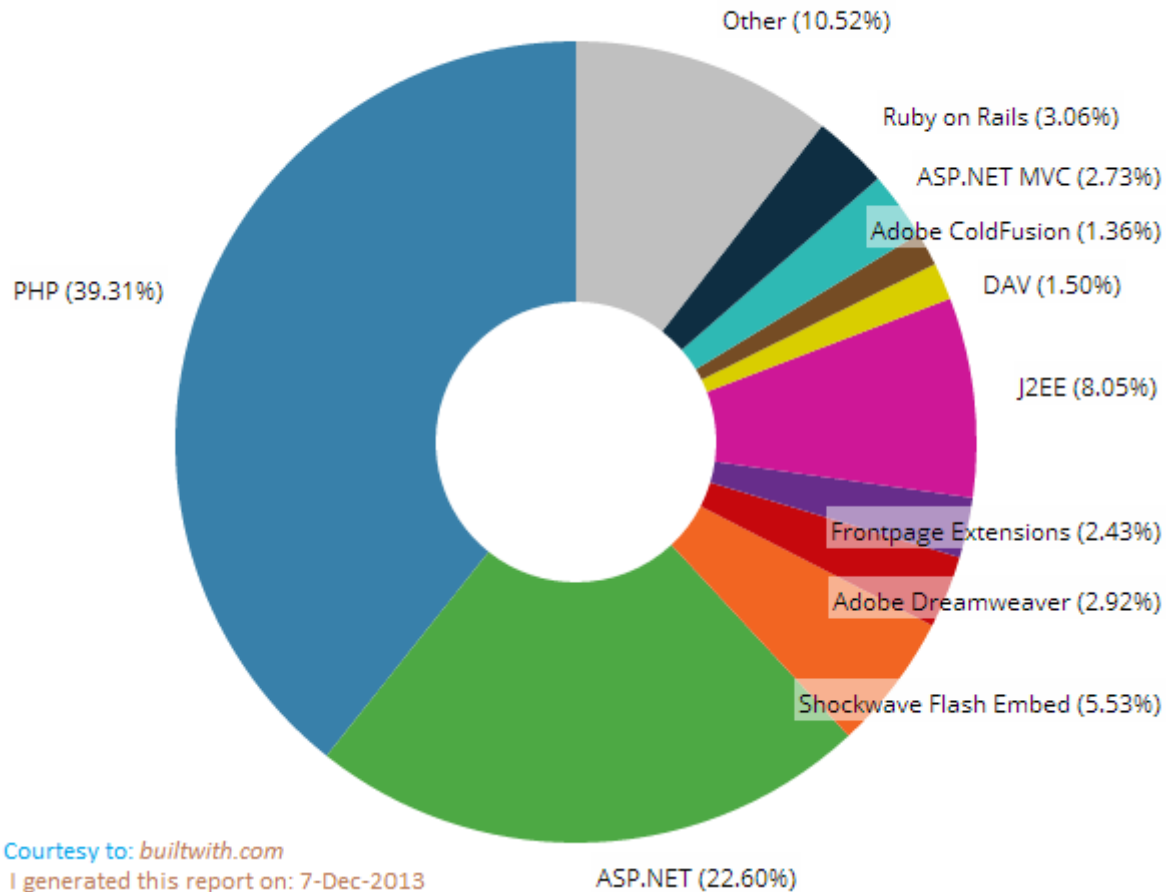
❖ Why

When the web developers implement on databases such as Microsoft SQL server, Oracle, MySQL, etc, they have to know about SQL programming language because through this language they can accomplish the knack of obtaining the required data from large and multifaceted databases.

The Evolution Of Computer Programming Languages



Mainstream Languages



Framework?

Popular Frameworks



❖ JavaScript

There are many JavaScript frameworks available. JavaScript frameworks are an increasingly popular way to build web applications.

jQuery

jQuery is a cross-platform JavaScript library designed to simplify the client-side scripting of HTML.

jQuery provides a simple interface for the underlying JavaScript. It's easier for many users to learn jQuery first, then dive into the nitty-gritty JavaScript details later.

jQuery's syntax is designed to make it easier to navigate a document, select DOM elements, create animations, handle events, and develop Ajax applications.

```
$(document).ready(function(){  
    $('img').click ( function() {  
        // handle the click event on any img element in the page  
    });  
});
```

Popular Frameworks

❖ JavaScript

AngularJS



In Angular, both the Model and the View can update the data, thus the “two-way” descriptor. Two-way data binding is a much loved feature of AngularJS that describes the condition where data is bound to an HTML element in the View and that element has the ability to both update and display that data.

Another popular feature is directives, which allow developers to extend HTML by attaching special behaviors to parts of the DOM.

Dependency injection is another great feature of Angular that allows developers to easily include services in their modules.

Backbone.js



As one of the oldest of the JavaScript frameworks. Backbone may be better suited for more advanced JavaScript developers. It's minimalism can be both a blessing and a challenge depending on the experience level of the developer working with it.

Node.js



It is actually a runtime environment runs on server-side and handles all the server-side logic.

Popular Frameworks



❖ JAVA

Spring MVC

The Spring Web model-view-controller (MVC) framework is designed around a `DispatcherServlet` that dispatches requests to handlers, with configurable handler mappings, view resolution, locale, time zone and theme resolution as well as support for uploading files.

Popular Frameworks

❖ C#, ASP.NET



Microsoft's .NET platform is heavily used in business applications running the Microsoft Windows operating system.

.NET is more or less a closed ecosystem controlled by Microsoft. Widely adopted by enterprises, the documentation and the support services for the language are comprehensive.

The ecosystem of .NET is based on a licensed software model. This means that when third party tools are required, somebody somewhere will need to pay for a license and that eventually will fall upon you. Choosing .NET is likely to cost more than choosing an open source platform.

Popular Frameworks



❖ Python

Django

Django's primary goal is to ease the creation of complex, database-driven websites.

Python is used throughout, even for settings, files, and data models. Django also provides an optional administrative create, read, update and delete interface that is generated dynamically through introspection and configured via admin models.

Popular Frameworks



❖ Ruby

Ruby on Rails

An extremely productive web-application framework.

You could develop a web application at least ten times faster with Rails than you could with a typical Java framework.

An open source Ruby framework for developing database-backed web applications.

Your code and database schema are the configuration!

Popular Frameworks



❖ HTML

Bootstrap

Bootstrap is definitely the most popular and widely used framework, nowadays. It's a beautiful, intuitive and powerful web design kit for creating cross browser, consistent and good looking interfaces.

It offers many of the popular UI components with a plain-yet-elegant style, a grid system and JavaScript plugins for common scenarios.

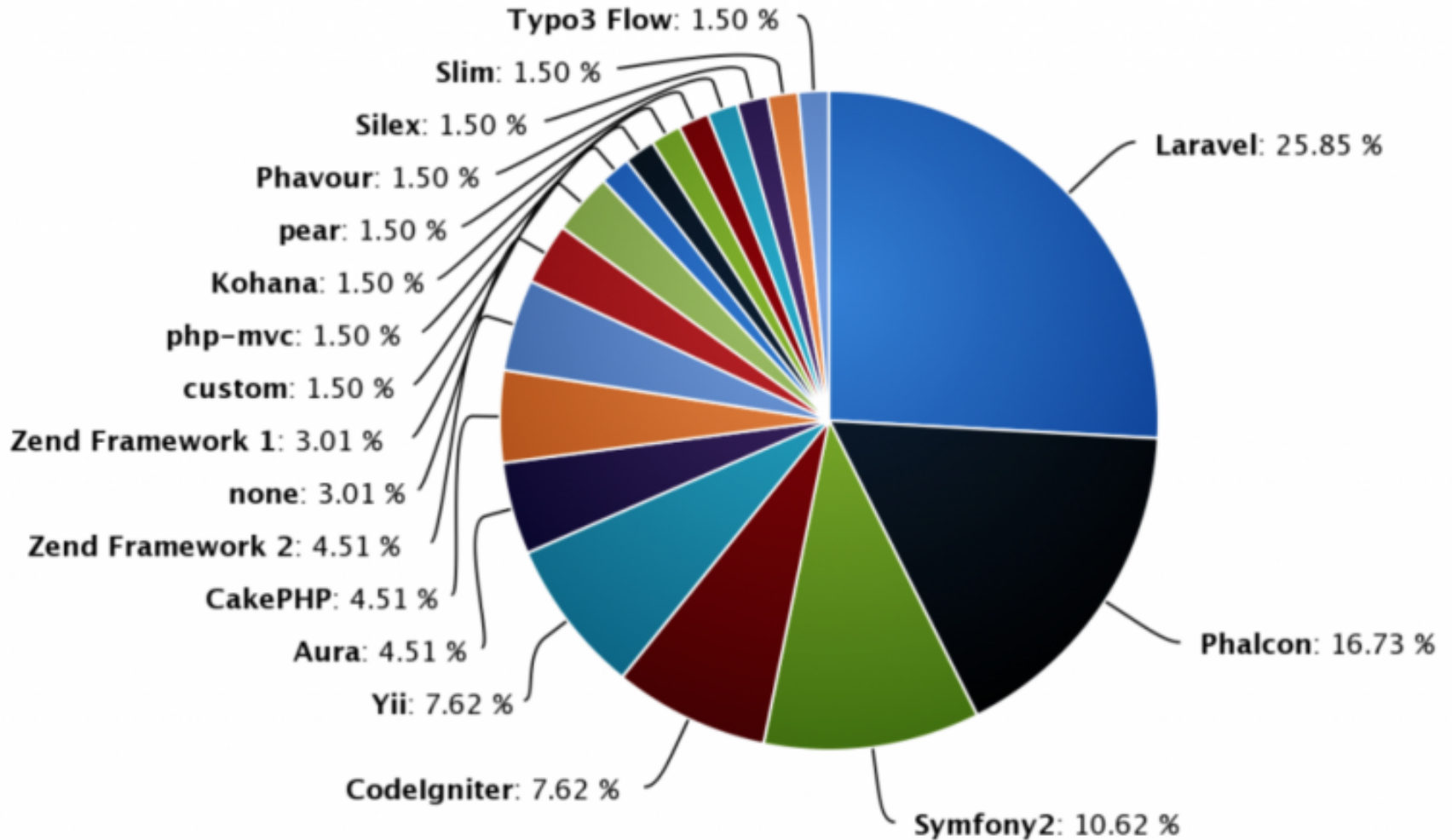
Popular Frameworks

❖ PHP

PHP itself is a very weak and dangerous language. But its easy to learn for beginners. PHP is very special as you can learn the language quickly but it takes a long time to become a good PHP developer. Mostly you you have to see a lot of to know how to use PHP more professional. These frameworks out there try to handle and copy concepts from other better OOP programing languages, frameworks and paradigms.

1. Laravel
2. CodeIgniter
3. CakePHP
4. Symfony 2
5. Zend Framework 2
6. Phalcon
7. Yii 2
8. Aura
9. PHP-MVC
10. Kohana
11. FuelPHP
12. Slim

PHP Framework



How?

Choosing a Language

- ❖ Determine your area of interest

Don't Get Hung Up on Choosing a Language !!!!

- ❖ Consider starting with a "simpler" language
- ❖ Read through some basic tutorials for a variety of languages

Starting Small

- ❖ Learn the core concepts of the language
 - > Variables
 - > Conditional Statements
 - > Functions or Subroutines
 - > Data input
- ❖ Install any necessary software
 - > Environment
 - > IDE
 - > Plugins

Teach yourself

- ❖ Focus on one concept at a time
- ❖ Learn through deconstruction of online examples
- ❖ Examine the syntax.
 - > The syntax is the way the language is written so that the compiler or interpreter can understand it.
- ❖ Experiment with changes
- ❖ Start practicing debugging
- ❖ Comment all of your code

Devoted

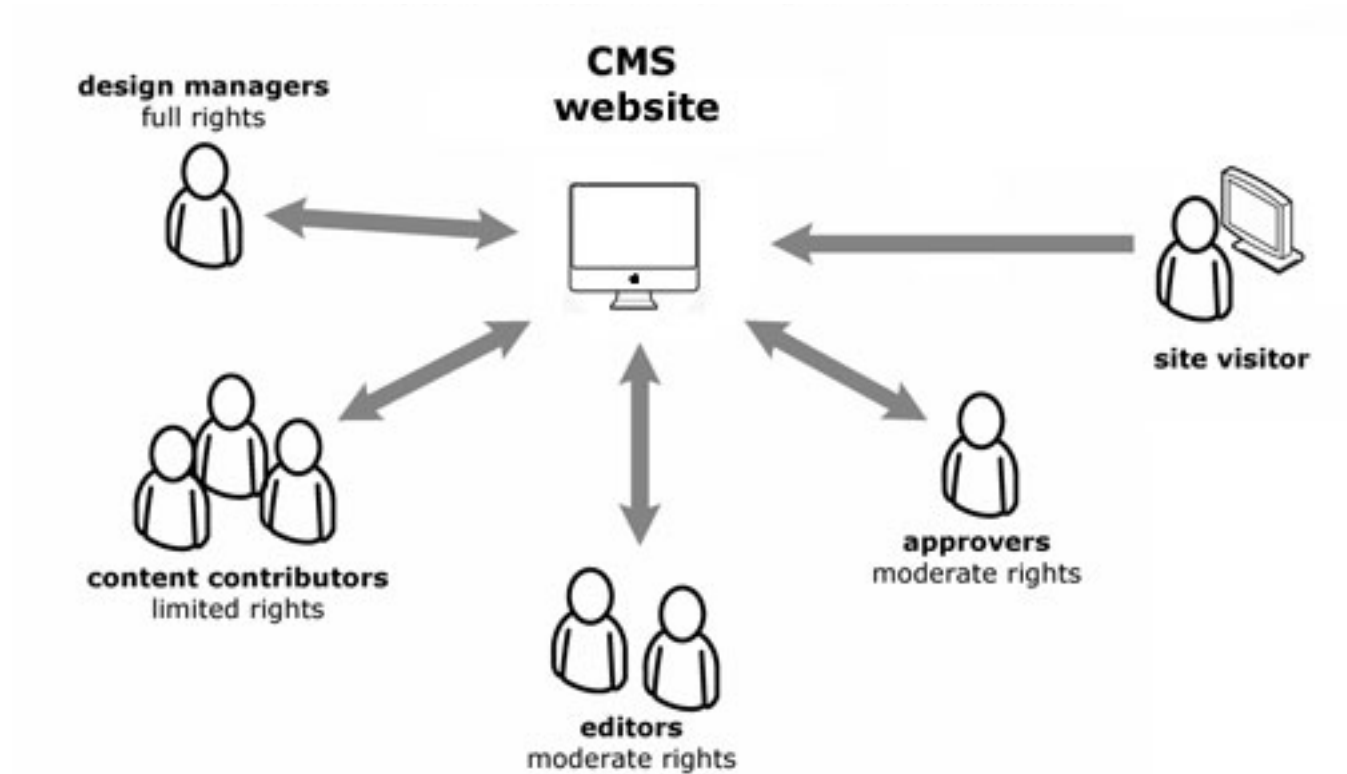
- ❖ Keep coding
 - > Code daily
 - > Set goals for your programs
 - > Challenge yourself to keep it fun
- ❖ Keep learning
 - > Talk with others and read other programs
 - > Take a few training courses
 - > Buy or borrow a book
 - > Study math and logic
 - > Learn another programming language

A few more

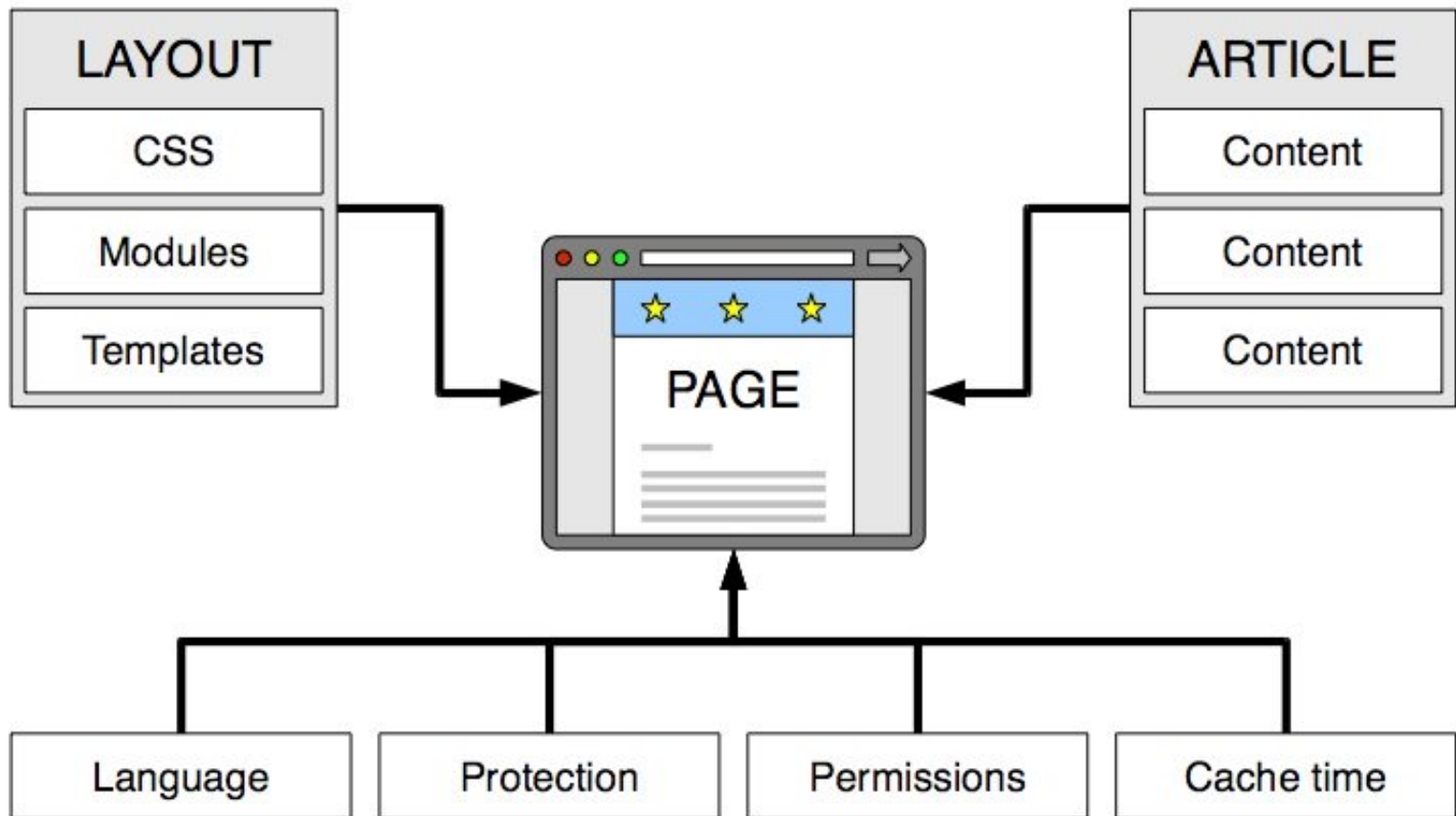
Content Management System



Content Management System



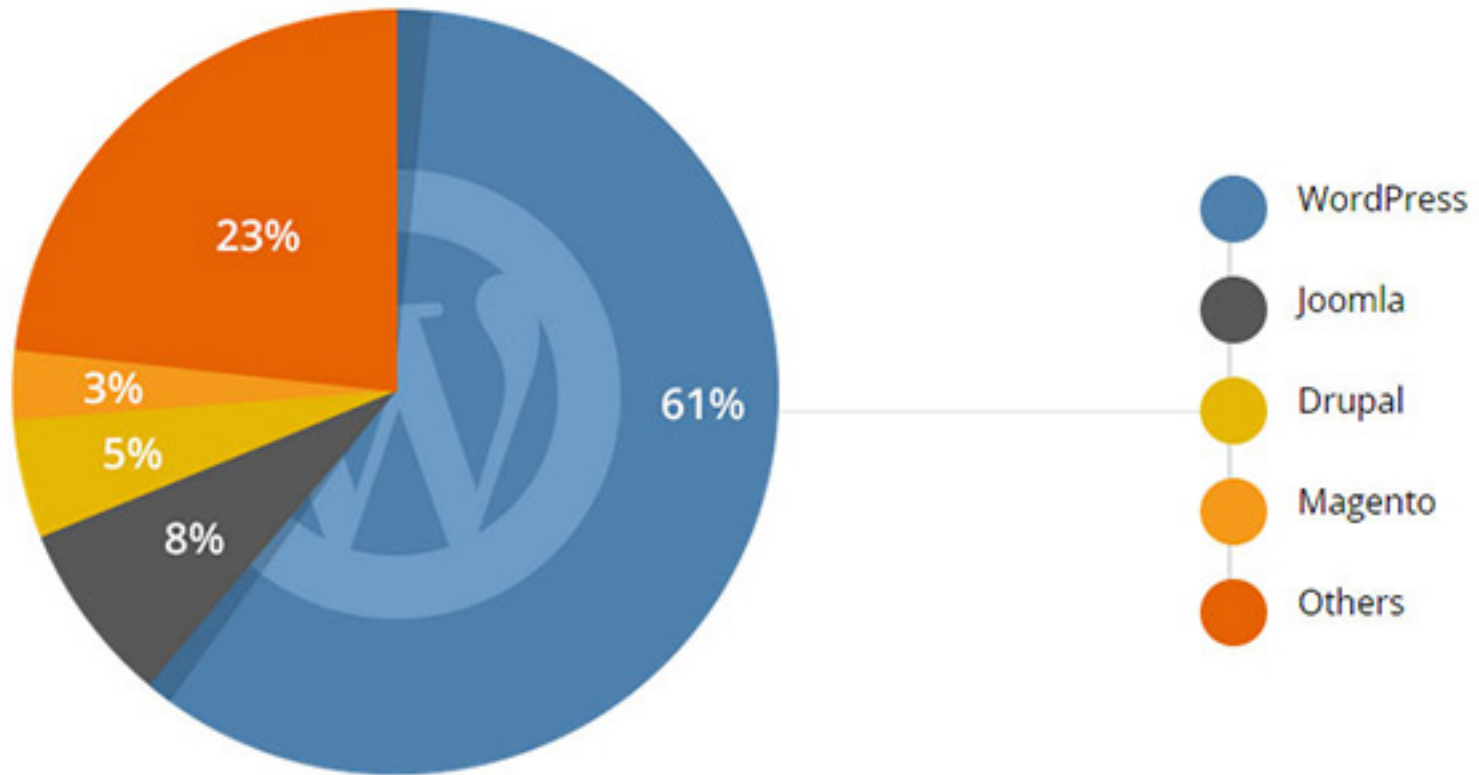
Content Management System



Content Management System



Content Management System



WordPress



WordPress is a completely free tool (based on PHP and MySQL) used to create dynamic websites.

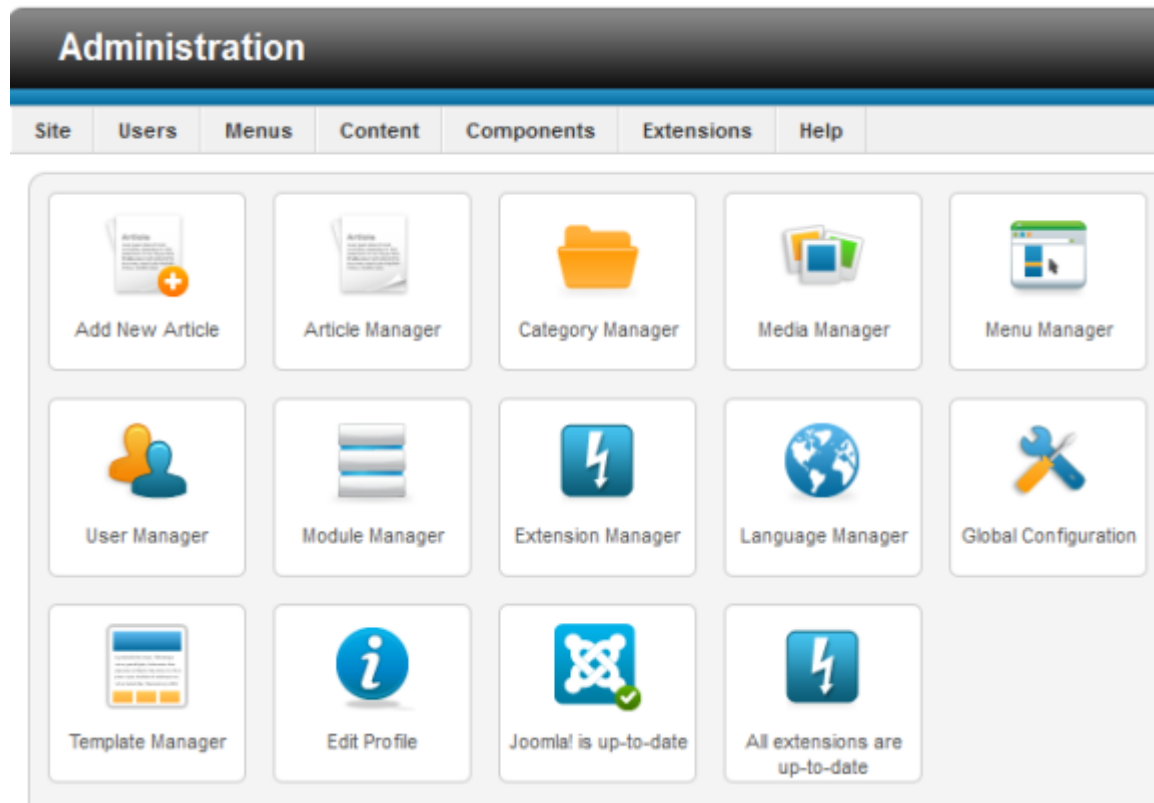
WordPress was used by more than 23.3% of the top 10 million websites as of January 2015. WordPress is the most popular blogging system in use on the Web, at more than 60 million websites.

A screenshot of the WordPress dashboard interface. The top navigation bar includes links for 'Upgrade to Pro', 'New Post', a user profile 'Dave', and a search icon. The left sidebar contains a menu with options like 'Dashboard', 'Home', 'Comments I've Made', 'Site Stats', 'Akismet Stats', 'My Blogs', 'Blogs I Follow', 'Store', 'Posts', 'Media', 'Links', 'Pages', 'Comments', 'Feedbacks', 'Appearance', 'Users', 'Tools', 'Settings', and 'Collapse menu'. The main content area is titled 'Dashboard' and features several widgets: 'Right Now' showing content and discussion statistics (8 Posts, 1 Page, 5 Categories, 52 Tags, 9 Comments, 9 Approved, 0 Pending, 0 Spam); 'QuickPress' for creating new posts; 'STORAGE SPACE' showing 3,072MB allowed and 0.08MB used; 'Recent Comments' with two entries; 'Recent Drafts' showing none; and 'Stats' showing no data for the current period. The dashboard is using the 'Hemingway' theme with 7 widgets.

Joomla



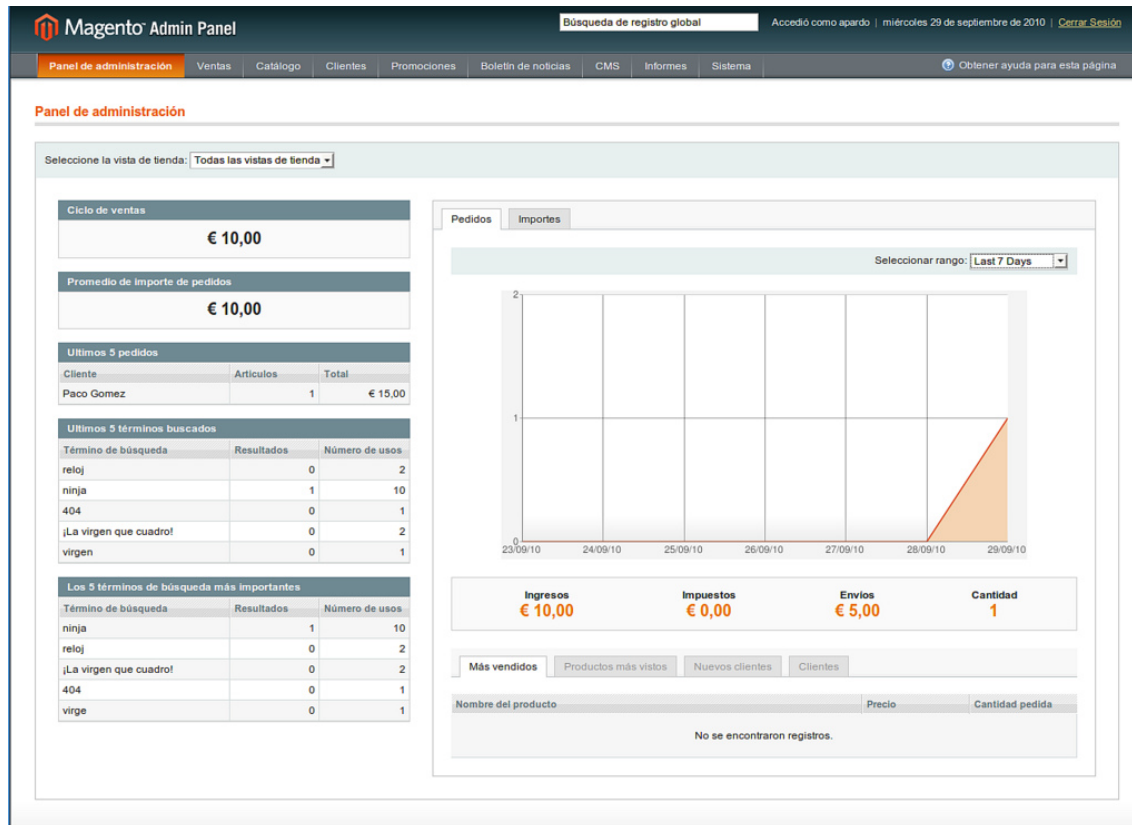
- ❖ Joomla is written in PHP, uses object-oriented programming (OOP) techniques and software design patterns stores data in a MySQL, MS SQL , or PostgreSQL database, and includes features such as page caching, RSS feeds, printable versions of pages, news flashes, blogs, search, and support for language internationalization.



Magento










- ❖ Magento is an open source application that is build upon Zend Framework.
- ❖ There are two versions of Magento:
 1. Community version
 2. Enterprise edition version



Opencart



- ❖ OpenCart is a turn-key ready "out of the box" shopping cart solution. You simply install, select your template, add products and you're ready to start accepting orders.
- ❖ It has order management and multiple payment gateways already built in and we provide lifetime free support and free software updates.

Dashboard	Catalog	Extensions	Sales	System	Reports	Help	Store Front	Logout
Home > Products								
<div>Products</div> <div>Insert Copy Delete</div>								
<input type="checkbox"/>	Image	Product Name ▲	Model	Price	Quantity	Status	Action	
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="Filter"/>	
<input type="checkbox"/>		Apple Cinema 30"	Product 15	400.0000 90.0000	934	Enabled	[Edit]	
<input type="checkbox"/>		Canon EOS 5D	Product 3	400.0000 80.0000	0	Enabled	[Edit]	
<input type="checkbox"/>		HP LP3065	Product 21	100.0000	1000	Enabled	[Edit]	
<input type="checkbox"/>		HTC Touch HD	Product 1	100.0000	752	Enabled	[Edit]	
<input type="checkbox"/>		MacBook	Product 16	500.0000	845	Enabled	[Edit]	
<input type="checkbox"/>		MacBook Air	Product 17	1000.0000	993	Enabled	[Edit]	
<input type="checkbox"/>		MacBook Pro	Product 18	2000.0000	998	Enabled	[Edit]	

Concrete 5



- ❖ Most of the work you'll need to do with concrete5 happens right on the pages you want to edit. This "In-Context Editing" is very intuitive.
- ❖ For more administrative duties (like adding users, customizing themes, getting reporting data, etc) there is a more traditional Dashboard.

