

Introducing PHP

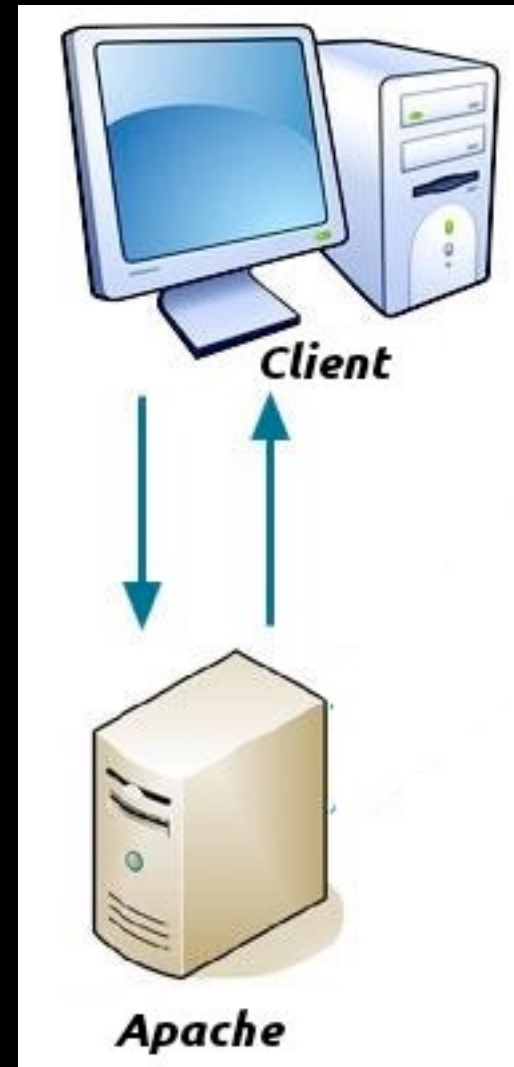
Intro PHP

Download the code:
[No Code Samples for the Slides](#)

How Static Websites Work

- Files use .html suffix
- Content rarely changes
- Page always shows the same content from request to request
- GET requests almost exclusively
- Stateless (no memory)

<https://example.com/about.html>
<https://example.com/shop.html>
<https://example.com/support.html>



How Dynamic Websites Work

- Most HTTP verbs used (GET, POST, PUT/PATCH, DELETE)
- Stateful (memory/session)
- Pages show varying content based on query vars
- Integrate with database
- CMS
- Easy to maintain
- Easy to scale up

<https://example.com/index.php?p=about>

<https://example.com/index.php?p=shop>

<https://example.com/index.php?p=support>

Common Server-Side Languages

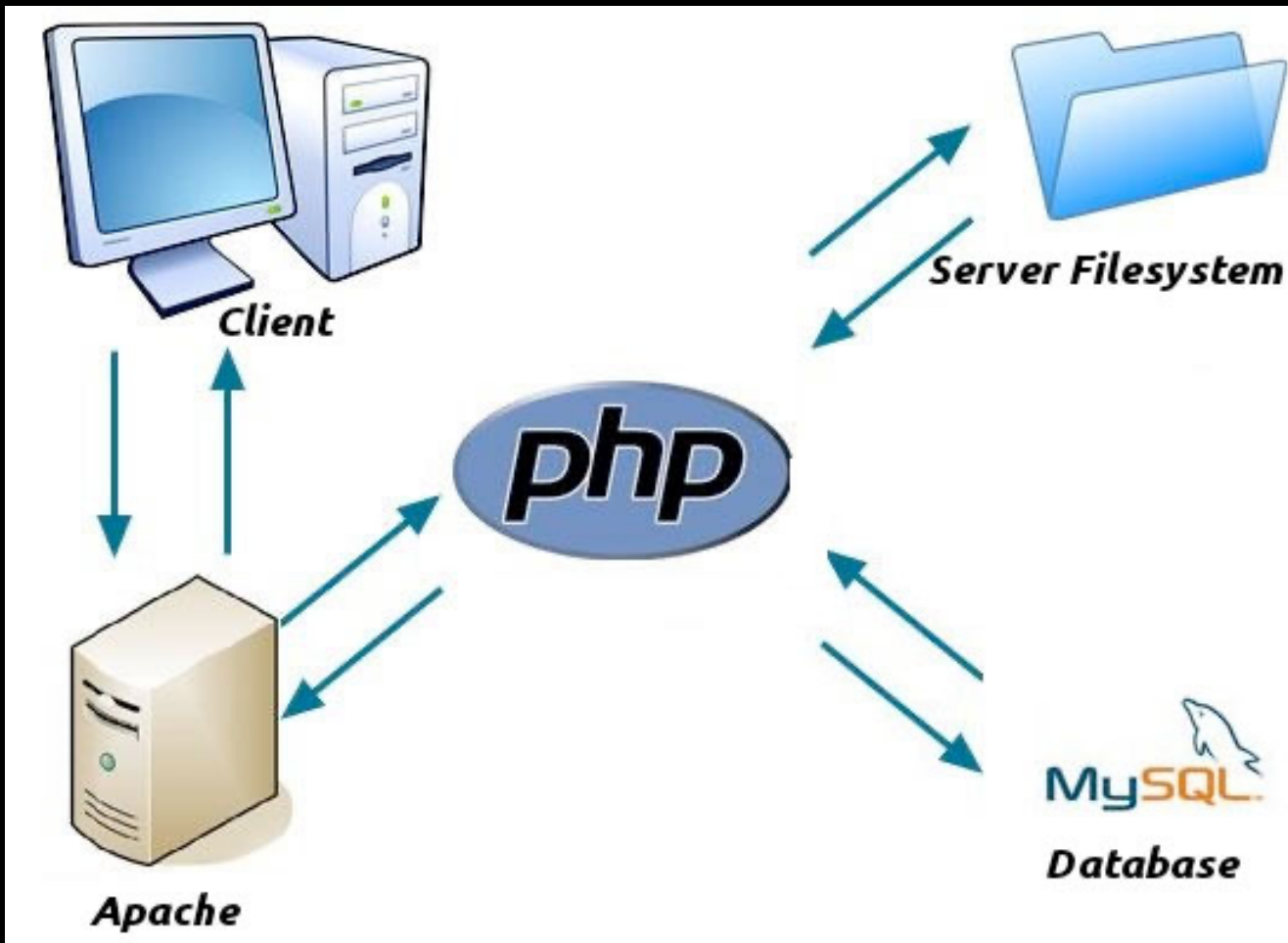
- .NET (Microsoft)
- Java
- ColdFusion (unused now?)
- Ruby (via Rails)
- Python (via Django/Sinatra)
- PHP
- Javascript (via NodeJS)

Server-Side vs Client-Side

- Client Side
 - HTML, CSS, Javascript
 - Files sent directly to browser
- Server Side
 - Page is interpreted (parsed)
 - Output rendered as HTML
 - Rendered output sent to browser

In both cases, the browser sees only HTML!

How PHP Works



A Little PHP Background

- PHP – Personal Home Page, 1994, Rasmus Lerdorf
- Essentially a collection of template tags wrapping C functions.
- A Greenland programmer, Canadian Citizenship.
- He create PHP while he was at Waterloo University



A Little PHP Background

- PHP evolved over the years.
- PHP stands for: PHP Hypertext Pre-Processor
- Coding Standards: [Framework Interoperability Group](#)
- Maintained by Zend
- Certification path available



Why learn PHP

- Although there are a number of Server-Side options, PHP is still the most widely used back-end language on the web.
- Massive number of sites use PHP... if you don't know PHP, you can't get a job working on those sites.
- Most major Off-The-Shelf CMS systems are built with PHP (Wordpress, Drupal, Joomla)

PHP is used by 77.6% of all the websites whose server-side programming language we know.

source: <https://w3techs.com/technologies/details/pl-php>

Learn more than PHP

Although PHP is a major player in Web development, it is not the only player. There are a variety of technologies and languages used in Web development, sometimes in conjunction with PHP, sometimes as a replacement for PHP.

- Python
- Ruby
- NodeJS



PHP Development Environments

PHP's built-in development server can serve files from any folder, as long as the PHP executable is in your PATH.

<h1>PHP Version 8.1.2</h1> 	
System	Darwin Steves-Mac-mini.local 21.3.0 Darwin Kernel Version 21.3.0: Wed Jan 5 21:37:58 PST 2022; root:xnu-8019.80.24~20/RELEASE_ARM64_T80101 x86_64
Build Date	Jan 20 2022 05:49:19
Build System	Darwin osx-compilation-1010-vm-macmini-3 14.5.0 Darwin Kernel Version 14.5.0: Wed Jul 29 02:26:53 PDT 2015; root:xnu-2782.40.9~1/RELEASE_X86_64 x86_64
Configure Command	'./configure' '--prefix=/Applications/XAMPP/xamppfiles/' '--with-apxs2=/Applications/XAMPP/xamppfiles/bin/apxs/' '--with-config-file-path=/Applications/XAMPP/xamppfiles/etc/' '--with-mysql=mysqlnd' '--enable-inline-optimization' '--disable-debug' '--enable-bcmath' '--enable-calendar' '--enable-ctype' '--enable-gd-native-ttf' '--enable-magic-quotes' '--enable-shmop' '--disable-sigchild' '--enable-sysvsem' '--enable-sysvshm' '--enable-wddx' '--with-gdbm=/Applications/XAMPP/xamppfiles/' '--with-jpeg-dir=/Applications/XAMPP/xamppfiles/' '--with-png-dir=/Applications/XAMPP/xamppfiles/' '--with-freetype-dir=/Applications/XAMPP/xamppfiles/' '--with-zlib=yes' '--with-zlib-dir=/Applications/XAMPP/xamppfiles/' '--with-openssl=/Applications/XAMPP/xamppfiles/' '--with-xsl=/Applications/XAMPP/xamppfiles/' '--with-ldap=/Applications/XAMPP/xamppfiles/' '--with-gd' '--with-imap=bitnami/xamppunixinstaller81stack-osx-x64/src/imap-2007e' '--with-imap-ssl' '--with-gettext=/Applications/XAMPP/xamppfiles/' '--with-mssql=shared,/Applications/XAMPP/xamppfiles/' '--with-pdo-dblib=shared,/Applications/XAMPP/xamppfiles/' '--with-sybase-ct=/Applications/XAMPP/xamppfiles/' '--with-mysql-socket=/Applications/XAMPP/xamppfiles/var/mysql/mysql.sock' '--with-mcrypt=/Applications/XAMPP/xamppfiles/' '--with-mhash=/Applications/XAMPP/xamppfiles/' '--enable-sockets' '--enable-mbstring=all' '--with-curl=/Applications/XAMPP/xamppfiles/' '--enable-mbregex' '--enable-zend-multibyte' '--enable-exif' '--with-bz2=/Applications/XAMPP/xamppfiles/' '--with-sqlite=shared,/Applications/XAMPP/xamppfiles/' '--with-sqlite3=/Applications/XAMPP/xamppfiles/' '--with-libxml-dir=/Applications/XAMPP/xamppfiles/' '--enable-soap' '--with-xmlrpc' '--enable-pcntl' '--with-mysqli=mysqlnd' '--with-pgsql=shared,/Applications/XAMPP/xamppfiles/' '--with-iconv=/usr' '--with-pdo-mysql=mysqlnd' '--with-pdo-pgsql=/Applications/XAMPP/xamppfiles/postgresql' '--with-pdo_sqlite=/Applications/XAMPP/xamppfiles/' '--with-icu-dir=/Applications/XAMPP/xamppfiles/' '--enable-fileinfo' '--enable-phar' '--enable-zip' '--enable-mbstring' '--disable-huge-code-pages' 'ac_cv_decimal_fp_supported=no' '--with-lbzip' '--with-pear' '--enable-gd' '--with-jpeg' '--with-libwebp' '--with-freetype' '--with-zip' 'PKG_CONFIG_PATH=/Applications/XAMPP/xamppfiles/lib/pkgconfig' 'CFLAGS=-std=gnu99 -Qunused-arguments -UOCCSDB_SUPPORT_THREAD_LOCAL -U_MACH_' -I/Applications/XAMPP/xamppfiles/include/c-client -Qunused-arguments -I/Applications/XAMPP/xamppfiles/include/libpng -I/Applications/XAMPP/xamppfiles/include/freetype2 -O3 -L/Applications/XAMPP/xamppfiles/lib -I/Applications/XAMPP/xamppfiles/include -I/Applications/XAMPP/xamppfiles/include/ncurses -arch x86_64 'LIBXML_CFLAGS=-I/usr/include/libxml2' 'LIBXML_LIBS=-L/usr/lib -lxml2' 'XSL_CFLAGS=-I/usr/include/libxslt' 'XSL_LIBS=-L/usr/lib -lxslt'

AMP Stacks

For more serious development, it is recommended that you use a full AMP stack to more properly reflect the final hosting environment for your project.



The most common and easy to configure development environments are shown above:

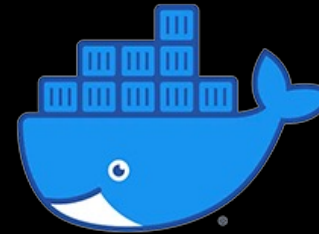
- **WAMP** (WIndows Apache MySQL and PHP)
- **XAMPP** (CrossPlatform Apache MySQL PHP and PERL)
- **MAMP** (Mac Apache MySQL and PHP)

Any of these platforms will work. I recommend **XAMPP** (on both Mac and Windows), as I will be able to provide some degree of support.

That said, you may install the package you prefer.

Other Dev Options

There are more advanced development platform options available that allow for extreme customization of the dev environment. These, however, are more difficult to setup and maintain.



Docker



Vagrant

- **Docker** allows creation of containers, each container holding a part of the development target... apache... mysql... php... etc.
- **Vagrant** Allows creation of virtual machines, provisioned to be exactly the same as the production environment.

Advantages: highly configurable, more realistic environment


Disadvantages: harder to configure and maintain.

Download / Install

Make sure you download the correct version of XAMPP for your system. Always grab the latest, stable version of PHP.




<https://www.apachefriends.org/download.html>

 XAMPP for **OS X** 7.4.27, 8.0.15, 8.1.2, 7.4.27, 8.0.15 & 8.1.2

Version	Checksum	Size
7.4.27 / PHP 7.4.27	What's Included? md5 sha1 Download (64 bit)	163 Mb
8.0.15 / PHP 8.0.15	What's Included? md5 sha1 Download (64 bit)	164 Mb
8.1.2 / PHP 8.1.2	What's Included? md5 sha1 Download (64 bit)	163 Mb
7.4.27 / PHP 7.4.27	What's Included? md5 sha1 Download (64 bit)	360 Mb
8.0.15 / PHP 8.0.15	What's Included? md5 sha1 Download (64 bit)	361 Mb
8.1.2 / PHP 8.1.2	What's Included? md5 sha1 Download (64 bit)	361 Mb

[Requirements](#) [Add-ons](#) [More Downloads »](#)

 XAMPP for **Windows** 7.4.27, 8.0.15 & 8.1.2

Version	Checksum	Size
7.4.27 / PHP 7.4.27	What's Included? md5 sha1 Download (64 bit)	160 Mb
8.0.15 / PHP 8.0.15	What's Included? md5 sha1 Download (64 bit)	161 Mb
8.1.2 / PHP 8.1.2	What's Included? md5 sha1 Download (64 bit)	164 Mb

[Requirements](#) [Add-ons](#) [More Downloads »](#)

Windows XP or 2003 are not supported. You can download a compatible version of XAMPP for these platforms [here](#).

On Mac, download the smaller sized file.
The larger files are Virtual Machines.

Next: PHP Basics