

# Getting Set Up with PHP

Setup tutorial and all materials at:

[https://github.com/sketchings/  
beginning-php-training](https://github.com/sketchings/beginning-php-training)

# What elements do we need, to start?

Think about building a fire.  
Without these three elements  
there's no fire!

- Oxygen
- Heat
- Fuel



# Three Things Power a PHP Website

- ▷ PHP
- ▷ Database (MySQL)
- ▷ Web server (Apache/nginx)

Like the three elements needed to start a fire - you need all three or there's no fire!

- Oxygen
- Heat
- Fuel



# Why Do We Care About Elements?

- ▷ Many possible setups
- ▷ Many possible environments
- ▷ But you always need the three elements

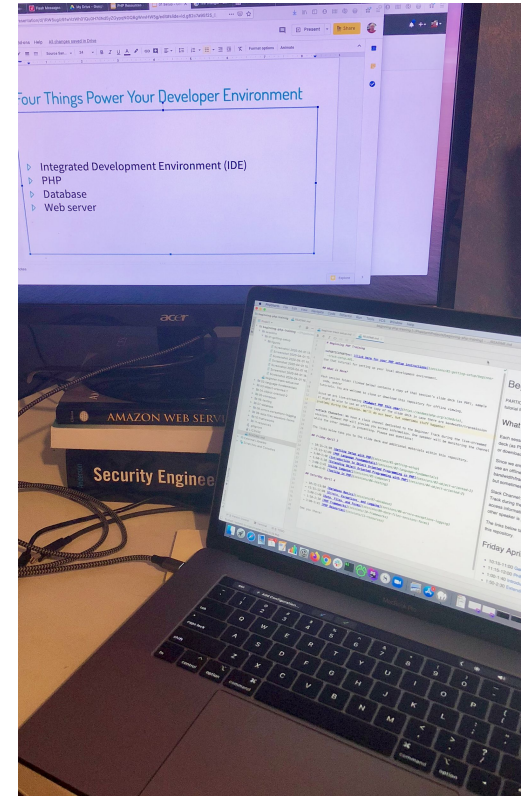
Your mission, should you choose to accept it, is to get **(PHP, Database, Server)** working in whatever environment you have available



# Four Things Power Your Developer Environment

- ▶ Integrated Development Environment (IDE)
- ▶ PHP
- ▶ Database
- ▶ Web server

No matter your setup, you need these four things



# Easy Start – Have You Done These Steps?

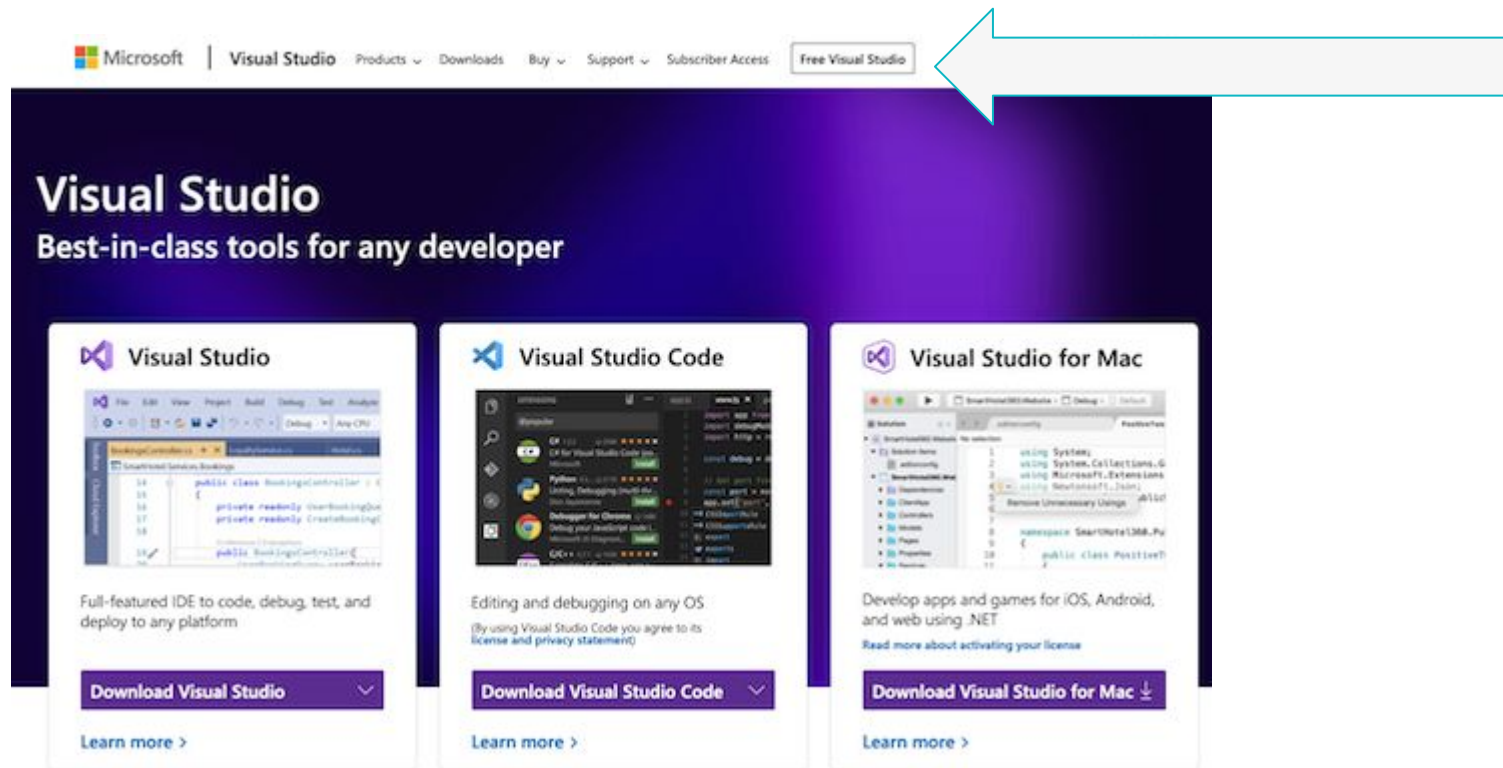
<https://github.com/sketchings/beginning-php-training>

- ▶ IDE - Visual Studio (free) or PhpStorm (30-day trial)
- ▶ MAMP (free) for integrated PHP, MySQL, Apache, nginx

Above options available Windows or Mac

# Visual Studio

<https://visualstudio.microsoft.com/>




The screenshot shows the Visual Studio website homepage. At the top, there is a navigation bar with the Microsoft logo, 'Visual Studio', and links for 'Products', 'Downloads', 'Buy', 'Support', and 'Subscriber Access'. A button labeled 'Free Visual Studio' is highlighted by a large, light gray arrow pointing from the right. Below the navigation bar, the main heading reads 'Visual Studio' followed by the tagline 'Best-in-class tools for any developer'. The page features three main product cards: 'Visual Studio', 'Visual Studio Code', and 'Visual Studio for Mac'. Each card includes a screenshot of the IDE, a brief description of its capabilities, and a 'Download' button. The 'Visual Studio' card describes it as a 'Full-featured IDE to code, debug, test, and deploy to any platform'. The 'Visual Studio Code' card describes it as 'Editing and debugging on any OS (By using Visual Studio Code you agree to its license and privacy statement)'. The 'Visual Studio for Mac' card describes it as a tool to 'Develop apps and games for iOS, Android, and web using .NET'. Each card also has a 'Learn more' link.

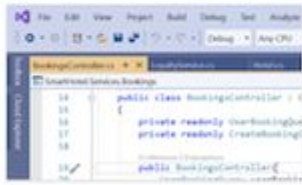
Microsoft | Visual Studio Products Downloads Buy Support Subscriber Access [Free Visual Studio](#)

## Visual Studio

Best-in-class tools for any developer




### Visual Studio




Full-featured IDE to code, debug, test, and deploy to any platform

[Download Visual Studio](#)[Learn more >](#)




### Visual Studio Code

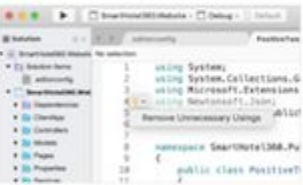


Editing and debugging on any OS  
(By using Visual Studio Code you agree to its license and privacy statement)

[Download Visual Studio Code](#)[Learn more >](#)



### Visual Studio for Mac



Develop apps and games for iOS, Android, and web using .NET  
[Read more about activating your license](#)

[Download Visual Studio for Mac](#)[Learn more >](#)



[Learn more >](#)



<https://laracasts.com/series/visual-studio-code-for-php-developers>



## Visual Studio Code for PHP Developers

Out of the blue, Microsoft jumps into the editor wars with an incredible offering that gives Sublime Text an overwhelming run for its money. In fact, it just might surpass it! So come along, as I demonstrate the ins, the outs, the tips, the techniques. Say hello to your new best friend: **Visual Studio Code**.

[BEGIN](#)[WATCH LATER](#)[SUBSCRIBE](#)

18

LATEST EPISODE IN THIS SERIES  
Added 2 years ago

### Type Checking JavaScript Files

What if we could add a single commented line to the top of any vanilla JavaScript file...

[WATCH](#)

●●● Intermediate

📺 18 episodes

🕒 1:20:20 hrs

Tooling



#### YOUR TEACHER | JEFFREY WAY

[VISIT WEBSITE](#)

Hi, I'm Jeffrey. I'm the creator of Laracasts and spend most of my days building the site and thinking of new ways to teach confusing concepts. I live in Orlando, Florida with my wife and two kids.

## You May Also Enjoy...

Here are some additional series that may be up your alley.

**TOOLING**



**Be Awesome in PHPStorm**

Think about how many hours each week you spend within your editor. Doesn't it make sense to unlock every inch of its capabilities? I certainly subscri...

 Beginner  
 Difficulty

 27 Lessons

**TOOLING**



**Sublime Text Mastery**

If you intend to dedicate a career to web development, shouldn't you, in the process, harness every ounce of your code editor? In this series, I'll sh...

 Beginner  
 Difficulty

 11 Lessons

**TOOLING**



**Vim Mastery**

There's a reason why, after decades, countless developers still prefer Vim as their code editor of choice. That many people can't be wrong, right? In...

 Advanced  
 Difficulty

 22 Lessons

<https://symfonycasts.com/screencast/phpstorm>



## Lean and Mean Dev with PhpStorm (for Symfony)



### What you'll be learning

Tip: This course is built on Symfony 2, but the important concepts of

Login or register to track your progress!

01. Setup	5:12	▶
02. Annotations	2:47	▶
03. Twig	5:01	▶
04. Namespaces	4:05	▶
05. Doctrine	5:00	▶

<https://www.jetbrains.com/phpstorm/>

PhpStorm

Coming in 2020.1   What's New   Features   [Learn](#)   Blog & Social   Buy

[Download](#)

## Getting Started



Debugging	Step Into Debugging with PhpStorm	58:32
Development Environment	<a href="#">Deployment and Remote Hosts in PhpStorm - PhpStorm Video Tutorial</a>	5:26
Getting Started	<a href="#">Introduction to PhpStorm</a>	6:18
	<a href="#">Basic PhpStorm Editor Actions and Navigation - PhpStorm</a>	2:28

### Resources

[PhpStorm Tutorials](#)

[PhpStorm Quick Start Guide](#)

[PhpStorm Plugin Repository](#)

[PhpStorm Online Help](#)

[PhpStorm Leaflet](#) (1.9 Mb)

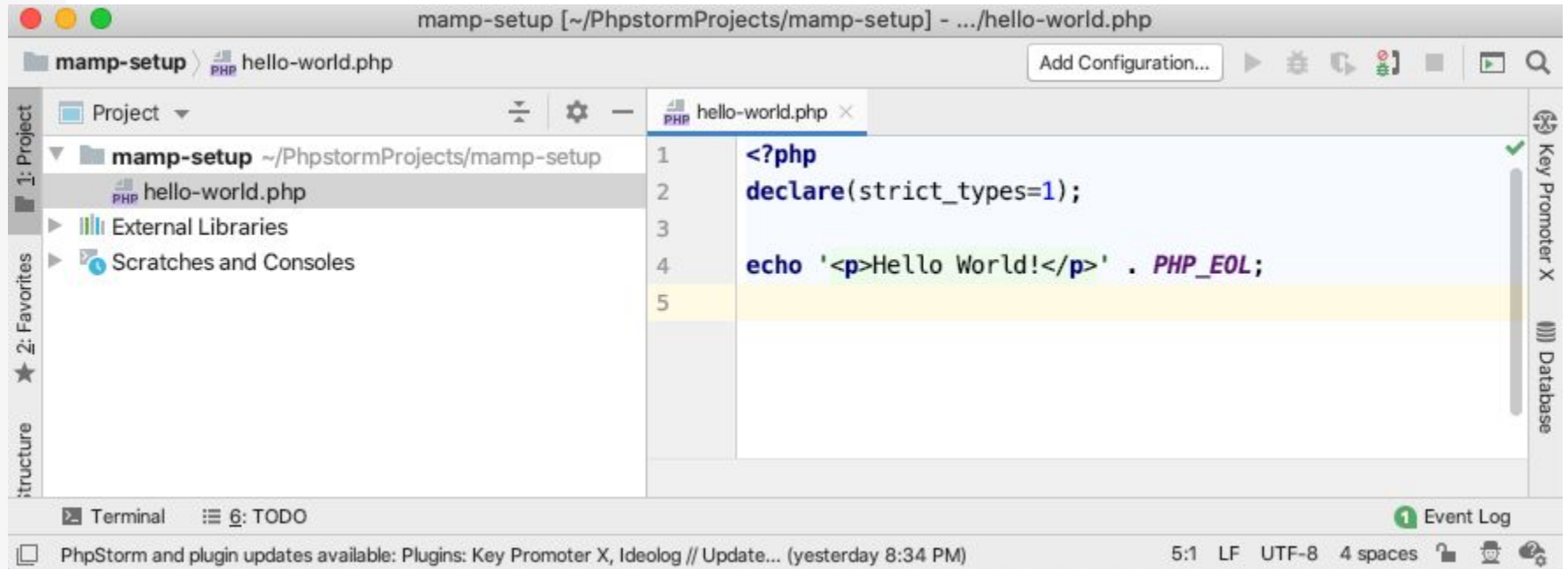
[Keyboard Reference](#) (277 Kb)

[Video Tutorials](#)

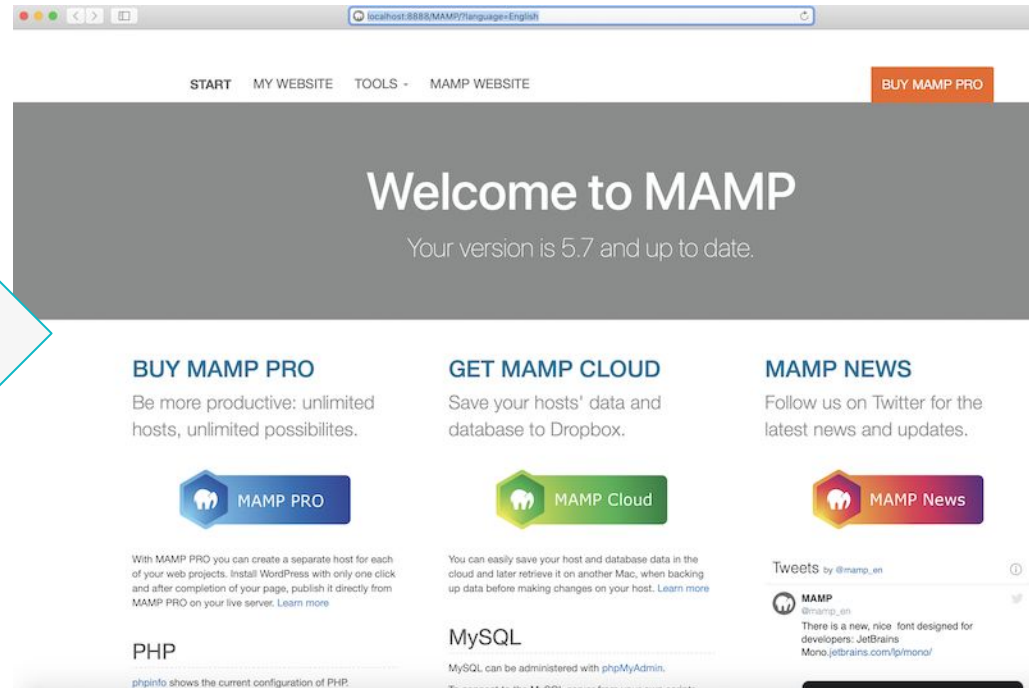
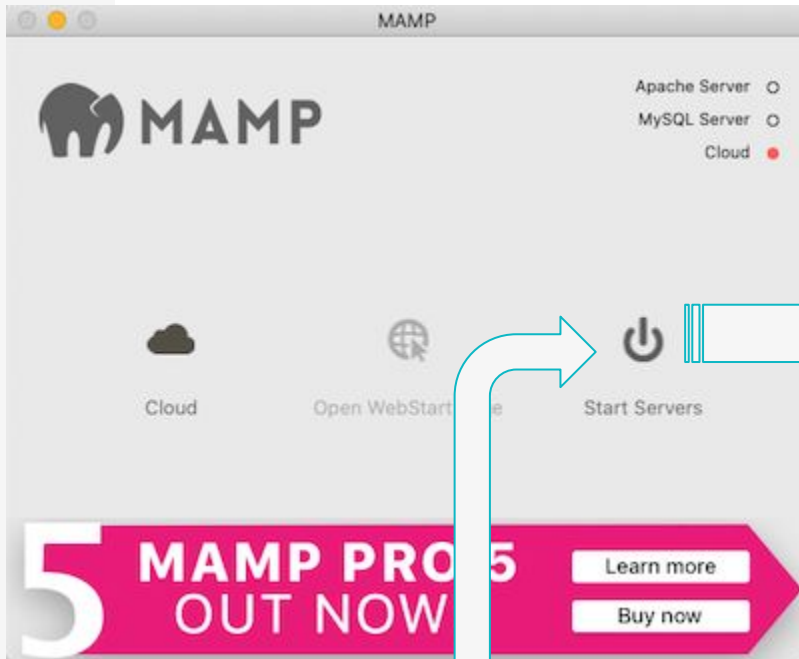
[Webinars](#)

[Ultimate Debugging Guide](#)

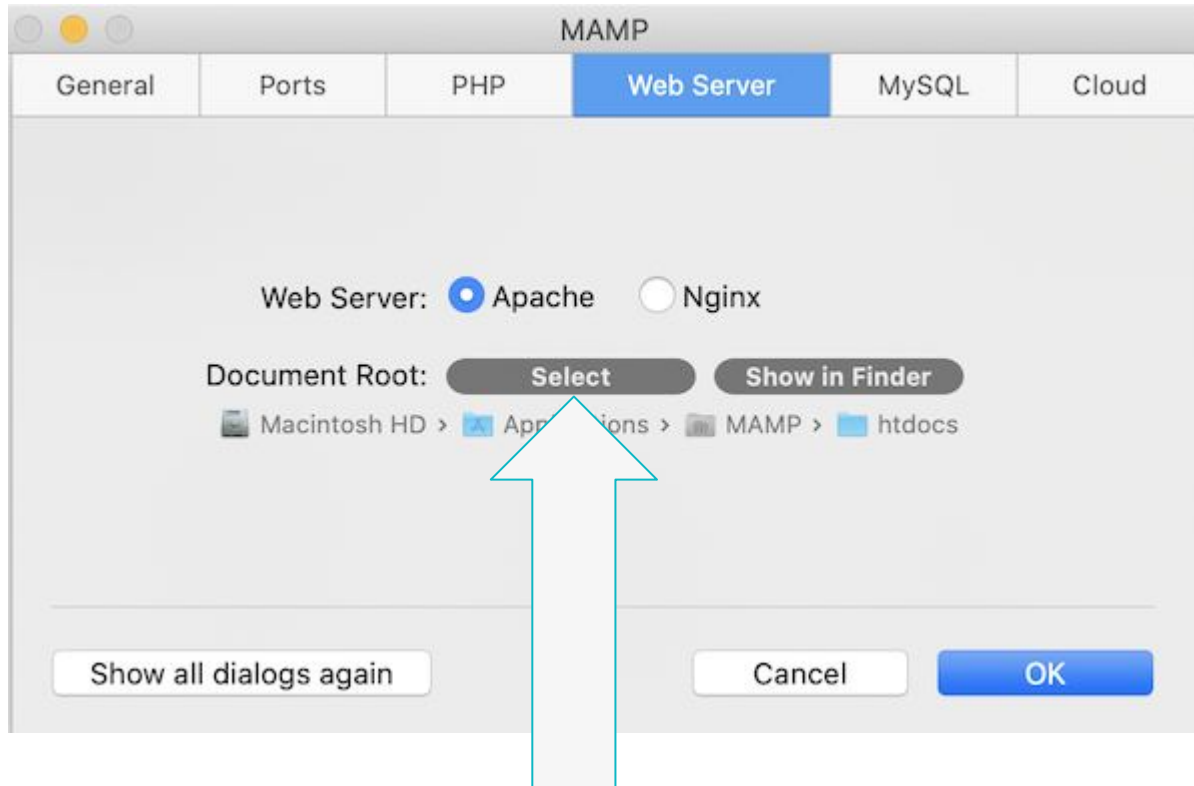
# Create a Project in Your Editor / IDE



# Install MAMP - Start Servers - localhost:8888

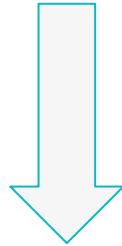
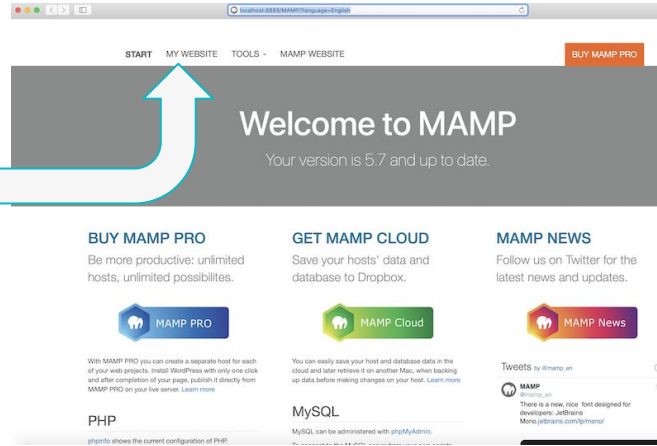


# Preferences - Document Root



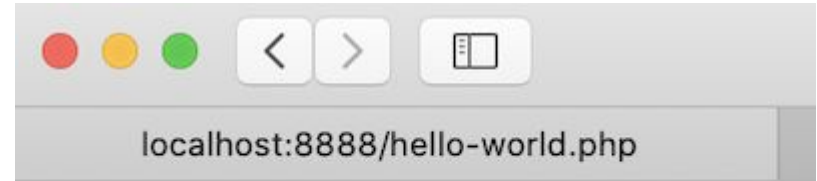


“My Website”



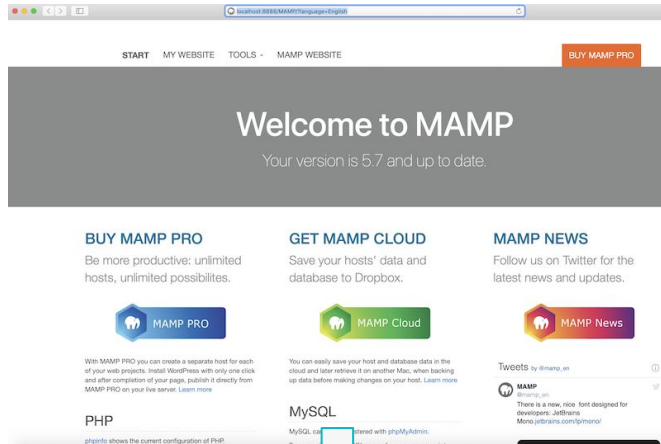
Index of /

- [.idea/](#)
- [hello-world.php](#)



Hello World!

# MySQL



## MySQL

MySQL can be administered with [phpMyAdmin](#).

To connect to the MySQL server from your own scripts use the following connection parameters:

<b>Host</b>	localhost
<b>Port</b>	8889
<b>User</b>	root
<b>Password</b>	root
<b>Socket</b>	/Applications/MAMP/tmp/mysql/mysql.sock

## Examples:

[PHP >= 5.6.x](#) [PHP <= 5.5.x](#) [Python](#) [Perl](#)

Connect via network:

```
$user = 'root';
$password = 'root';
$db = 'inventory';
$host = 'localhost';
$port = 8889;

$link = mysqli_init();
$success = mysqli_real_connect(
    $link,
    $host,
    $user,
```

# phpMyAdmin

The screenshot shows the phpMyAdmin web interface in a browser window. The address bar displays `localhost:8888/phpMyAdmin/?lang=en`. The interface includes a left sidebar with a tree view of databases (information\_schema, mysql, performance\_schema, sys) and a 'New' button. The main content area is titled 'Server: localhost:8889' and contains several tabs: Databases, SQL, Status, User accounts, Export, Import, Settings, Replication, Variables, and More. The 'Settings' tab is active, showing 'General settings' and 'Appearance settings'. The 'General settings' section includes a dropdown for 'Server connection collation' set to 'utf8mb4\_unicode\_ci'. The 'Appearance settings' section includes a dropdown for 'Language' set to 'English', a dropdown for 'Theme' set to 'Original', and a dropdown for 'Font size' set to '82%'. A 'More settings' link is also present. On the right side, there are two panels: 'Database server' and 'Web server'. The 'Database server' panel lists details such as 'Server: Localhost via UNIX socket', 'Server type: MySQL', 'Server connection: SSL is not being used', 'Server version: 5.7.26 - MySQL Community Server (GPL)', 'Protocol version: 10', 'User: root@localhost', and 'Server charset: UTF-8 Unicode (utf8)'. The 'Web server' panel lists details such as 'Apache/2.2.34 (Unix) mod\_wsgi/3.5 Python/2.7.13 PHP/7.4.2 mod\_ssl/2.2.34 OpenSSL/1.0.2o DAV/2 mod\_fastcgi/mod\_fastcgi-SNAP-0910052141 mod\_perl/2.0.11 Perl/v5.24.0', 'Database client version: libmysql - mysqlnd 7.4.2', 'PHP extension: mysqli curl mbstring', and 'PHP version: 7.4.2'. At the bottom left, there is a 'Console' button, which is highlighted by a large blue arrow pointing to it from the left sidebar area.

phpMyAdmin

Recent Favorites

New

- information\_schema
- mysql
- performance\_schema
- sys

Server: localhost:8889

Databases SQL Status User accounts Export Import Settings Replication Variables More

### General settings

Server connection collation: utf8mb4\_unicode\_ci

### Appearance settings

Language: English

Theme: Original

- Font size: 82%

[More settings](#)

### Database server

- Server: Localhost via UNIX socket
- Server type: MySQL
- Server connection: SSL is not being used
- Server version: 5.7.26 - MySQL Community Server (GPL)
- Protocol version: 10
- User: root@localhost
- Server charset: UTF-8 Unicode (utf8)

### Web server

- Apache/2.2.34 (Unix) mod\_wsgi/3.5 Python/2.7.13 PHP/7.4.2 mod\_ssl/2.2.34 OpenSSL/1.0.2o DAV/2 mod\_fastcgi/mod\_fastcgi-SNAP-0910052141 mod\_perl/2.0.11 Perl/v5.24.0
- Database client version: libmysql - mysqlnd 7.4.2
- PHP extension: mysqli curl mbstring
- PHP version: 7.4.2

### phpMyAdmin

- Version information: 4.9.3

Console

# Success!

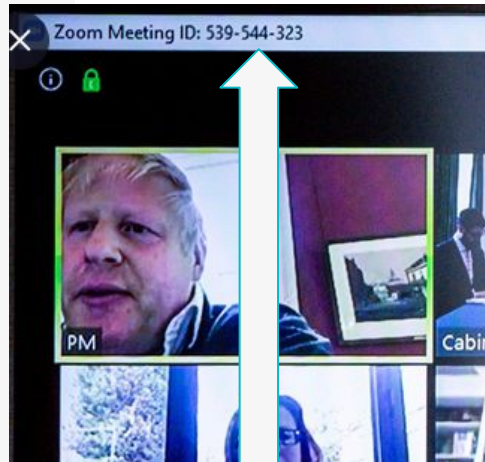
- ▷ Editor / IDE
- ▷ PHP
- ▷ Database
- ▷ Web server



# Policy

- ▷ Remember your laptop could be stolen
  - ▶ What constitutes a reportable data breach?
  - ▶ Can you keep sensitive passwords/keys OFF of your laptop?
  - ▶ Don't allow sensitive production data onto your laptop copy of the database (PII, HIPAA, GDPR)

# Don't Be Like the Prime Minister



Zoom Meeting ID:  
539-544-323



**Boris Johnson #StayHomeSaveLives** ✓

@BorisJohnson

This morning I chaired the first ever digital Cabinet.

Our message to the public is: stay at home, protect the NHS, save lives. [#StayHomeSaveLives](#)



8:52 AM · Mar 31, 2020 · [Twitter Web App](#)



# Remember – Web Images Contain Meta Data

- ▶ Meta data can reveal more than you intended
- ▶ Photos that include computer screens or sticky notes can prove embarrassing
- ▶ Well-intentioned screen shots... well... don't be like the Prime Minister
- ▶ Not a PHP problem? Still is YOUR problem!





# Ways to Build that “Fire” (dev environment)

- ▶ Integrated environments  
MAMP, WAMP, XAMPP:
  - ▶ Install and configure PHP, database, web server
  - ▶ Might not duplicate production env closely enough



# Containerized – Vagrant, Docker

- ▶ Rapid setup for new members of a team
- ▶ Specific environment(s) pre-built
- ▶ “Spin up” multiple experimental environments

# Virtual Machine

- ▷ Virtual Box (free) or VMWare
- ▷ Complete operating system and filesystem
- ▷ Can run
  - ▶ Windows on Mac
  - ▶ Linux on Windows
  - ▶ Et cetera

# Build Your Own

- ▶ Many ways to install PHP, including building from source
- ▶ Can be necessary for specific language extensions, specific versions, database drivers, etc.
- ▶ The XDebug extension is important - and is included in most packaged environments such as MAMP
- ▶ HomeBrew for the Mac

# Case-Sensitive Filesystem

- ▶ Linux servers tend to have case-sensitive file system
- ▶ Mac tends to NOT have case-sensitive file system
- ▶ Windows... reports vary

This disparity will become a problem when...

# PHP Does Not Care... Or Does It?

- ▷ PHP class names are NOT case sensitive
  - ▶ `Class FireBuilder` and `class firebuilder` are the same
- ▷ The linux filesystem DOES care
  - ▶ `FireBuilder.php` and `firebuilder.php` are NOT the same file
- ▷ The Mac filesystem DOES NOT care
  - ▶ `FireBuilder.php` and `firebuilder.php` ARE the same file

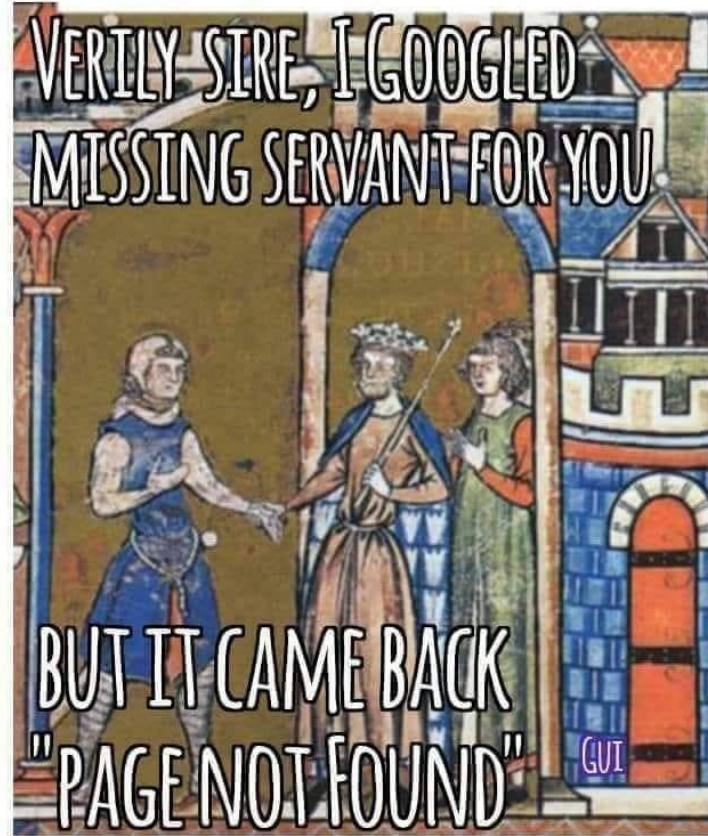
# What Happens?

1. Suppose real `class FireBuilder` declared in `FireBuilder.php`
2. Other code invokes `$fire = new Firebuilder();`
3. Works fine in dev environment
4. Push to production... `class Firebuilder` not found
  - a. Mac autoloader finds `Firebuilder.php` when looking for `FireBuilder.php`
  - b. Linux autoloader cannot find `Firebuilder.php` because only `FireBuilder.php` exists
5. “Works for me”



# Blank Page

- ▷ “500” error in dev environment
- ▷ Often blank white page in production
- ▷ Find and check error logs
  - ▶ Coding error
  - ▶ Failed database connection
  - ▶ Unsuccessful deployment
- ▷ Recent code change most likely



# Remember Your Mission

- ▶ Get the four elements installed and playing-well with each other:
  - ▶ Code editor / IDE
  - ▶ PHP
  - ▶ Web server
  - ▶ Database
- ▶ Web pages are plain text (html and css) - you can edit them with your code editor / IDE

# Thank You

Build that fire!

- ▶ Code Editor / IDE
- ▶ PHP (7.2 or newer)
- ▶ Database (MySQL)
- ▶ Web server (Apache or nginx)

Easy route:

- ▶ Visual Studio / PhpStorm
- ▶ MAMP

