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# *Lecture 31*

Content Management and WordPress  
*(Best for last?)*

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Course logo spider web photograph from [Morguefile](#) openstock photograph by Gabor Karpati, Hungary.

# *Think About Workflow!*

- Consider domains of expertise:
  - Design – art, communication, ..
  - Systems – CS, CIS, ..
  - Content – writers, photographers, ..
- First time up – build a site.
- From that moment forward
  - Maintenance?
  - Much much more than maintenance!

# *A Site is Like a ...*

- A Book
  - Major up front effort then walk away.
- A TV Miniseries
  - Effort over fixed period, then walk away.
- A Good Newspaper
  - What needs to be said today.
- A Good Restaurant
  - Yesterday's food holds little appeal.

# *More Newspaper than Book*

- A website not in need of updating is a rare thing, and probably boring.
- How does content get onto a site?
- It comes from people typically without deep web development skills.
- ... and they typically type in that content through a browser.



# *The Big Change*

## **BCM (Before Content Management)**

Content added/modified using files on a server.  
No server access, no changing the site.  
Content providers need some degree of training.  
CT 310 is BCM focused.

## **ACM(After Content Management)**

Content added/modified through a browser.  
Some degree of user access control is in place.  
Usually less training, more WYSIWYG in approach.  
Content typically in a database.

# The Argument

## BCM Pros

- Security
  - Content changes require server access/expertise
- Simplicity
  - No complex superstructure
- Transparency
  - Files equals pages

## BCM Cons

- Updating is hard!
  - Content changes require server access/expertise

## ACM Pros

- Updating is easy!
  - Those responsible for content directly contribute

## BCM Cons

- Complexity
  - CMS Superstructure
- Obscurity
  - Pages aren't files
- Security
  - Site hacked through a browser

For all the ACM Cons, "Updating is easy!" wins. Expect to deploy some form of CMS in any project where real people are responsible for site content.

# CMS Features

Compare Content Manager x

www.cmsmatrix.org/matrix/cms-matrix

Compare Search Return to Matrix

Hide/show stickied

	<u>concrete5 5.0.0</u> ✘	<u>Drupal 7.12</u> ✘	<u>Joomla! 2.5.4</u> ✘	<u>WordPress 3.3.2</u> ✘
<i>Last Updated</i>	10/12/2008	2/16/2012	5/2/2012	5/29/2012
<b>System Requirements</b>	concrete5 5.0.0	Drupal 7.12	Joomla! 2.5.4	WordPress 3.3.2
<input type="checkbox"/> Application Server	Apache	Apache	CGI	blank
<input type="checkbox"/> Approximate Cost	0	Free	Free	Free
<input type="checkbox"/> Database	MySQL	MySQL	MySQL	MySQL
<input type="checkbox"/> License	Open Source	Open Source	Open Source	Open Source
<input type="checkbox"/> Operating System	*nix Only	Platform Independent	Platform Independent	Platform Independent
<input type="checkbox"/> Programming Language	PHP	PHP	PHP	PHP
<input type="checkbox"/> Root Access	No	No	No	No
<input type="checkbox"/> Shell Access	Yes	No	No	No
<input type="checkbox"/> Web Server	Apache	Any	Any	blank
<b>Security</b>	concrete5 5.0.0	Drupal 7.12	Joomla! 2.5.4	WordPress 3.3.2
<input type="checkbox"/> Audit Trail	Yes	Yes	No	Limited
<input type="checkbox"/> Captcha	No	Free Add On	Free Add On	Free Add On
<input type="checkbox"/> Content Approval	Yes	Yes	Yes	Yes
<input type="checkbox"/> Email Verification	Limited	Yes	Yes	Yes
<input type="checkbox"/> Granular Privileges	Yes	Yes	Yes	Yes

- <sitekit> CMS
- +CMS Content Management System
- 1 Man CMS
- 1024 AJAX CMS
- 1Work
- 2F CMS
- 2flex
- 360 Web Manager
- 4Steps2Web
- < CONTREXX@ 3 > Website Management System
- ABO.CMS
- Absolut Engine CMS/news publishing system
- Academic Portal
- AccelSite CMS
- Accessify WCMS
- Accomplish
- Accrisoft Freedom
- AccuCMS
- Accura Site CMS
- Acilia Symflex
- acms
- ActivePortail





# There is a Winner

**W<sup>3</sup>Techs**

Web Technology Surveys

## Usage statistics and market share of WordPress for websites

This report shows the usage statistics and market share data of WordPress on the web. See [technologies overview](#) for explanations on the methodologies used in the surveys. Our reports are updated daily.

Request an extensive  
WordPress market  
report.

[Learn more](#)

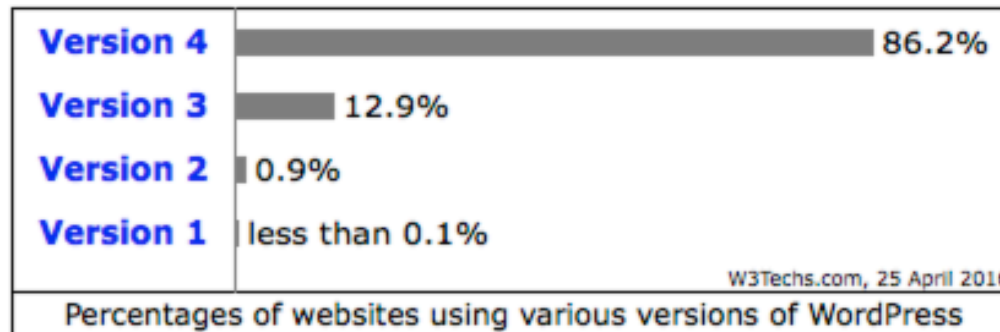
**WordPress is used by 59.4%** of all the websites whose content management system we know. This is 26.4% of all websites.

## Versions of WordPress

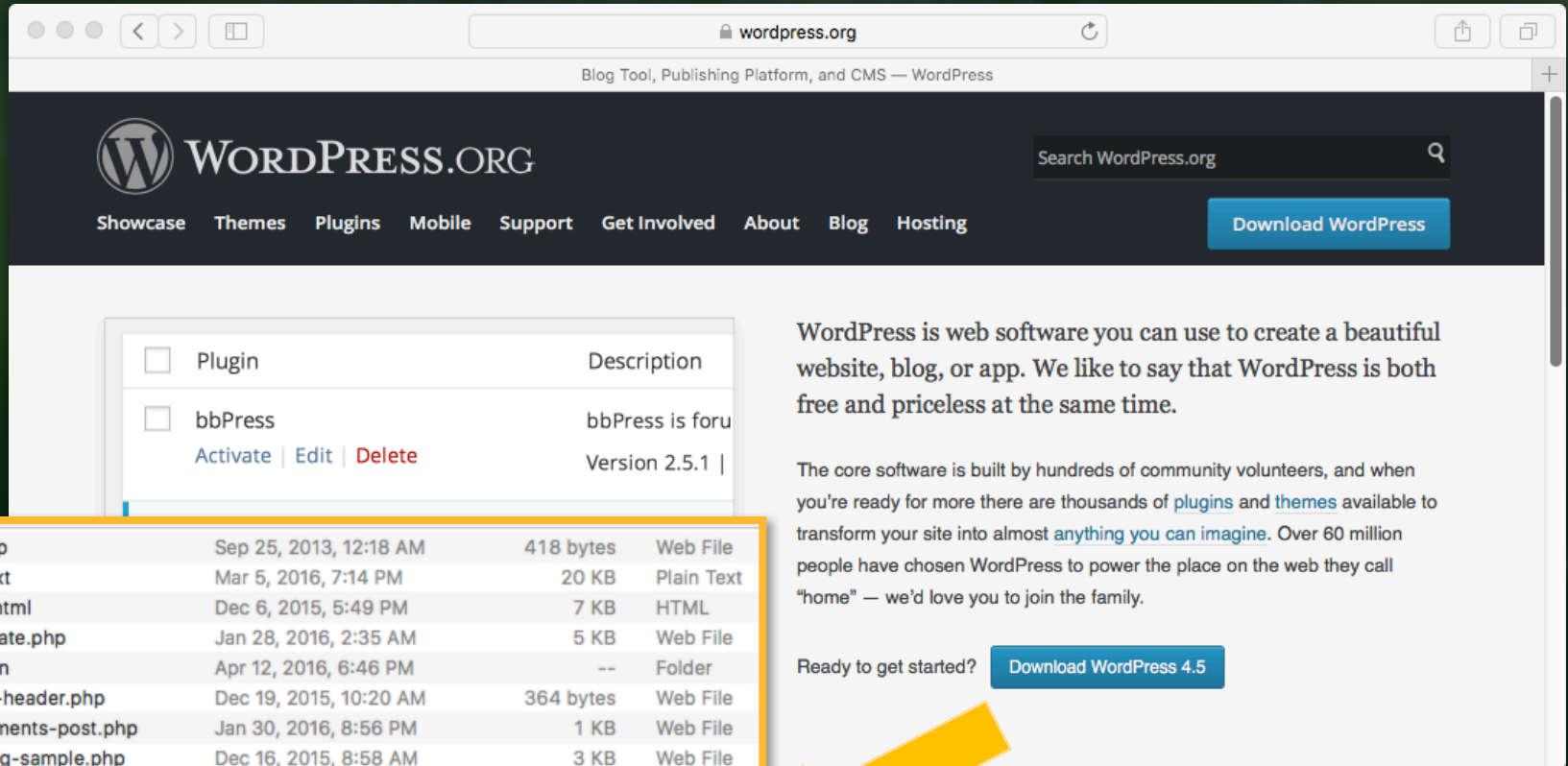
This diagram shows the percentages of websites using various versions of WordPress.

How to read the diagram:

Version 4 is used by 86.2% of all the websites who use WordPress.



# WordPress – Get It



The screenshot shows the WordPress.org homepage. At the top, there's a navigation menu with links for Showcase, Themes, Plugins, Mobile, Support, Get Involved, About, Blog, and Hosting. A prominent blue button labeled "Download WordPress" is visible. Below the navigation, there's a search bar and a section for plugins. A table lists plugins, with "bbPress" highlighted. To the right, there's a text block describing WordPress as free and priceless software, and another section titled "Ready to get started?" with a "Download WordPress 4.5" button. A yellow arrow points from this button towards the file list in the foreground.

<input type="checkbox"/>	Plugin	Description
<input type="checkbox"/>	bbPress	bbPress is foru Activate   Edit   Delete Version 2.5.1

WordPress is web software you can use to create a beautiful website, blog, or app. We like to say that WordPress is both free and priceless at the same time.

The core software is built by hundreds of community volunteers, and when you're ready for more there are thousands of [plugins](#) and [themes](#) available to transform your site into almost [anything you can imagine](#). Over 60 million people have chosen WordPress to power the place on the web they call "home" — we'd love you to join the family.

Ready to get started? [Download WordPress 4.5](#)

index.php	Sep 25, 2013, 12:18 AM	418 bytes	Web File
license.txt	Mar 5, 2016, 7:14 PM	20 KB	Plain Text
readme.html	Dec 6, 2015, 5:49 PM	7 KB	HTML
wp-activate.php	Jan 28, 2016, 2:35 AM	5 KB	Web File
▶ wp-admin	Apr 12, 2016, 6:46 PM	--	Folder
wp-blog-header.php	Dec 19, 2015, 10:20 AM	364 bytes	Web File
wp-comments-post.php	Jan 30, 2016, 8:56 PM	1 KB	Web File
wp-config-sample.php	Dec 16, 2015, 8:58 AM	3 KB	Web File
▶ wp-content	Apr 12, 2016, 6:46 PM	--	Folder
wp-cron.php	May 24, 2015, 5:26 PM	3 KB	Web File
▶ wp-includes	Apr 12, 2016, 6:46 PM	--	Folder
wp-links-opml.php	Oct 24, 2013, 10:58 PM	2 KB	Web File
wp-load.php	Nov 5, 2015, 10:59 PM	3 KB	Web File
wp-login.php	Mar 6, 2016, 2:06 AM	34 KB	Web File
wp-mail.php	Oct 6, 2015, 2:07 PM	8 KB	Web File
wp-settings.php	Feb 17, 2016, 9:58 PM	13 KB	Web File
wp-signup.php	Jan 28, 2016, 2:51 AM	29 KB	Web File
wp-trackback.php	Nov 30, 2014, 8:23 PM	4 KB	Web File
xmllrpc.php	Oct 2, 2015, 10:46 PM	3 KB	Web File

# Follow The Handy Guide

## Famous 5-Minute Install

Here's the quick version of the instructions for those who are already comfortable with performing such installations. More [detailed instructions](#) follow.

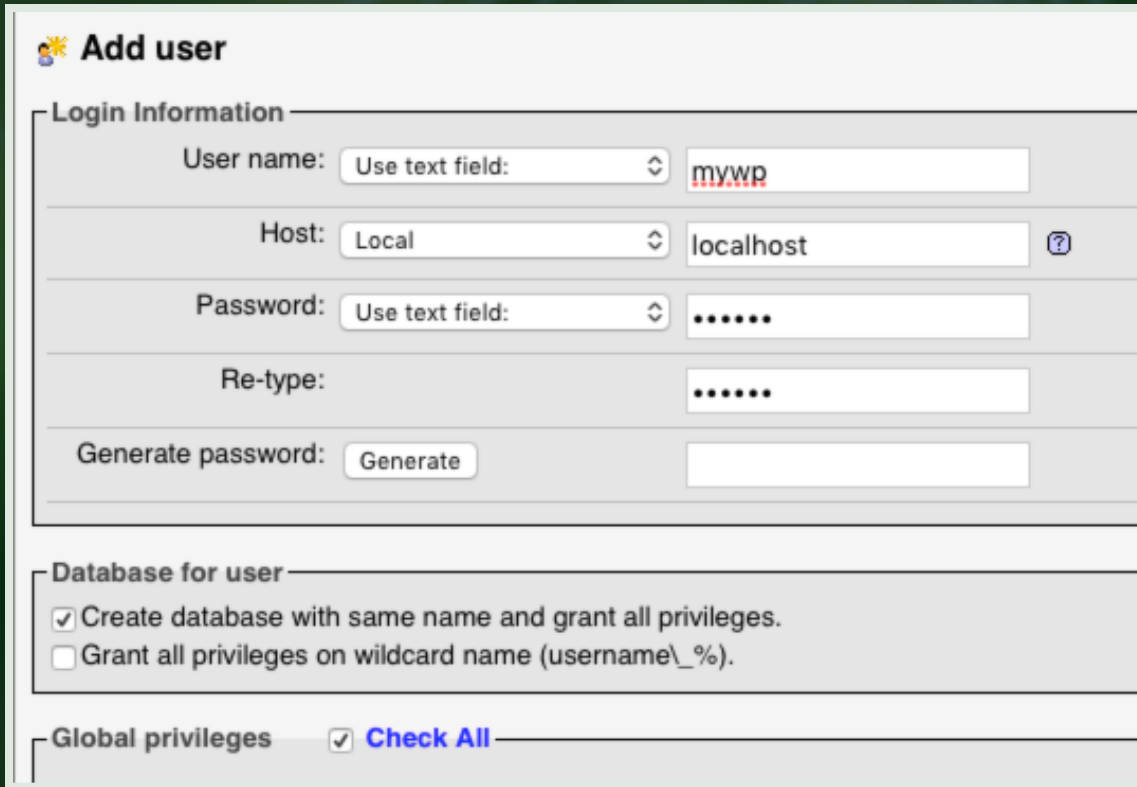
If you are not comfortable with renaming files, step 3 is optional and you can skip it as the install program will create the `wp-config.php` file for you.

1. Download and unzip the WordPress package if you haven't already.
2. Create a database for WordPress on your web server, as well as a [MySQL](#) (or [MariaDB](#)) user who has all privileges for accessing and modifying it.
3. (Optional) Find and rename `wp-config-sample.php` to `wp-config.php`, then edit the file (see [Editing wp-config.php](#)) and add your database information.
4. Upload the WordPress files to the desired location on your web server:
  - If you want to integrate WordPress into the root of your domain (e.g. `http://example.com/`), move or upload all contents of the unzipped WordPress directory (excluding the WordPress directory itself) into the root directory of your web server.
  - If you want to have your WordPress installation in its own subdirectory on your website (e.g. `http://example.com/blog/`), create the `blog` directory on your server and upload the contents of the unzipped WordPress package to the directory via FTP.
  - **Note:** If your FTP client has an option to convert file names to lower case, make sure it's disabled.
5. Run the WordPress installation script by accessing the URL in a web browser. This should be the URL where you uploaded the WordPress files.
  - If you installed WordPress in the root directory, you should visit: `http://example.com/`
  - If you installed WordPress in its own subdirectory called `blog`, for example, you should visit: `http://example.com/blog/`

- [8.3.1 WAMP](#)
- [9 Installing WordPress at popular Hosting Companies](#)
  - [9.1 Installing WordPress at Atlantic.Net](#)
  - [9.2 Installing WordPress at AWS](#)
  - [9.3 Installing WordPress at DigitalOcean](#)
  - [9.4 Installing WordPress at Linode](#)
  - [9.5 Installing WordPress at iPage Hosting](#)
  - [9.6 Installing WordPress at Microsoft Azure](#)
- [10 Installing through wp-cli](#)
- [11 Moving an Existing WordPress Blog](#)

Don't try to read it here, we will step through the install process today.

# Step 2: New Database



The screenshot shows the 'Add user' window in MySQL. It is divided into three sections: 'Login Information', 'Database for user', and 'Global privileges'. In the 'Login Information' section, the 'User name' is 'mywp', the 'Host' is 'localhost', and the password is masked with dots. The 'Database for user' section has two options: 'Create database with same name and grant all privileges' (checked) and 'Grant all privileges on wildcard name (username\\_%)' (unchecked). The 'Global privileges' section has 'Check All' checked.

**Add user**

**Login Information**

User name: Use text field:

Host: Local  ?

Password: Use text field:

Re-type:

Generate password:

**Database for user**

Create database with same name and grant all privileges.

Grant all privileges on wildcard name (username\\_%).

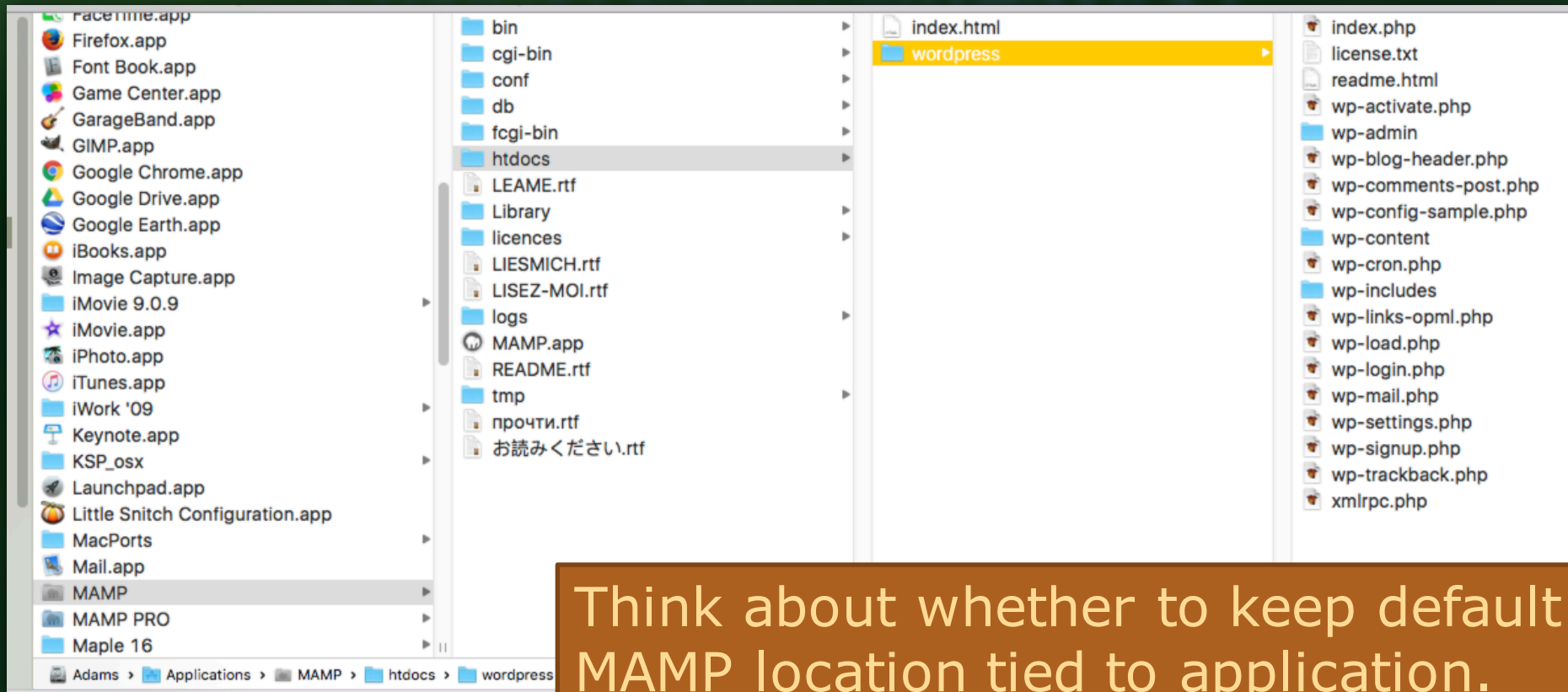
**Global privileges**  **Check All**

```
CREATE USER 'mywp'@'localhost' IDENTIFIED BY '***';GRANT ALL PRIVILEGES ON *.*
TO 'mywp'@'localhost' IDENTIFIED BY '***' REQUIRE NONE WITH GRANT OPTION
MAX_QUERIES_PER_HOUR 0 MAX_CONNECTIONS_PER_HOUR 0 MAX_UPDATES_PER_HOUR 0
MAX_USER_CONNECTIONS 0;
CREATE DATABASE IF NOT EXISTS `mywp`;
GRANT ALL PRIVILEGES ON `mywp`.* TO 'mywp'@'localhost';
```



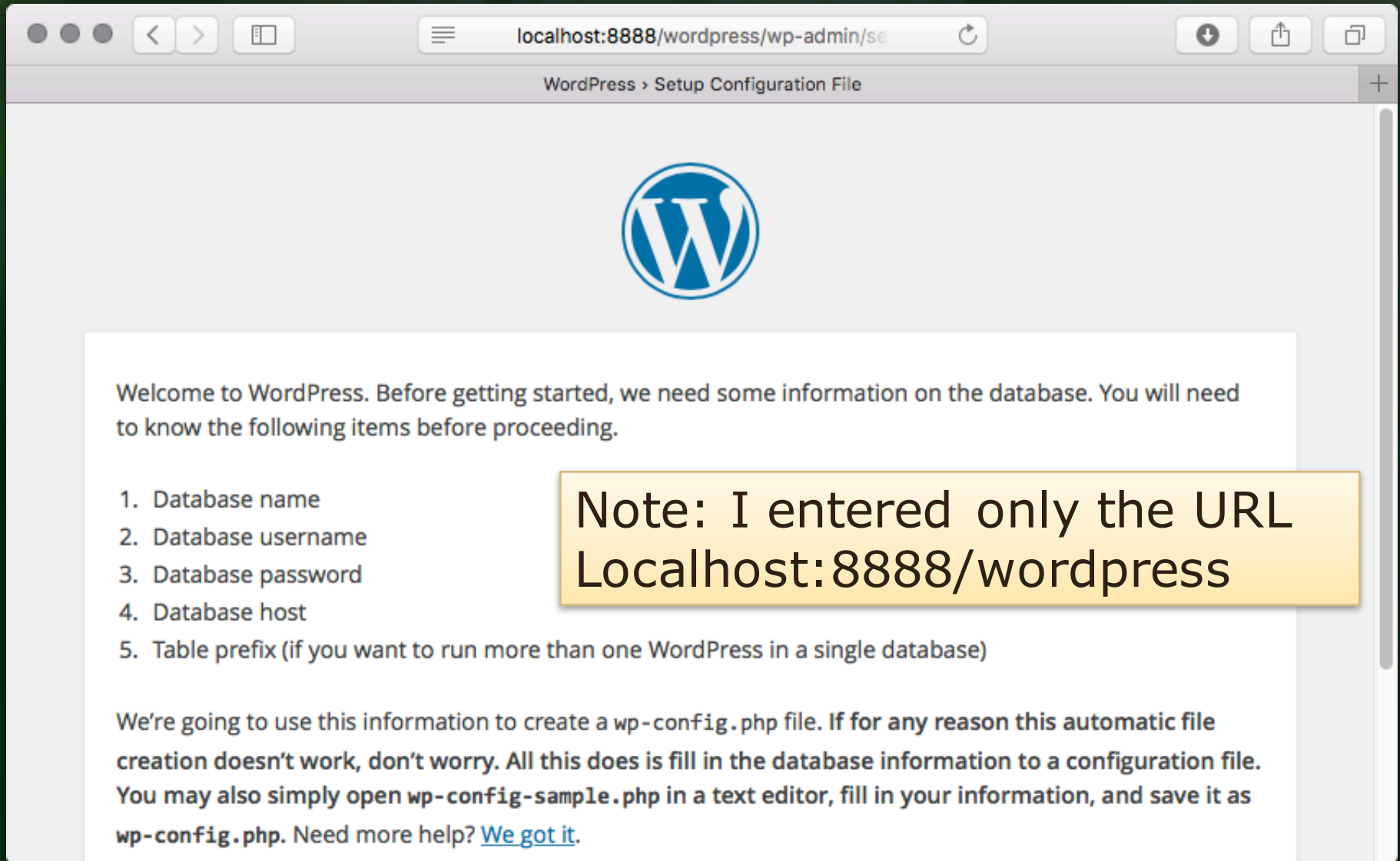
# Step 3: Move Download

- Place all WordPress files in your server's root directory.



Think about whether to keep default MAMP location tied to application.

# Step 4: Start Setup



The screenshot shows a browser window with the address bar containing `localhost:8888/wordpress/wp-admin/se`. The page title is "WordPress > Setup Configuration File". The WordPress logo is centered at the top. Below it, a white box contains the following text:

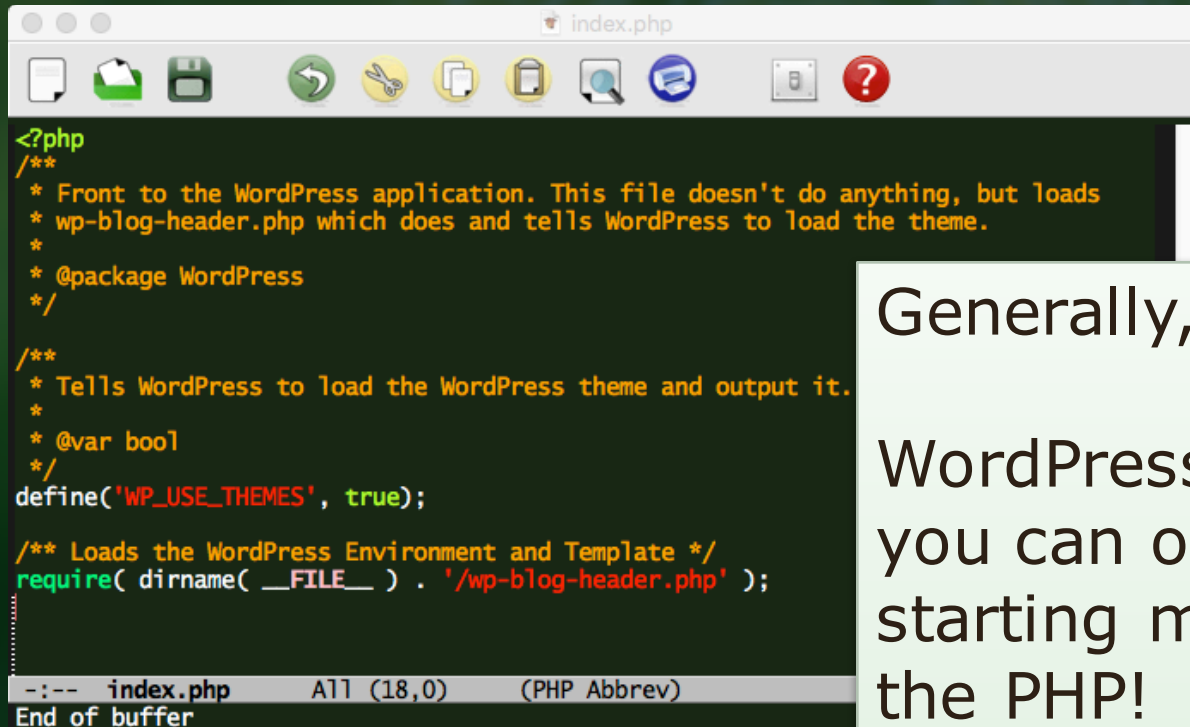
Welcome to WordPress. Before getting started, we need some information on the database. You will need to know the following items before proceeding.

1. Database name
2. Database username
3. Database password
4. Database host
5. Table prefix (if you want to run more than one WordPress in a single database)

We're going to use this information to create a `wp-config.php` file. If for any reason this automatic file creation doesn't work, don't worry. All this does is fill in the database information to a configuration file. You may also simply open `wp-config-sample.php` in a text editor, fill in your information, and save it as `wp-config.php`. Need more help? [We got it.](#)

A yellow callout box on the right side of the page contains the text: "Note: I entered only the URL Localhost:8888/wordpress".

# What Happened?



```
<?php
/**
 * Front to the WordPress application. This file doesn't do anything, but loads
 * wp-blog-header.php which does and tells WordPress to load the theme.
 *
 * @package WordPress
 */

/**
 * Tells WordPress to load the WordPress theme and output it.
 *
 * @var bool
 */
define('WP_USE_THEMES', true);

/** Loads the WordPress Environment and Template */
require( dirname( __FILE__ ) . '/wp-blog-header.php' );
```

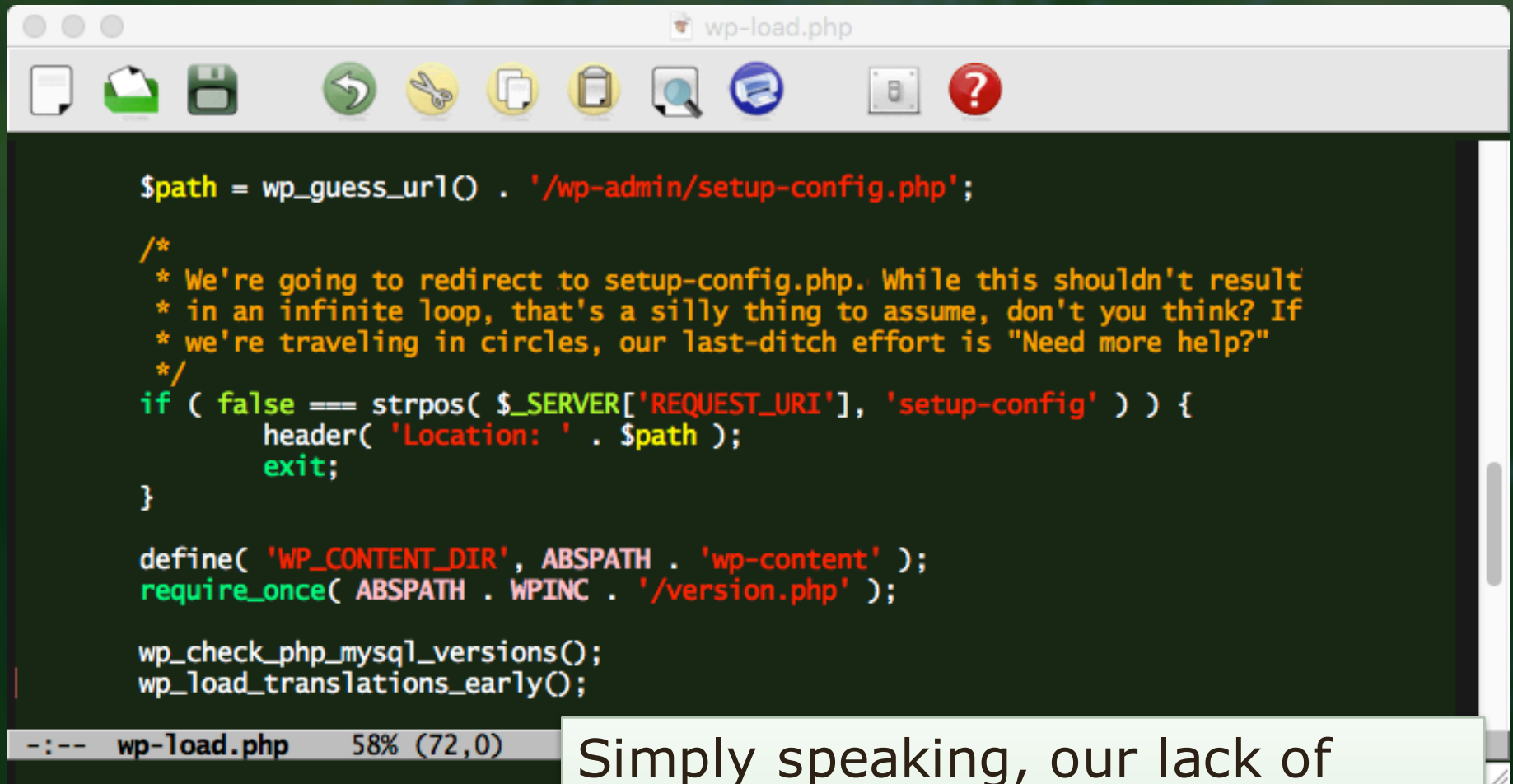
-:-- index.php All (18,0) (PHP Abbrev)  
End of buffer

Generally, don't ask!

WordPress is not written so you can or should quickly start messing with the PHP!

But, in CT 310 you are aware enough of PHP that you should at least think about what is going on.

# Can't Help It– On More Peak



```
$path = wp_guess_url() . '/wp-admin/setup-config.php';

/*
 * We're going to redirect to setup-config.php. While this shouldn't result
 * in an infinite loop, that's a silly thing to assume, don't you think? If
 * we're traveling in circles, our last-ditch effort is "Need more help?"
 */
if ( false == strpos( $_SERVER['REQUEST_URI'], 'setup-config' ) ) {
    header( 'Location: ' . $path );
    exit;
}

define( 'WP_CONTENT_DIR', ABSPATH . 'wp-content' );
require_once( ABSPATH . WPINC . '/version.php' );

wp_check_php_mysql_versions();
wp_load_translations_early();
```

-:-- wp-load.php 58% (72,0)

Simply speaking, our lack of DataBase setup is detected and we're going to be asked to fix it.



# Welcome

---

Welcome to the famous five-minute WordPress installation process! Just fill in the information below and you'll be on your way to using the most extendable and powerful personal publishing platform in the world.

## Information needed

---

Please provide the following information. Don't worry, you can always change these settings later.

Site Title

Username

Names can have only alphanumeric characters, spaces, underscores, hyphens, periods, and the @ symbol.

Password

**Strong**

**Important:** You will need this password to log in. Please store it in a secure location.

Your Email

Double-check your email address before continuing.

Search Engine Visibility  Discourage search engines from indexing this site  
It is up to search engines to honor this request.

# Step 4: Setup Complete

➤ Now connected to your database



## Success!

---

WordPress has been installed. Thank you, and enjoy!

**Username**            red

**Password**            *Your chosen password.*

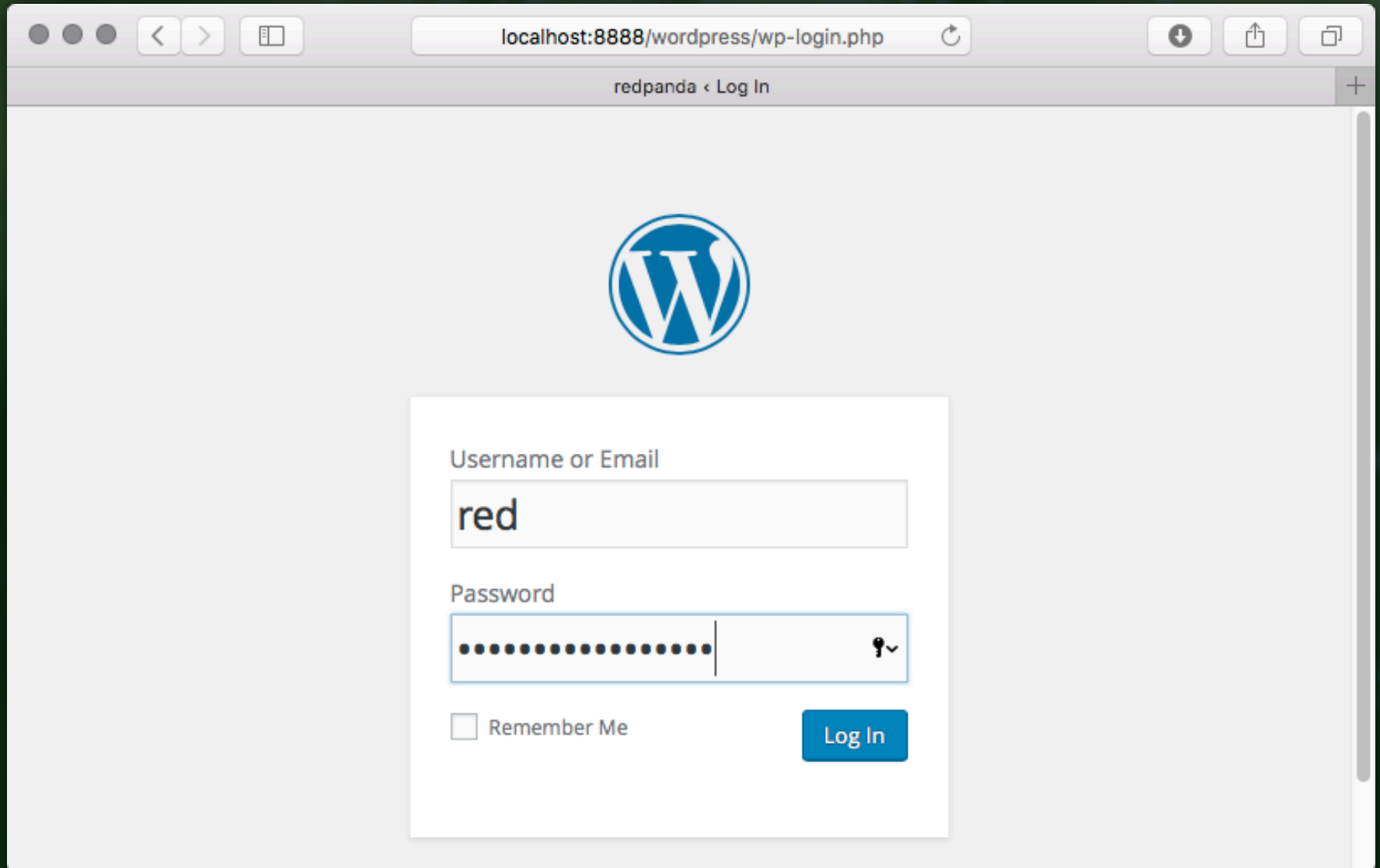
Log In

# Want Proof

The screenshot shows the phpMyAdmin interface for a MySQL server at localhost:8889. The database selected is 'mysql'. The interface includes a navigation sidebar on the left with a tree view of databases and tables. The main area displays a table list with columns for 'Table', 'Action', 'Rows', 'Type', and 'Collation'. The 'Action' column contains icons for Browse, Structure, Search, Insert, Empty, and Drop. The 'Rows' column shows the number of rows for each table, and the 'Type' column shows the storage engine (e.g., MyISAM, CSV). The 'Collation' column shows the character set and collation (e.g., utf8\_bin, latin1\_swedish\_ci).


Table	Action	Rows	Type	Collation
columns_priv	Browse Structure Search Insert Empty Drop	0	MyISAM	utf8_bin
db	Browse Structure Search Insert Empty Drop	3	MyISAM	utf8_bin
event	Browse Structure Search Insert Empty Drop	0	MyISAM	utf8_general_ci
func	Browse Structure Search Insert Empty Drop	0	MyISAM	utf8_bin
general_log	Browse Structure Search Insert Empty Drop	2	CSV	utf8_general_ci
help_category	Browse Structure Search Insert Empty Drop	36	MyISAM	utf8_general_ci
help_keyword	Browse Structure Search Insert Empty Drop	378	MyISAM	utf8_general_ci
help_relation	Browse Structure Search Insert Empty Drop	726	MyISAM	utf8_general_ci
help_topic	Browse Structure Search Insert Empty Drop	458	MyISAM	utf8_general_ci
host	Browse Structure Search Insert Empty Drop	0	MyISAM	utf8_bin
ndb_binlog_index	Browse Structure Search Insert Empty Drop	0	MyISAM	latin1_swedish_ci
plugin	Browse Structure Search Insert Empty Drop	0	MyISAM	utf8_general_ci
proc	Browse Structure Search Insert Empty Drop	0	MyISAM	utf8_general_ci
procs_priv	Browse Structure Search Insert Empty Drop	0	MyISAM	utf8_bin
proxies_priv	Browse Structure Search Insert Empty Drop	1	MyISAM	utf8_bin
servers	Browse Structure Search Insert Empty Drop	0	MyISAM	utf8_general_ci
slow_log	Browse Structure Search Insert Empty Drop	2	CSV	utf8_general_ci
tables_priv	Browse Structure Search Insert Empty Drop	0	MyISAM	utf8_bin
time_zone	Browse Structure Search Insert Empty Drop	0	MyISAM	utf8_general_ci
time_zone_leap_second	Browse Structure Search Insert Empty Drop	0	MyISAM	utf8_general_ci
time_zone_name	Browse Structure Search Insert Empty Drop	0	MyISAM	utf8_general_ci
time_zone_transition	Browse Structure Search Insert Empty Drop	0	MyISAM	utf8_general_ci
time_zone_transition_type	Browse Structure Search Insert Empty Drop	0	MyISAM	utf8_general_ci
Console	Browse Structure Search Insert Empty Drop	4	MyISAM	utf8_bin

# Now Login




localhost:8888/wordpress/wp-login.php

redpanda < Log In



Username or Email

Password

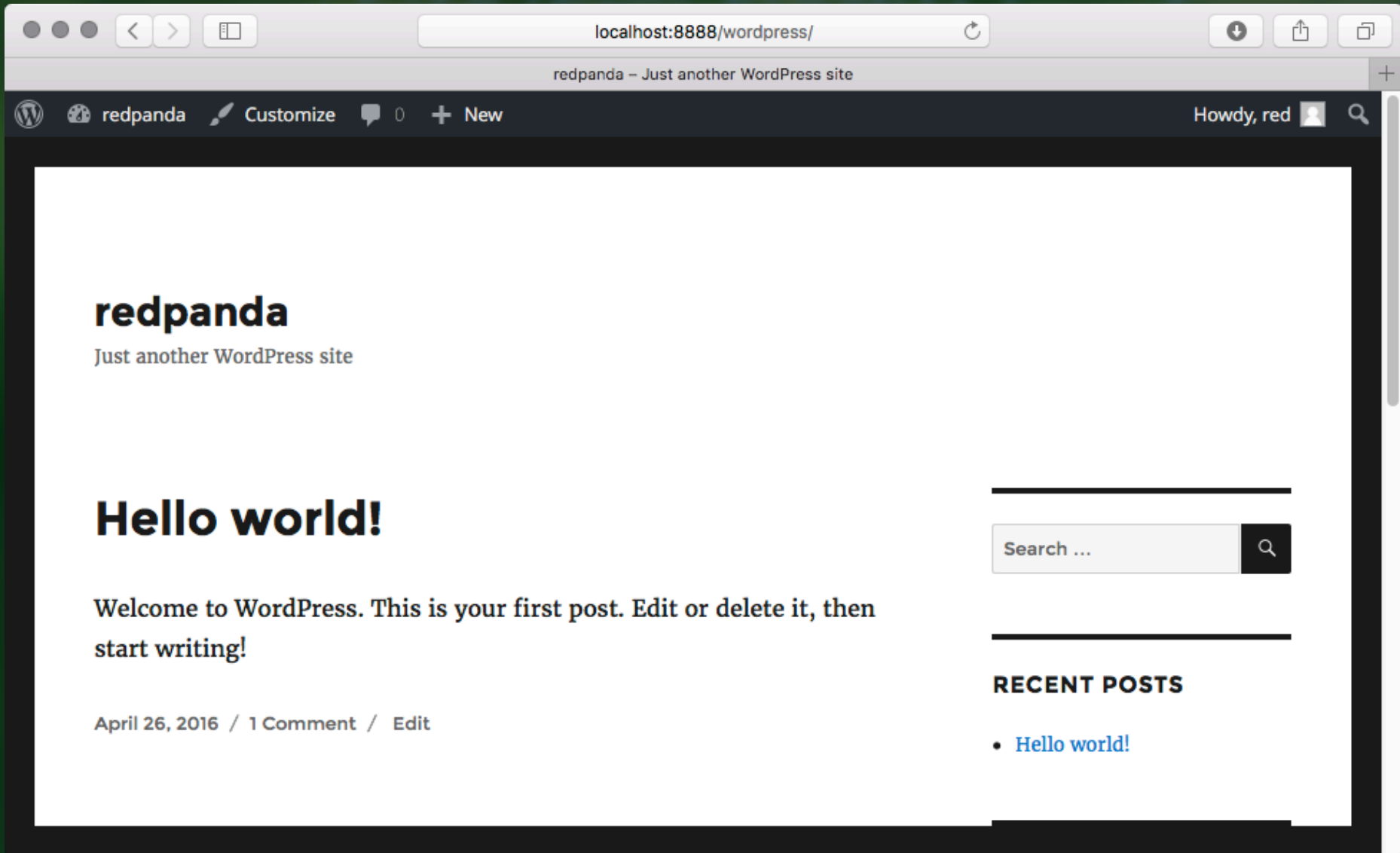
   
 Remember Me



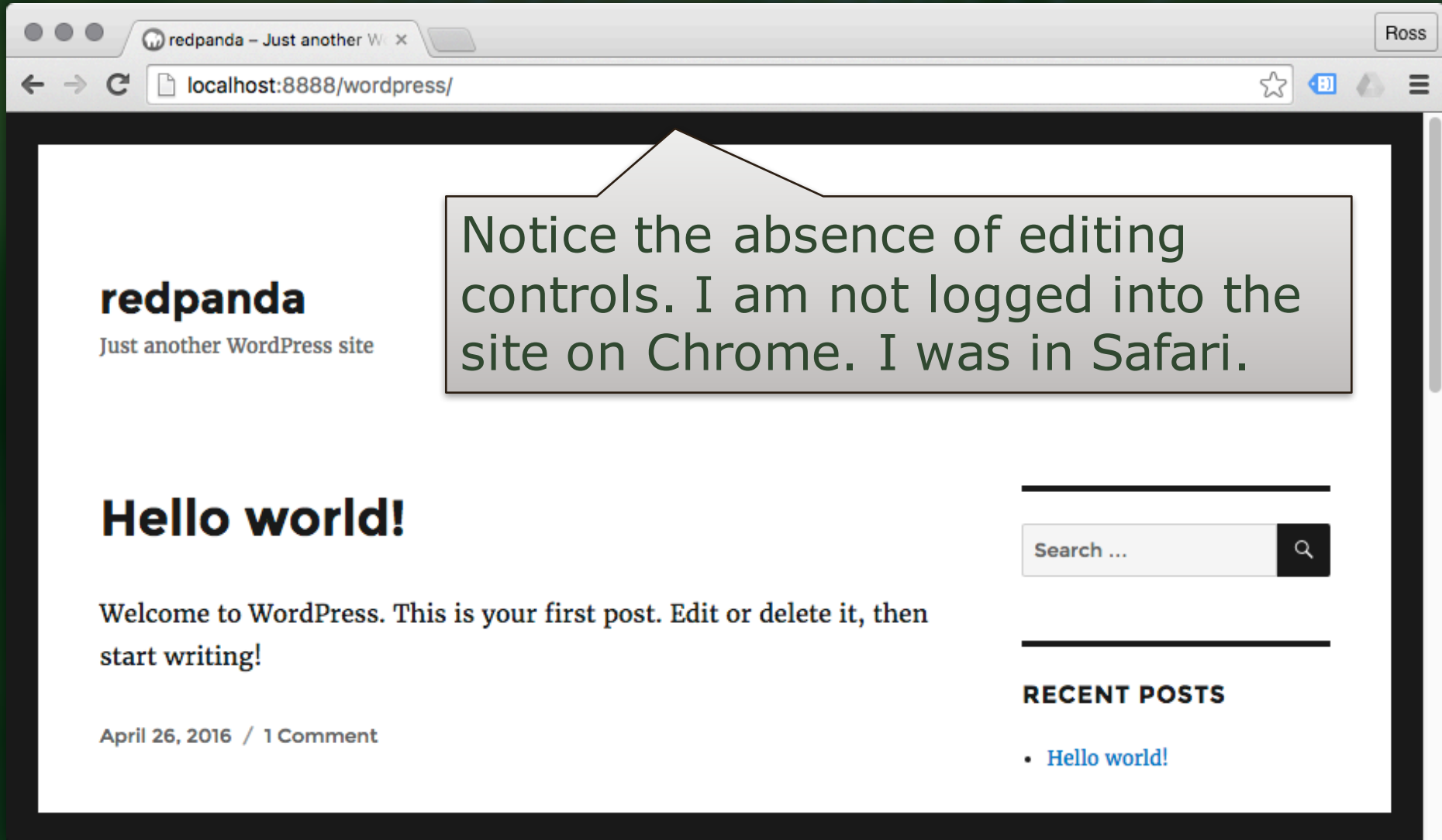
# Done? No! Just Started ...

The image shows a browser window displaying the WordPress dashboard for a user named 'redpanda'. The address bar shows 'localhost:8888/wordpress/wp-admin/'. The dashboard header includes the site name 'redpanda', a 'New' button, and a user profile 'Howdy, red'. The main content area features a 'Welcome to WordPress!' message with a 'Dismiss' link. Below this, there are sections for 'Get Started' with a 'Customize Your Site' button, 'Next Steps' with links to 'Write your first blog post', 'Add an About page', and 'View your site', and 'More Actions' with links to 'Manage widgets or menus' and 'Turn comments on or off'. A 'Learn more about getting started' link is also visible at the bottom.

# Now Build Your Site



# No You See It – Now ...



The image shows a web browser window with the address bar displaying 'localhost:8888/wordpress/'. The page content includes the site name 'redpanda' and the text 'Hello world!'. A callout box points to the text 'Edit or delete it, then start writing!' in the main content area.

redpanda  
Just another WordPress site

**Hello world!**

Welcome to WordPress. This is your first post. Edit or delete it, then start writing!

April 26, 2016 / 1 Comment

Search ...

**RECENT POSTS**

- [Hello world!](#)

Notice the absence of editing controls. I am not logged into the site on Chrome. I was in Safari.

# WordPress: Two Views

How does it work inside?

- Overall design

- Use of MySQL

- Use of PHP

- Use of JavaScript

- Use of jQuery

- (Bootstrap Themes)

As students in CT 310 you could, with sufficient time and motivation, begin to decipher how WordPress is put together.

How do I use it?

- Install (easy part)

- Build out a site

- What about themes

- What about features

- What about users

- Maintenance

As students in CT 310 you have learned nothing about WordPress in particular and the rich ecosystem it supports. Next lecture – a glimpse.