TECH SHARE

WordPress in 30 Minutes

... or your pizza is free

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You are going to know WP*

*More than you know about it now... from a development perspective... not a legally binding statement....



What is WordPress?



What is WordPress

... humble beginnings to internet powerhouse

- Open Source Content Management System (CMS)
  - Initially released in 2003 as a blogging platform
  - Grew to support pages in 2005
  - **Custom post types** released publicly in 2009
- Backed by Automattic
  - 2,000 employees
    - Not all working on WP, lots of support around it though
- PHP Based
  - Backend System / Templating Engine
- MySQL Database for Content
- Now powers over 33% of sites on the internet*
  - * obviously a lot of dead / unmaintained sites



Why Use WordPress

... not necessarily in the following order...

- User Management
- Open Source
- Secure
- Easy for Users
- Excellent Documentation (Codex)
- Plugin / Theme Ecosystem
- Extensible*

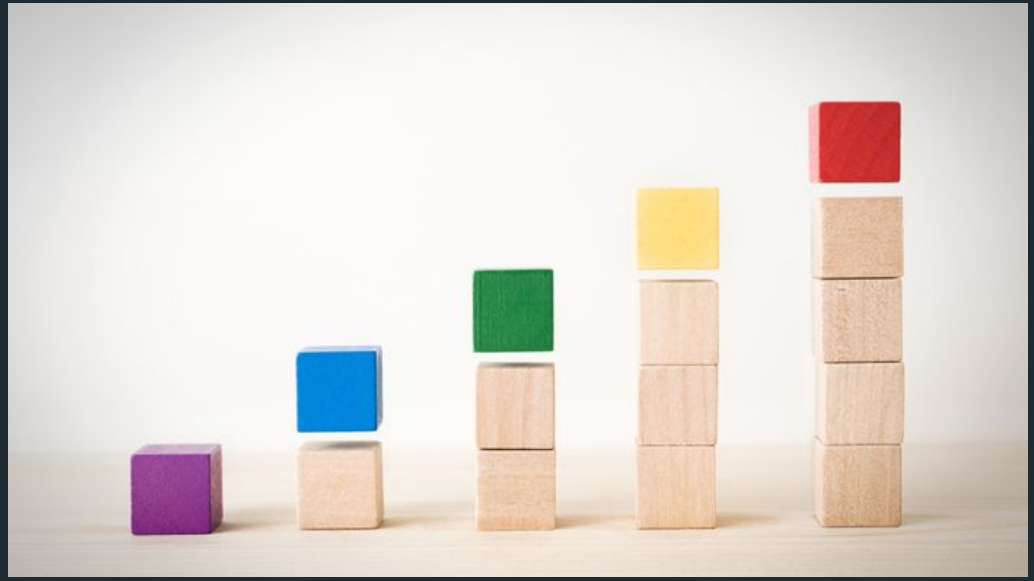
WP as a developer



WP as a developer

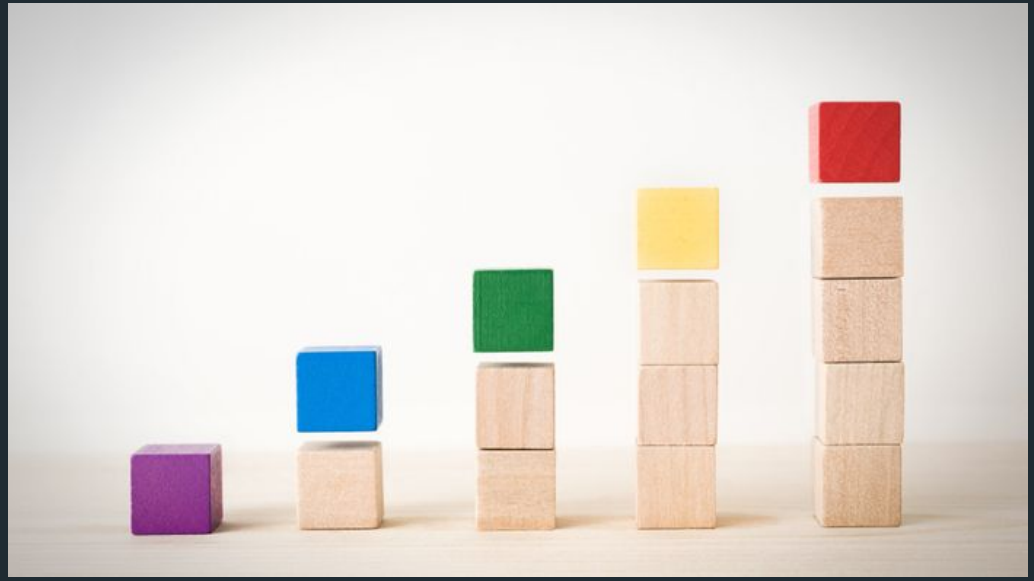


Five Building Blocks of WP Development



Five Building Blocks of WP Development

- Hook System



Hook System

The WP Driver

- Hook based architecture
  - Code all runs off hooks
- 2 types of hooks
  - Actions
    - Execute code / change how code operates at a particular point during the core execution of WordPress
  - Filters
    - Modify content prior to moving on in the execution pipeline
- Filters return data, actions don’t



Hook System

The WP Driver

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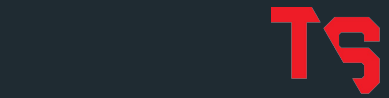
uring the core execution

Hook System

Actions run during a typical request

muplugins_loaded, registered_taxonomy, registered_post_type, plugins_loaded, sanitize_comment_cookies, setup_theme, load_textdomain, after_setup_theme, auth_cookie_malformed, auth_cookie_valid, set_current_user, init, widgets_init, register_sidebar, wp_register_sidebar_widget, wp_default_scripts, wp_default_styles, admin_bar_init, add_admin_bar_menus, wp_loaded, parse_request, parse_query, pre_get_posts, send_headers, posts_selection, wp, template_redirect, get_header, wp_enqueue_scripts, wp_head, wp_print_styles, wp_print_scripts, get_search_form, loop_start, the_post, get_template_part_content, loop_end, get_sidebar, dynamic_sidebar, get_search_form, pre_get_comments, wp_meta, get_footer, get_sidebar, wp_footer, wp_print_footer_scripts, admin_bar_menu, wp_before_admin_bar_render, wp_after_admin_bar_render, shutdown

Source: https://codex.wordpress.org/Plugin_API/Action_Reference



Hook System

Actions Code

```
1 function red_do_init_action_hook_code() {
2   // custom code goes here
3 }
4
5 add_action('init', 'red_do_init_action_hook_code')
```

Hook System

Filter Code

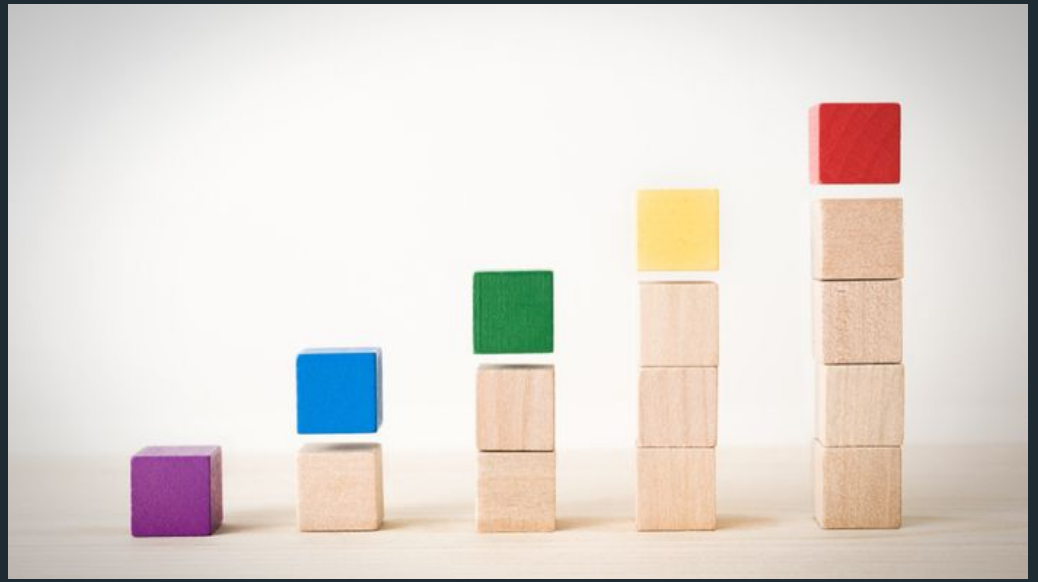
```php
function red_add_quotes_to_content($s) {
  // custom code goes here

  return "\"{$s}\"";
}

add_filter('the_content', 'red_add_quotes_to_content')
```

Five Building Blocks of WP Development

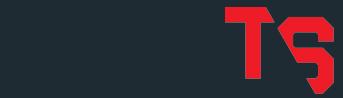
- Hook System
- Posts



Posts

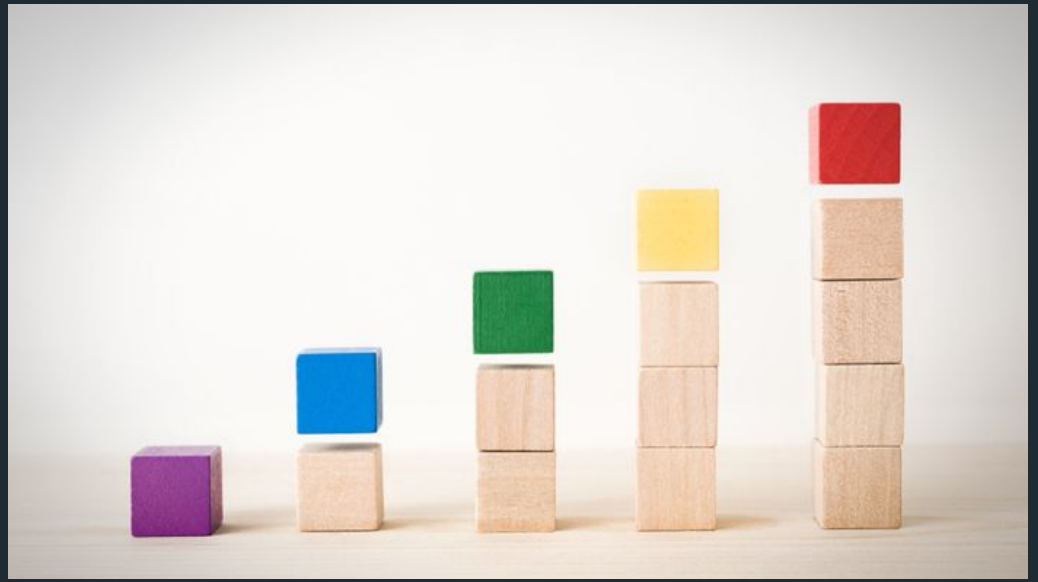
The most basic and complex data model

- Everything is a post
  - EVERYTHING IS A POST
- Blog post is a post
- Page is a post
  - Pages are hierarchical posts
    - Parent / Child relationships
- Content is going to be a post
- `post_type` defines the type of content
- You can create custom post types via the `register_post_type` hook, or a plugin
  - *Be careful with plugins*
- If you can understand that all of your content, at some level, is a post, you've learned a very important thing about how WordPress is working under the hood



Five Building Blocks of WP Development

- Hook System
- Posts
- Taxonomies



Taxonomies

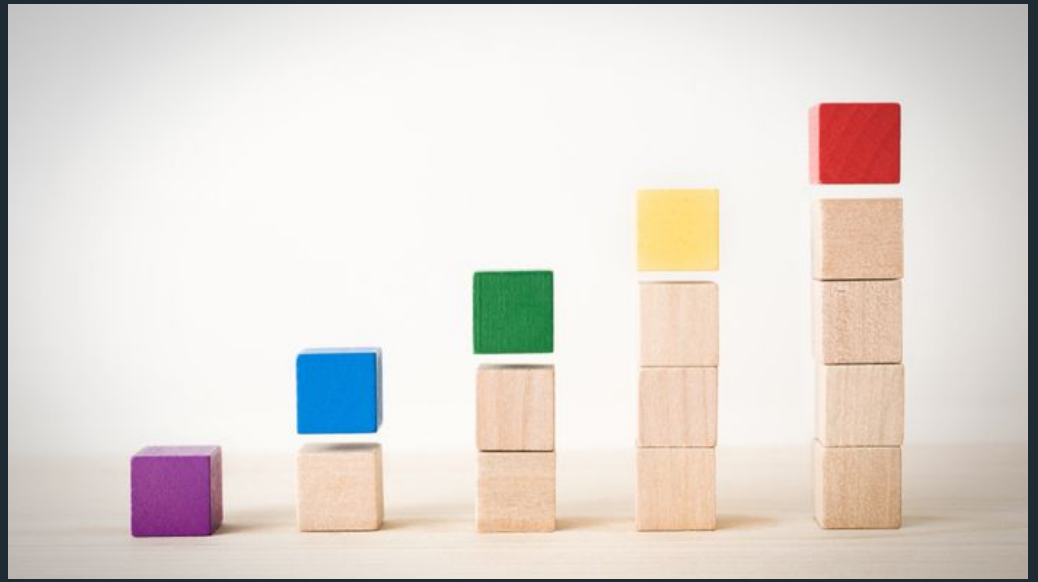
Fancy word for categories

- Taxonomies are used to classify our posts
- Categories and Tags ship with WordPress
    - Categories are hierarchical
    - Tags are not
- Posts can be associated with categories or tags
- You can also create custom taxonomies within WordPress, that are / are not hierarchical to tag content more appropriately
- Taxonomies can be used to query posts directly



Five Building Blocks of WP Development

- Hook System
- Posts
- Taxonomies
- Meta



Meta

Key / Value data store for Posts

- Meta is where a lot of the developer power is in WP
- Meta is custom data that lives in the database that is associated with a post in what is essentially a key/value store
- Meta is not limited to being associated with posts, but can also be associated with taxonomies, and users as well

Meta

Programmatically adding to posts

- Add
  - `add_post_meta( $post_id, 'key', $value )`
- Update
  - `update_post_meta( $post_id, 'key', $value )`
  - `update_post_meta( $post_id, 'key', $value, $previous_value )`
- Delete
  - `delete_post_meta( $post_id, 'key' )`
  - `delete_post_meta( $post_id, 'key', $value )`
- Retrieve
  - `get_post_meta( $post_id, 'key' )`

Meta

Quick note!

- Meta, by default, is returned as an array. If your architecture only holds a single value for a key, then you need to specify that when you `get` meta
  - `get_post_meta( $post_id, 'key' )` → `[ results ]`
  - `get_post_meta( $post_id, 'key', true )` → `result`

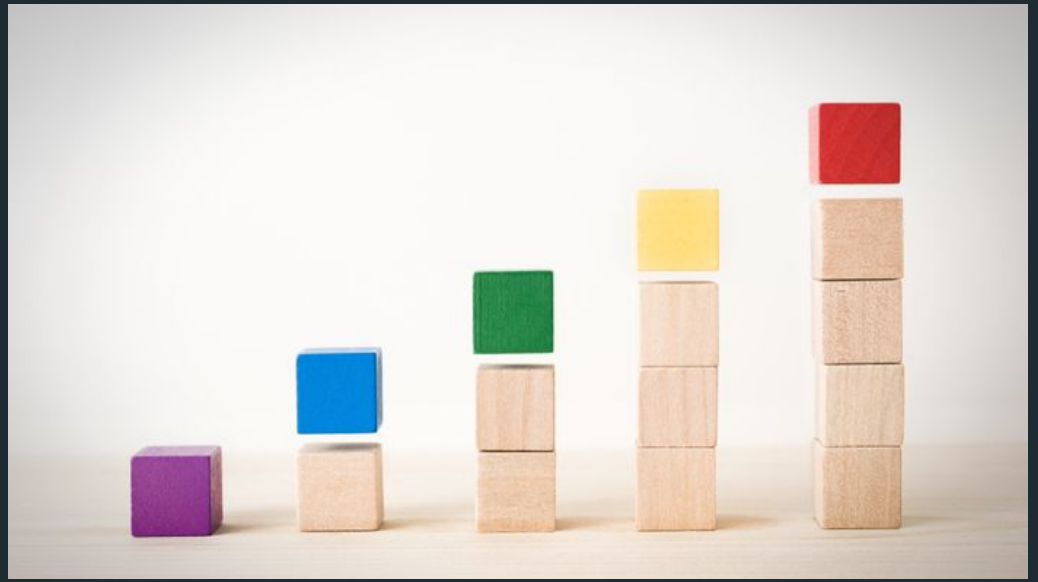
Meta

Options

- Sitewide meta are known as “options”
  - Options set with an expiration are known as “transients”
  - Follows key / value approach
  - Doesn’t follow the array approach

Five Building Blocks of WP Development

- Hook System
- Posts
- Taxonomies
- Meta
- REST API



REST API

WordPress as JSON

- The WordPress REST API provides an interface for applications to interact with your WordPress site by sending and receiving data as JSON objects
- The REST API is a developer-oriented feature of WordPress. It provides data access to the content of your site.
- Allows for users to easily use the user-friendly WP UI as a headless CMS for applications that are fronted by non-PHP technologies
- Also helps for cleaner content retrieval than using the `wp_ajax` action
- Uses a collection of exposed hooks to handle the endpoint creation, validation, etc.



Plugin Ecosystem



Plugin Ecosystem

Work Smarter, Not Harder

- There are a number of plugins that exist to make your life developing in and around WordPress easier
- There are a number of plugins that exist that say they are going to make your life easier when developing in and around WordPress that will do nothing but slow down your site, cause issues with some of your custom hooks, and lead to poor performance and a bad user experience
- I would argue that most of the popular plugins are worth their weight in gold
- I would argue that many of the most popular plugins are pure rubbish and you're better off writing a simple hook to do the work



Luke’s List of Approved WP Plugins

If they cause an issue, tell them someone else told you do install them...

- Advanced Custom Fields Pro
  - What can’t it do
- WP Offload S3
  - Automatically push file uploads to s3
- Custom Post Type UI
  - Custom Post Type functionality now in ACF plugin
- WP GraphQL
  - Allows you to expose content via a graph endpoint

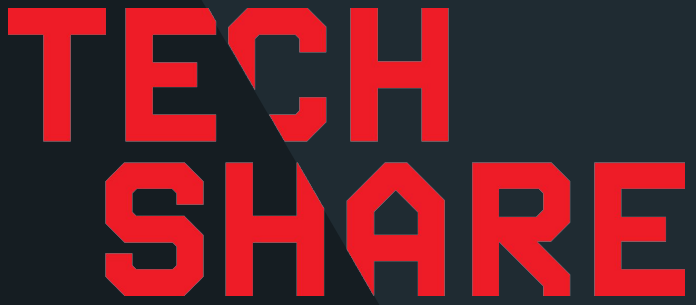
WordPress is Easy

... tell'em Wash...



TECH SHARE

Thank you!



Questions?