Wordless Documentation

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weLaika

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CHAPTER 1

Introduction

Wordless is an opinionated WordPress plugin + starter theme that dramatically speeds up and enhances your custom theme creation. Some of its features are:

- A structured, organized and clean theme organization
- Scaffold a new theme directly within wp-cli
- Write PHP templates with the Pug templating system
- Write CSS stylesheets using the awesome Sass syntax
- Write Javascript logic in Coffeescript
- · A growing set of handy and documented PHP helper functions ready to be used within your views
- Development workflow backed by WebPack, BrowserSync (with live reload), WP-CLI, Yarn. All the standards you already know, all the customizations you may need.

CHAPTER 2

Contents

2.1 Installation

2.1.1 Wordless GEM (favourite)

The quickest CLI tool to setup a new WordPress locally. Wordless ready.

No prerequisites. Just joy.

Navigate to https://github.com/welaika/wordless_gem to discover the tool and set up all you need for local development. In less than 2 minutes;)

2.1.2 (Not so) Manual

At the end of the installation process you will have

- a plugin almost invisible: no backend page, just wp-cli commands
- a theme where we will do all of the work

2.1.2.1 Prerequisites

- 1. Install WP-CLI http://wp-cli.org/#installing
- 2. Install global packages from NPM: npm install -g foreman yarn¹² (you already have node on your development machine, haven't you?)
- 3. WordPress installed and configured as per official documentation
- 4. Install MailHog. On MacOS this is as simple as brew install mailhog. Wordless will do the rest.

¹ https://www.npmjs.com/package/yarn

² https://www.npmjs.com/package/foreman

Note: We don't know if you have a local apache {M,L,W}AMPP instance or whatever in order to perform the official installation process. Keep in mind that Wordless's flow does not need any external web server, since it will use the wp server command to serve your wordpress.

See also:

Development environment

2.1.2.2 Steps

Note: We consider that you have WordPress already up and running and you are in the project's root directory in your terminal.

1. Install and activate the wordpress plugin

```
wp plugin install --activate wordless
```

2. Scaffold a new theme

```
wp wordless theme create mybrandnewtheme
```

3. Enter theme directory

```
cd wp-content/themes/mybrandnewtheme
```

4. Bundle NPM packages

```
yarn install
```

5. Start the server - and the magic

```
yarn run server
```

Webpack, php server and your browser will automatically come up and serve your needs:)

See also:

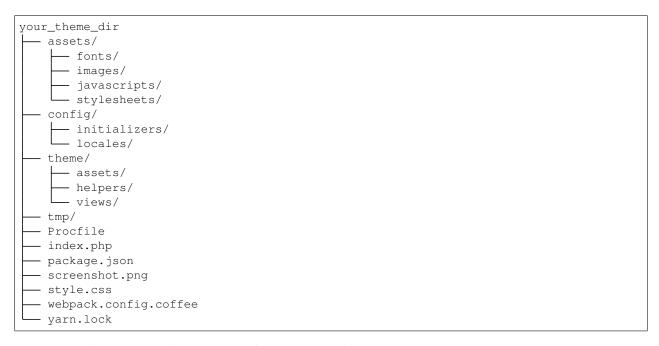
Development environment

Note: It is possible that your OS asks you to allow connections on server ports (3000 and/or 8080). It's just ok to do it.

2.2 Usage

2.2.1 Theme anatomy

This is a typical Wordless theme directory structure:



Now let's see in detail what is the purpose of all those directories.

2.2.1.1 Routing

The *index.php* serves as a router to all the theme views.

```
if (is_front_page()) {
   render_view("static/homepage)");
} else if (is_post_type_archive("portfolio_work")) {
   render_view("portfolio/index");
} else if (is_post_type("portfolio_work")) {
   render_view("portfolio/show");
}
```

As you can see, you first determine the type of the page using WordPress conditional tags, and then delegate the rendering to an individual view.

See also:

render_view() helper documentation

See also:

Using Page Template Wordpress' feature inside Wordless

2.2.1.2 Rendering

2.2.1.2.1 render_view()

The main helper function used to render a view is - fantasy name - render_view(). Here is its signature:

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```
<?php
/**

* Renders a view. Views are rendered based on the routing.

* They will show a template and a yielded content based

* on the page requested by the user.

*

* @param string $name Filename with path relative to theme/views

* @param string $layout The template to use to render the view

* @param array $locals An associative array. Keys will be variable

* names and values will be variable values inside

* the view

*/

function render_view($name, $layout = 'default', $locals = array()) {
    /* [...] */
}</pre>
```

Thanks to this helper, Wordless will always intercept PUG files and automatically translate them to HTML.

Note: Extension for \$name can always be omitted.

See also:

PHUG section @ Code compilation

Inside the theme/views folder you can scaffold as you wish, but you'll have to always pass the relative path

```
<?php
render_view('folder1/folder2/myview')</pre>
```

The \$locals array will be auto-extract () -ed inside the required view, so you can do

```
<?php
render_view('folder1/folder2/myview', 'default', array('title' => 'My title'))
```

and inside theme/views/folder1/folder2/myview.pug

```
h1= $title
```

2.2.1.2.2 render partial()

render_partial() is almost the same as its sister render_view(), but it does not accept a layout as argument. Here is its signature:

```
<?php
/**

* Renders a partial: those views followed by an underscore

* by convention. Partials are inside theme/views.

*

* @param string $name    The partial filenames (those starting

* with an underscore by convention)

*

* @param array $locals An associative array. Keys will be variables'

* names and values will be variable values inside

* the partial

*/</pre>
```

(continues on next page)

(continued from previous page)

```
function render_partial($name, $locals = array()) {
    $parts = preg_split("/\//", $name);
    if (!preg_match("/^_/", $parts[sizeof($parts)-1])) {
          $parts[sizeof($parts)-1] = "_" . $parts[sizeof($parts)-1];
    }
    render_template(implode($parts, "/"), $locals);
}
```

Partial templates – usually just called "partials" – are another device for breaking the rendering process into more manageable chunks.

Note: Partials files are **named with a leading underscore** to distinguish them from regular views, even though they are **referred to without the underscore**.

2.2.1.2.3 Layouts

theme/views/layouts directory

When Wordless renders a view, it does so by combining the view within a layout.

E.g. calling

```
render_view('folder1/folder2/myview')
```

will be the same as calling

```
render_view('folder1/folder2/myview', 'default', array())
```

so that the default.html.phug layout will be rendered. Within the layout, you have access to the wl_yield() helper, which will combine the required view inside the layout when it is called:

```
doctype html
html
  head= render_partial("layouts/head")
  body
    .page-wrapper
     header.site-header= render_partial("layouts/header")
     section.site-content= wl_yield()
     footer.site-footer= render_partial("layouts/footer")
     - wp_footer()
```

Note: For content that is shared among all pages in your application that use the same layout, you can use partials directly inside layouts.

2.2.1.2.4 Views

```
theme/views/**/*.pug or theme/views/**/*.php
```

This is the directory where you'll find yourself coding most of the time. Here you can create a view for each main page of your theme, using Pug syntax or plain HTML.

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Feel free to create subdirectories to group together the files. Here's what could be an example for the typical WordPress loop in an archive page:

```
// theme/views/posts/archive.html.pug
h2 Blog archive
ul.blog_archive
while have_posts()
    - the_post()
    li.post= render_partial("posts/single")
```

```
// theme/views/posts/_single.html.pug
h3!= link_to(get_the_title(), get_permalink())
.content= get_the_filtered_content()
```

Wordless uses Pug.php - formerly called Jade.php - for your Pug views, a great PHP port of the PugJS templating language. In this little snippet, please note the following:

- The view is delegating some rendering work to a partial called _single.html.pug
- There's no layout here, just content: the layout of the page is stored in a secondary file, placed in the theme/views/layouts directory, as mentioned in the paragraph above
- We are already using two of the 40+ Wordless helper functions, link_to() and get_the_filtered_content(), to DRY up this view
- Because the link_to helper will return html code, we used unescaped buffered code to print PUG's function: !=. Otherwise we'd have obtained escaped html tags.

It looks awesome, right?

2.2.1.3 Helpers

```
theme/helpers/*.php files
```

Helpers are basically small functions that can be called in your views to help keep your code stay DRY. Create as many helper files and functions as you want and put them in this directory: they will all be required within your views, together with the default Wordless helpers. These are just a small subset of all the 40+ tested and documented helpers Wordless gives you for free:

- lorem() A "lorem ipsum" text and HTML generator
- pluralize() Attempts to pluralize words
- truncate () Truncates a given text after a given length
- new_post_type() and new_taxonomy() Help you create custom posts and taxonomy
- $\bullet \ \, \text{distance_of_time_in_words ()} \, \cdot \, \text{Reports the approximate distance in time between two dates} \\$

Our favourite convention for writing custom helpers is to write almost 1 file per function and naming both the same way. It will be easier to find with `cmd+p

2.2.1.4 Initializers

```
config/initializers/*.php files
```

Remember the freaky functions.php file, the one where you would drop every bit of code external to the theme views (custom post types, taxonomies, wordpress filters, hooks, you name it?) That was just terrible, right? Well, forget it.

Wordless lets you split your code into many modular initializer files, each one with a specific target:

confi	g/initializers
	- backend.php
	- custom_post_types.php
	- default_hooks.php
-	- hooks.php
-	- login_template.php
	- menus.php
-	- shortcodes.php
	- thumbnail_sizes.php

- backend: remove backend components such as widgets, update messages, etc
- **custom_post_types**: well... if you need to manage taxonomies, this is the place to be
- **default_hooks**: these are used by wordless's default behaviours; tweak them only if you know what are you doing
- hooks: this is intended to be your custom hooks collector
- menus: register new WP nav_menus from here
- shortcodes: as it says
- thumbnail_sizes: if you need custom thumbnail sizes

These are just some file name examples: you can organize them the way you prefer. Each file in this directory will be automatically required by Wordless.

2.2.1.5 Locale files

```
config/locales directory
```

Just drop all of your theme's locale files in this directory. Wordless will take care of calling load_theme_textdomain() for you.

Note: Due to the WordPress localization framework, you need to append our "wl" domain when using internationalization. For example, calling ___ ("News") without specifying the domain will not work.

You'll have to add the domain "wl" to make it work: ___("News", "wl")

2.2.1.6 Assets

2.2.1.6.1 The Fast Way

- jQuery is included by default for you (not aliased to \$ though)
- write your Sass in theme/assets/stylesheets/screen.sass
- $\bullet \ \ write \ your \ Coffees cript \ in \ \texttt{theme/assets/javascripts/application.js.} coffee$

and all will automagically work!:)

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2.2.1.6.2 I need to really understand

Wordless has 2 different places where you want to put your assets (javascript, css, images):

- Place all your custom, project related assets into theme/assets/*
- Since you are backed by Webpack, you can use NPM (node_modules) to import new dependencies following a completely standard approach

Custom assets

They must be placed inside theme/assets/javascript/ and theme/assets/stylesheets/ and theme/assets/images/.

They will be compiled and resulting compilation files will be moved in the assets/assetType folder.

Compilation, naming and other logic is fully handled by webpack.

Images will be optimized by ImageminPlugin. The default setup already translates url s inside css/sass files in order to point to images in the right folder via resolve-url-loader.

Take a look to the default screen.sass and application.js.coffee to see usage examples.

See also:

Code compilation

See also:

- · Official Sass guide
- Official CoffeeScritp guide

node modules

You can use node modules just as any SO answer teaches you :)

Add any vendor library through YARN with

```
yarn add slick-carousel
```

Then in your CoffeeScritp/Javascript you can do

```
require('slick-carousel')
```

and go on as usual.

2.2.2 Build and distribution

Since Wordless uses Webpack, we have to manage build and distribution strategies for dev and staging/production.

The most widespread folder naming approach to distinguish between source and built code are src and dst, but Wordless has different naming due to its backward compatibility effort.

The source asset code is placed in theme/assets/{javascripts|stylesheets|images}, while built/optimized code is placed - automatically by Webpack - in assets/{javascripts|stylesheets|images}

See also:

CoffeeScript and Sass

We offer standard approaches for both environments. They are handled - as expected - through package.json 's scripts1:

Listing 1: package.json

```
"scripts": {
    "server": "nf start",
    "build:dev": "webpack --debug --env.WL_ENV=development",
    "build:prod": "webpack -p --bail --env.WL_ENV=production",
    "clean:js": "rimraf assets/javascripts/**.js assets/javascripts/**.map",
    "clean:css": "rimraf assets/stylesheets/**.css assets/stylesheets/**.map",
    "clean:images": "rimraf assets/images/**.{png,gif,jpg,svg}",
    "clean:dist": "yarn clean:js && yarn clean:css && yarn clean:images"
},
```

It is expected - but it's still up to you - that before every build you will clean the compiled files.

Build for development

```
yarn clean:dist && yarn build:dev
```

Build for production

```
yarn clean:dist && yarn build:prod
```

Production build will essentially:

- enable Webpack's production mode
- do not produce source maps
- · do minimize assets

2.2.2.1 PHUG optimizer

When performance is a must, PHUG ships a built-in Optimizer. You can read about it in the phug documentation:

The Optimizer is a tool that avoids loading the Phug engine if a file is available in the cache. On the other hand, it does not allow to change the adapter or user post-render events.

Wordless supports enabling this important optimization by setting an environment variable (in any way your system supports it) or a global constant to be defined in wp-config.php. Let's see this Wordless internal code snippet:

Listing 2: render_helper.php

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https://docs.npmjs.com/files/package.json#scripts

where we search for ENVIRONMENT and thus we'll activate PHUG's Optimizer if the value is either production or staging.

Note: Arbitrary values are not supported.

The simplest approach is to to define a constant inside wp-config.php.

```
:caption: wp-config.php
</php
define('ENVIRONMENT', 'production');</pre>
```

2.2.2.2 Deploy

Wordless is agnostic about the deploy strategy. Our favourite product for deploying WordPress is Wordmove.

2.2.3 Filters

The plugin exposes WordPress filters to let the developer alter specific data.

2.2.3.1 wordless pug configuration

Listing 3: wordless/helpers/pug/wordless_pug_options.php

Usage example

```
<?php
add_filter('wordless_pug_configuration', 'custom_pug_options', 10, 1);

function custom_pug_options(array $options): array {
    $options['expressionLanguage'] = 'js';

    return $options;
}</pre>
```

2.3 Development stack

Here are the stack components of Wordless' development workflow:

- WordPress plugin
- · A theme with a convenient default scaffold
- Webpack
- WP-CLI

Contents

2.3.1 Development environment

Starting by saying that with a

```
yarn run server
```

you should be up and running, let's see in depth what happens behind the scenes.

2.3.1.1 YARN

yarn run (or simply yarn scriptName) will search for a scripts section inside your package.json file and will execute the matched script.

Listing 4: package.json

```
"scripts": {
    "server": "nf start",
    "build:dev": "webpack --debug --env.WL_ENV=development",
    "build:prod": "webpack -p --bail --env.WL_ENV=production",
    "clean:js": "rimraf assets/javascripts/**.js assets/javascripts/**.map",
    "clean:css": "rimraf assets/stylesheets/**.css assets/stylesheets/**.map",
    "clean:images": "rimraf assets/images/**.{png,gif,jpg,svg}",
    "clean:dist": "yarn clean:js && yarn clean:css && yarn clean:images"
},
```

yarn server will run nf start, where nf is the Node Foreman executable.

2.3.1.2 Foreman

Node Foreman (nf) could do complex things, but Wordless uses it just to be able to launch multiple processes when server is fired.

Listing 5: Procfile

```
wp: wp server --host=127.0.0.1
webpack: npx webpack --debug --watch --progress --color --env.WL_ENV=development
mailhog: mailhog
```

As you can see, each line has a simple named command. Each command will be launched and foreman will:

- run all the listed processes
- collect all STDOUTs from processes and print theme as one with fancyness
- when stopped (CTRL-C) it will stop all of the processes

2.3.1.3 wp server

Launched by nf. Is a default WP-CLI command.

We are invoking it within a theme directory, but it will climb up directories until it finds a wp-config.php file, then it will start a PHP server on its default port (8080) and on the 127.0.0.1 address as per our config.

Note: You can directly reach http://127.0.0.1:8080 in you browser in order to reach wordpress, bypassing all the webpack *things* we're going to show below.

2.3.1.4 BrowserSync

The only relevant **Webpack** part in this section is BrowserSync. It will start a web server at address 127.0.0.1 on port 3000. This is where your browser will automatically go once launched.

Listing 6: webpack.config.coffee

```
plugins: [
   new BrowserSyncPlugin {
    host: "127.0.0.1"
    port: 3000
    proxy: { target: "http://127.0.0.1:8080" }
    watchOptions: { ignoreInitial: true }
    files: [
```

As you can see from the configuration, web requests will be proxy-ed to the underlying wp server.

Since *BrowserSync* is invoked through a Webpack plugin (browser-sync-webpack-plugin) we will benefit from automatic **browser autoreloading** when assets are recompiled by Webpack itself.

The files option is there because .pug files are not compiled by webpack, so we force watching those files too, thus calling autoreload on template changes too.

See also:

Code compilation for other Webpack default configurations

Note: BrowserSync's UI will be reachable at http://127.0.0.1:3001 as per default configuration.

Warning: If you will develop with the WordPress backend in a tab, *BrowserSync* will ignorantly reload that tab as well (all tabs opened on port 3000 actually). This could slow down your server. We advise to use the WordPress backend using port 8080 and thus bypassing *BrowserSync*.

2.3.1.5 MailHog

MailHog is an email testing tool for developers:

- Configure your application to use MailHog for SMTP delivery
- · View messages in the web UI, or retrieve them with the JSON API
- Optionally release messages to real SMTP servers for delivery

Wordless is configured to use it by default, so you can test mailouts from your site, from WordPress and from your forms.

The UI will be at http://localhost:8025 as per default configuration.

When you spawn yarn server, you'll have an environment variable exported thanks to the .env file:

Listing 7: .env

```
MAILHOG=true
```

This will trigger the smtp.php initializer:

Listing 8: config/initializers/smtp.php

```
<?php
add_action( 'phpmailer_init', 'wl_phpmailer_init' );
function wl_phpmailer_init( PHPMailer $phpmailer ) {
    $mailhog = getenv('MAILHOG');

    if ($mailhog !== "true")
        return false;

        $phpmailer->IsSMTP();
        $phpmailer->Host = 'localhost';
        $phpmailer->Port = 1025;
        // $phpmailer->SMTPAuth = true;
        // $phpmailer->SMTPAuth = true;
        // $phpmailer->Password = 'user';
        // $phpmailer->Password = 'password';
        // $phpmailer->SMTPSecure = 'ssl'; // enable if required, 'tls' is another_
        --possible value
}
```

2.3.2 Code compilation

First things first: using "alternative" languages is not a constraint. Wordless's scaffolded theme uses the following languages by default:

- PHUG for views as an alternative to PHP+HTML
- CoffeeScript 2 for JS (ES6 ready)
- · Sass for CSS

You could decide to use *plain* languages, just by renaming (and rewriting) your files.

Wordless functions which require filenames as arguments, such as

```
<?php
render_partial("posts/post")
// or</pre>
```

(continues on next page)

(continued from previous page)

```
javascript_url("application")
```

will always require extension-less names and they will find your files whatever extension they have.

See also:

PHUG paragraph @ PlainPhp

Anyway we think that the default languages are powerful, more productive, more pleasant to read and to write.

Add the fact that wordless will take care of all compilation tasks, giving you focus on writing: we think this is a win-win scenario.

2.3.2.1 PHUG

Pug is a robust, elegant, feature-rich template engine for Node.js. Here we use a terrific PHP port of the language: Phug. You can find huge documentation on the official site https://www.phug-lang.com/, where you can also find a neat live playground (click on the "Try Phug" menu item).

It comes from the JS world, so most front-end programmers should be familiar with it, but it is also very similar to other template languages such as SLIM and HAML (old!)

We love it because it is concise, clear, tidy and clean.

Listing 9: A snippet of a minimal WP template

```
h2 Post Details
- the_post()
.post
header
   h3!= link_to(get_the_title(), get_permalink())
content!= get_the_content()
```

Certainly, becoming fluent in PUG usage could have a not-so-flat learning curve, but starting from the basics shuold be affordable and the reward is high.

2.3.2.1.1 Who compiles PUG?

When a .html.pug template is loaded, the wordless plugin will automatically compile (and cache) it. As far as you have the plugin activated you are ok.

Important: By default, you have nothing to do to deploy in production, but if performance is crucial in your project, then you can optimize. See *PHUG optimizer* for more informations.

2.3.2.2 CoffeeScript and Sass

Here we are in the **Webpack** domain; from the compilation point of view there is nothing Wordless-specific but the file path configuration.

The default webpack configuration file is written itself in Coffeescript, because it is natively supported by Webpack and because it makes the code easier to read.

Configuration is pretty standard, so it's up to you to read Webpack's documentation. Let's see how paths are configured in webpack.config.coffee.

2.3.2.2.1 Paths

Paths are based on the Wordless scaffold. Variables are defined at the top:

Listing 10: webpack.config.coffee

```
srcDir = path.resolve(__dirname, 'theme/assets')
dstDir = path.resolve(__dirname, 'assets')
javascriptsDstPath = path.join(dstDir, '/javascripts')
stylesheetsDstPath = path.join(dstDir, '/stylesheets')
```

and are used by the entry and output configurations:

Listing 11: webpack.config.coffee

```
return {
    entry: path.join(srcDir, "/main.js")

output: {
    filename: "application.js"
    path: javascriptsDstPath
```

CSS will be extracted from the bundle by the usual extract-text-webpack-plugin

Listing 12: webpack.config.coffee

```
plugins: [
69
          new BrowserSyncPlugin {
70
              host: "127.0.0.1"
71
              port: 3000
72
              proxy: { target: "http://127.0.0.1:8080" }
73
              watchOptions: { ignoreInitial: true }
75
                 './theme/views/**/*.pug'
76
                './theme/views/**/*.php'
77
                './theme/helpers/**/*.php'
78
79
```

2.3.2.2.2 Inclusion of compiled files

Wrapping up: the resulting files will be

- assets/javascripts/application.js
- assets/stylesheets/screen.css

As far as those files remain *as-is*, the theme will automatically load them.

If you want to edit names and/or paths, you have only to edit the WordPress asset enqueue configurations:

Listing 13: config/initializers/default_hooks.php

```
<?php
2
   // This function include screen.css in wp_head() function
3
   function enqueue_stylesheets() {
     wp_register_style("screen", stylesheet_url("screen"), false, false);
6
7
     wp_enqueue_style("screen");
   add_action('wp_enqueue_scripts', 'enqueue_stylesheets');
10
11
   // This function include jquery and application.js in wp_footer() function
12
13
   function engueue_javascripts() {
14
     wp_enqueue_script("jquery");
15
     wp_register_script("application", javascript_url("application"), '', false, true);
     wp_enqueue_script("application");
18
19
   add_action('wp_enqueue_scripts', 'enqueue_javascripts');
```

Note: The stylesheet_url and javascript_url Wordless' helpers will search for a file named as per the passed parameter inside the default paths, so if you use default paths and custom file naming, you'll be ok, but if you change the path you'll have to supply it using other WordPress functions.

See also:

stylesheet_url signature javascript_url signature