
Wordless Documentation

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1	Introduction	3
2	Contents	5
2.1	Installation	5
2.1.1	Wordless GEM (favourite)	5
2.1.2	(Not so) Manual	5
2.1.2.1	Prerequisites	5
2.1.2.2	Steps	6
2.2	Usage	6
2.2.1	Theme anatomy	6
2.2.1.1	Routing	7
2.2.1.2	Rendering	7
2.2.1.2.1	render_view()	7
2.2.1.2.2	render_partial()	8
2.2.1.2.3	Layouts	9
2.2.1.2.4	Views	9
2.2.1.3	Helpers	10
2.2.1.4	Initializers	10
2.2.1.5	Locale files	11
2.2.1.6	Assets	11
2.2.1.6.1	The Fast Way	11
2.2.1.6.2	I need to really understand	11
2.2.2	Build and distribution	12
2.3	Development stack	13
2.3.1	Development environment	13
2.3.1.1	YARN	14
2.3.1.2	Foreman	14
2.3.1.3	wp server	14
2.3.1.4	BrowserSync	15
2.3.1.5	MailHog	15
2.3.2	Code compilation	16
2.3.2.1	PHUG	16
2.3.2.1.1	Who compiles PUG?	17
2.3.2.2	CoffeeScript and Sass	17
2.3.2.2.1	Paths	17
2.3.2.2.2	Compiled files inclusion	18



CHAPTER 1

Introduction

Wordless is an opinionated WordPress plugin + starter theme that dramatically speeds up and enhances your custom themes 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 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.

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 to setup 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 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 yarn`¹² (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 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 or whatever in order to do the official installation process. Keep in mind that Wordless flow do not need any external web server, since it will use `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 project's root within 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 in theme's directory

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

4. Bundle NPM's 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's possible that your OS will ask you to allow connections on server's ports (3000 and/or 8080). It's just ok to do it.

2.2 Usage

2.2.1 Theme anatomy

That's a typical Wordless theme directory structure:

```

your_theme_dir
├── assets/
│   ├── fonts/
│   ├── images/
│   ├── javascripts/
│   └── stylesheets/
├── config/
│   ├── initializers/
│   └── locales/
├── theme/
│   ├── assets/
│   ├── helpers/
│   └── views/
├── tmp/
├── Procfile
├── index.php
├── package.json
├── screenshot.png
├── style.css
├── webpack.config.coffee
└── yarn.lock

```

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.

```

<?php

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 some particular 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's its signature:

```
<?php
/**
 * Renders a view. Views are rendered based on the routing.
 * They will show a template and a yielded content based
 * on the user requested page.
 *
 * @param string $name  Filename with path relative to theme/views
 * @param string $layout The template to use to render the view
 * @param array $locals An associative array. Keys will be variables'
 *                      names and values will be variable values inside
 *                      the view
 */
function render_view($name, $layout = 'default', $locals = array()) {
    /* [...] */
}
```

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')
```

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
 */
```

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```
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 be 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

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

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're 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
- `distance_of_time_in_words()` - Reports the approximate distance in time between two dates

Our favourite convention to write 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, isn't it? Well, forget it.

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

```
config/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, ecc
- **custom_post_types:** well... if you need to manage taxonomies, this is the place to be
- **default_hooks:** these are used by default wordless' behaviours; tweak them only if you know what you are 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 thumbnailing 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 your theme locale files in this directory. Wordless will take care of calling `load_theme_textdomain()` for you.

Note: Due to 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`
- write your coffeescript in `theme/assets/javascripts/application.js.coffee`

and all will automagically work! :)

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 `assets/assetType` folder.

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

Images will be optimized by `ImageminPlugin`. 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 example usage.

See also:

Code compilation

See also:

- [Official Sass guide](#)
- [Official CoffeeScript guide](#)

node_modules

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

Add any vendor library through `YARN` with

```
yarn add slick-carousel
```

Then in your CoffeeScript/Javascript you can do

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

and go on as usual.

2.2.2 Build and distribution

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

Most spread folder naming to distinguish between source and built code are `src` and `dst`, but Wordless has different naming due to backward compatibility effort.

Source assets' 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 the environments. They are handled - as expected - through `package.json` 's `scripts`¹:

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 up to you - that before every build you will clean 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

Deploy

Wordless is agnostic about deploy strategy. Our favourite product to deploy WordPress is [Wordmove](#).

2.3 Development stack

Following 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

Said that with a

```
yarn run server
```

¹ <https://docs.npmjs.com/files/package.json#scripts>

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 2: 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 3: 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 them 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 will find a `wp-config.php` file, then it will start a PHP server on its default port (8080) and on `127.0.0.1` address as per our config.

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

2.3.1.4 BrowserSync

The only relevant **Webpack**'s part in this section is the one about **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 4: `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 will be recompiled by Webpack self.

The `files` option is there because `.pug` files are not compiled by webpack, so we force watching those files too thus caling 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 WordPress backend in a tab, *BrowserSync* will ignorantly reload that tab also (all tabs opened on port `3000` actually). This could slow down your server. We advice to use 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'll spawn `yarn server`, you'll have an environment variable esported thanks to the `.env` file:

Listing 5: `.env`

```
MAILHOG=true
```

This will trigger the `smtp.php` initializer:

Listing 6: 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->Username = 'user';
    // $phpmailer->Password = 'password';
    // $phpmailer->SMTPSecure = 'ssl'; // enable if required, 'tls' is another_
↳possible value
}
```

2.3.2 Code compilation

First thing first: **using “alternative” languages is not a constrain.** Wordless scaffolded theme uses the following languages by default:

- **PHUG** for views as 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 want filenames as arguments such as

```
<?php
render_partial("posts/post")

// or
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 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 7: 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()
```

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

2.3.2.1.1 Who compiles PUG?

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

Important: You have to do nothing to deploy in production.

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 file path configuration.

The default webpack configuration file is written itself in coffeescript, because it is **natively supported** by Webpack and because it make the code more affordable 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 top:

Listing 8: `webpack.config.coffee`

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

and are used by entry and output configurations:

Listing 9: webpack.config.coffee

```
18 return {
19   entry: path.join(srcDir, "/main.js")
20
21   output: {
22     filename: "application.js"
23     path: javascriptsDstPath
```

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

Listing 10: webpack.config.coffee

```
69 plugins: [
70   new BrowserSyncPlugin {
71     host: "127.0.0.1"
72     port: 3000
73     proxy: { target: "http://127.0.0.1:8080" }
74     watchOptions: { ignoreInitial: true }
75     files: [
76       './theme/views/**/*.pug'
77       './theme/views/**/*.php'
78       './theme/helpers/**/*.php'
79     ]
80   }
```

2.3.2.2.2 Compiled files inclusion

Wrapping up: result 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 WordPress assets enqueueing configurations:

Listing 11: `config/initializers/default_hooks.php`

```
1 <?php
2
3 // This function include screen.css in wp_head() function
4
5 function enqueue_stylesheets() {
6   wp_register_style("screen", stylesheet_url("screen"), false, false);
7   wp_enqueue_style("screen");
8 }
9
10 add_action('wp_enqueue_scripts', 'enqueue_stylesheets');
11
12 // This function include jquery and application.js in wp_footer() function
13
14 function enqueue_javascripts() {
15   wp_enqueue_script("jquery");
16   wp_register_script("application", javascript_url("application"), '', false, true);
17   wp_enqueue_script("application");
```

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```
18 }
19
20 add_action('wp_enqueue_scripts', 'enqueue_javascripts');
```

Note: `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'll use default paths and custom file naming, you'll be ok, but if you'll change the path you'll have to supply it using other WordPress functions.

See also:

[stylesheet_url signature](#)

[javascript_url signature](#)