Raise the bar

Let's aim for higher quality in WordPress plugin development

Dennis Ploetner @realloc

$ whoami

Dennis Ploetner

@realloc on WordPress.org and Slack

Bio

I am an experienced PHP web developer with a passion for WordPress and Open Source in general. I am a German native speaker and speak Italian fluently as I live in Italy. I am curious about new trends in computing and I like to spend a lot of my free time updating, maintaining and supporting my WordPress plugins. I am also an active member in the local community where I help as co-organizer of the WordPress meetup Milan.

Interests

WordPress, Software engineering, Blogs, Travel, Fitness and Triathlon

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Contribution History

Core Contributor	Documentation Contributor	Meetup Organizer
Plugin Developer	Translation Contributor	WordCamp Organizer
WordCamp Speaker		

7+ ways to improve software quality

1. UnitTest early + often

2. Analyse static code

3. Define coding standards

4. Ask peers for code review

5. Implement quality gates

6. Use code as documentation

7. Automate the process

8. …

UnitTest early + often

1. Dependency management with Composer

2. Use the testing framework PHPUnit

3. Mock PHP and specific WordPress functionalities with [Brain Monkey](Brain%20Monkey)

```
realloc@asylum ~ $ git clone -q git@github.com:lloc/gmvp.git && \
> cd gmvp && composer install -q && \
> composer test
> ./vendor/bin/phpunit
PHPUnit 9.5.26 by Sebastian Bergmann and contributors.

.........                                                    9 / 9 (100%)

Time: 00:00.260, Memory: 16.00 MB

OK (9 tests, 17 assertions)
realloc@asylum gmvp (main)$ 
```
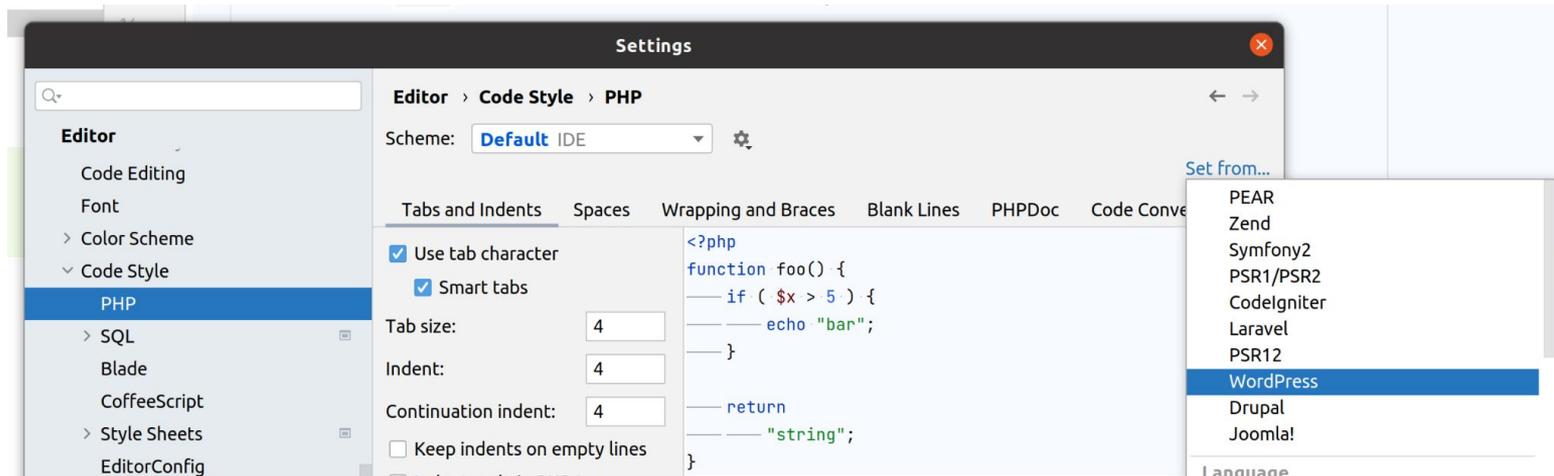
UnitTesting without WordPress

Testing with Brain Monkey brings:

- patching with *when()*

- bulk patching with *stubs()*

- testing with *expect()*

- pre-defined hook-related and generic WordPress functions

- testing for added and fired hooks

Analyse static code

- To start performing analysis on your code, require [PHPStan](#) in [Composer](#)

- Install and configure [WordPress extension for PHPStan](#)

```
realloc@asylum gmvp (main*)$ vendor/bin/phpstan --xdebug analyze
Note: Using configuration file /home/dennisploetner/gmvp/phpstan.neon.
 3/3 [███████████████████████████] 100%

 ------ ---------------------------------------------------------------
  Line    includes/Gmvp/Plugin.php
 ------ ---------------------------------------------------------------
  11      Action callback returns bool but should not return anything.
  13      Action callback returns bool but should not return anything.
 ------ ---------------------------------------------------------------



 [ERROR] Found 2 errors


realloc@asylum gmvp (main*)$
```

Define coding standards

- Install [WordPress Coding Standards for PHP_CodeSniffer](#) or let your IDE do the heavy lifting for you

What are coding standards for?

Think of coding standards as a set of rules, techniques, and best practices to **create cleaner, more readable, more efficient code** with minimal errors.

Code review

A code review (also referred to as peer code review) is a process where one or two developers analyze a teammate's code, identifying bugs, logic errors, and overlooked edge cases.

- Create a **checklist**
- Introduce **metrics**
- Peer reviews are great to **teach** and/or to **learn**
- Do not **review** more than **200 (?) lines of code**
- **Automate** the process as much as you can

What are quality gates?

Quality gates are verifications you can put across your software development pipeline to prevent code from moving forward if it doesn't meet the specified quality criteria.

This might include **check for coding standards** and the outcome of **code reviews on pull requests**.

But that could also be enforced using KPIs (and therefore automatable) such as **percentage of code coverage of unit tests**.

Links

- https://getcomposer.org/

- https://phpunit.de/index.html

- https://brain-wp.github.io/BrainMonkey/

- https://github.com/lloc/gmvp

- https://phpstan.org/

- https://github.com/szepeviktor/phpstan-wordpress

- https://github.com/WordPress/WordPress-Coding-Standards

- https://profiles.wordpress.org/realloc/

Thank you!
Any questions?

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