なぜ2018年にIDEとEmacsを選ぶのか

筆者の英語は残念なので発表済みの日本語資料を先に読むことをおすすめ

 Qiita

PHPで開発が捗るリアルタイムエラーチェック

PHP  Emacs  Vim  PHPStan
Who am I...?

- Kenta Usami (うさみけんた, @zonusexe)
- Language hobbyist, I love Lisp.
- Web programmer @pixiv
- Founder of Emacs-PHP

https://github.com/emacs-php
My favorite text editors

Maruo Editor (秀丸)

gedit 萌ディタ Mery

μ micro TATEditor
I usually use Emacs

- That's because it's a Lisp machine that is easy for me to hack.
- There are reasons for each person to choose an editor.
- I am a professional programmer, so I would like to raise development efficiency.
First of all...
We hate “Religious War”
Code of Conduct

日本語版はこちら / Japanese Version

VimConf is an international conference series of community events for knowledge-sharing, communication, and collaboration, focusing mainly on technology. (TODO: rewrite a paragraph)

Our prime goal is to provide events where all of the attendees can enjoy, and feel welcome to attend. To this end, we expect all who participate in our events to be courteous and be civil towards one another.

We ask that all participants including, but not limited to, the organizers and speakers, be respectful and inclusive of others. If an attendee feels that they are violating this code of conduct, please inform the organizers using the contact information provided.
Windows vs UNIX
Tab vs Space
Statically typed vs Dynamic typing
...and
Emacs vs vi
It was a joke?
It violates professionalism.
Even outside the conference. Is that okay?
Text editor and Plugin developers and power users respect each other and incorporate the trends of other text editors.
Rainbow Brackets

Compatible with: IntelliJ IDEA, PhpStorm, WebStorm, PyCharm, RubyMine, AppCode, CLion, GoLand, DataGrip, Rider, MPS, Android Studio

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Rainbow Brackets / Rainbow Parentheses for IntelliJ based IDEs

Supported languages:

Java, Scala, Clojure, Kotlin, Python, Haskell, Agda, Rust, JavaScript, TypeScript, Erlang, Go, Groovy, Ruby, Elixir, ObjectiveC, PHP, HTML, XML, SQL, Apex language, C# ...

```
package com.github.izhangzhihao.rainbow.brackets;

public class Test {
    {
        ()))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))
    }
}
```
What's PHP?

- It is a kind of Web platform.
- Small sites, many CMS, large scale SNS are built with PHP.
- It is also a general purpose programming language.
PHP as a Language

- PHP is procedural and it has object-oriented feature.
- Weak typing and dynamic type-checking.
- PHP is relatively suitable for static analysis in dynamic langs.
“We have things like protected properties. We have abstract methods. We have all this stuff that your computer science teacher told you you should be using. I don't care about this crap at all.”

–Rasmus Lerdorf

https://en.wikiquote.org/wiki/Rasmus_Lerdorf
Abstract class, Trait, Interface, Generator, Iterator, Closure, Dynamic function call, Anonymous class, eval, Type declaration, Associative array (Hash table), Reflection API, Self-documentation, Standard I/O, REPL, Lazy class loading, etc...
PHP coding styles

- PHP can be run on cheap hosting servers.
- PHP as a HTML template, PHP as a CGI script, PHP as a OOP language...
- Various people share PHP.
In the early days of my career, there was no one around me developing with IDE. However, the scale of our code was huge and it was obvious that tool assistance is necessary.
• The usual way to code PHP with a text editor is tag jump.

• But project has multiple methods with the same name in OOP.

• There is no smart input completion.
Refactoring...?

- The important thing is *sed* and a visual check.
- Must allow the possibility of a run-time error due to refactoring.
Photoshop

PhpStorm
JetBrains IDE

- PhpStorm is an IDE derived from IntelliJ IDEA (Java IDE).
- JetBrains' IDE is good at static analysis and refactoring.
- The PHP static analysis features of PhpStorm is practical.
Static Analysis

- Static analysis is required for error detection of code paths not executed in test.
- PhpStorm can check mistakes with high accuracy if conditions for specifying types are available.
Coding on PhpStorm

```php
foreach (x() as $dt) {
    $dd->~
}
```

Undefined variable $dd more... (F1)

```php
$str = 'string';
$echo count($str);
```

Expected array|Countable, got string more... (F1)
Coding on PhpStorm

Typed

```php
foreach (x() as $dt) {
    $dt->
}
```

- `diff` (datetime2 : \DateTimeInterface, [absolute : bool] \DateTimeInterface) -> string
- `format` (format : string) -> string
- `getOffset()` -> int
- `getTimestamp()` -> int
- `getTimezone()` -> DateTimeZone

Press ^Space again to see more variants  >>
わかりやすく

**Coding on PhpStorm**

Popup signature

```
datetime2 : \DateTimeInterface, [absolute : bool = false]
```
Awesome!
PhpStorm
But, do we have to purchase PhpStorm to write PHP?
No, No, No.
Since we are developers, we can create FREE implementations other than PhpStorm.
PHP QA Projects
Several PHP static analyzer projects are active
Phan
PHPStan
Phpactor
Phan

- [https://github.com/phan/phan](https://github.com/phan/phan)
- Static analyzer
- Slow, but it inspects the entire project precisely
- It's included LSP Server
PHPStan

- https://github.com/phpstan/phpstan
- Dynamic and Static hybrid
- Very fast and accurate
- Specific RPC and LSP
PSR-5 (PHPDoc)

- PHP Standard Recommendation *(Draft)*
- PHPDoc is the de facto standard for writing type definitions in DocComment.
- They are working on the standard specification of that tag and type definition.
### Phpactor

- [http://phpactor.github.io/phpactor/](http://phpactor.github.io/phpactor/)

- Phpactor provide code jump, completion, refactoring

- This is under development and is now inferior to PhpStorm, but it is promising in the future.
Editor-independent Movements
• Language Server Protocol
  https://microsoft.github.io/language-server-protocol/

• A Language Server is meant to provide the language-specific smarts and communicate with development tools over a protocol that enables inter-process communication.
EditorConfig

- [https://editorconfig.org/](https://editorconfig.org/)

- Indent and Newline code can be set for each file name and extension.
# Unix-style newlines with a newline ending every file

[*]
end_of_line = lf
insert_final_newline = true

# Set default charset

[*.{js,py}]
charset = utf-8

# 4 space indentation

[*.py]
indent_style = space
indent_size = 4

# Tab indentation (no size specified)

[Makefile]
indent_style = tab
On Vim
ALE

- Asynchronous Lint Engine
  https://github.com/w0rp/ale

- ALE supports PHP syntax checker, PHPStan, Phan, Psalm, PHP CS, PHP-CS-Fixer and LSP
ミスがわかる

Coding on Vim+ALE

```php
if (php_sapi_name() === 'cli') {
    try {
        $this->addPlugin('Bake');
    } catch (MissingPluginException $e) {
        // Do not halt if the plug
    }
}
```

```php
function src/Application.php
Function php_sapi_name not found.
```

```php
$a = 1;
$b = [];
```

```php
$echo $a + $b;
if (PHP_SAPI === 'cli') {
    try {
        $this->addPlugin('Bake');
    } catch (MissingPluginException $e) {
    }
}
```

```php
src/Application.php
Binary operation "+" between 1 and array() results in an error.
```
Coding on Vim + ALE

```php
public function middleware($middlewareQueue)
{
    return 1;
    $middlewareQueue
        // Catch any exceptions in the lower layers,
        // and make an error page/response
        ->add(ErrorHandlerMiddleware::class)
}
```

Typed
Phpactor

- Phpactor Vim Plugin Provides
  - Context menu
  - Code Navigation
  - Completion (It supports Vim's Omni-completion, Deoplete, NeoVim's NCM and NCM 2)
なにそれ

Veonim
Veonim

- veonim is a simple modal IDE built on neovim. https://github.com/veonim/veonim
- That is integrated with LSP and has a graphical interface like IDE.
- Veonim realized almost all the functions I wanted as ideal Vim.
I learned Veonim by @ShougoMatsu two weeks ago.

He said that I do not use yet because my plugins does not work.

I have not finished studying Veonim yet, but this may be a wonderful IDE.