エディタ中立なPHP開発環境の現在

Modern editor-independent development environment for **PHP**

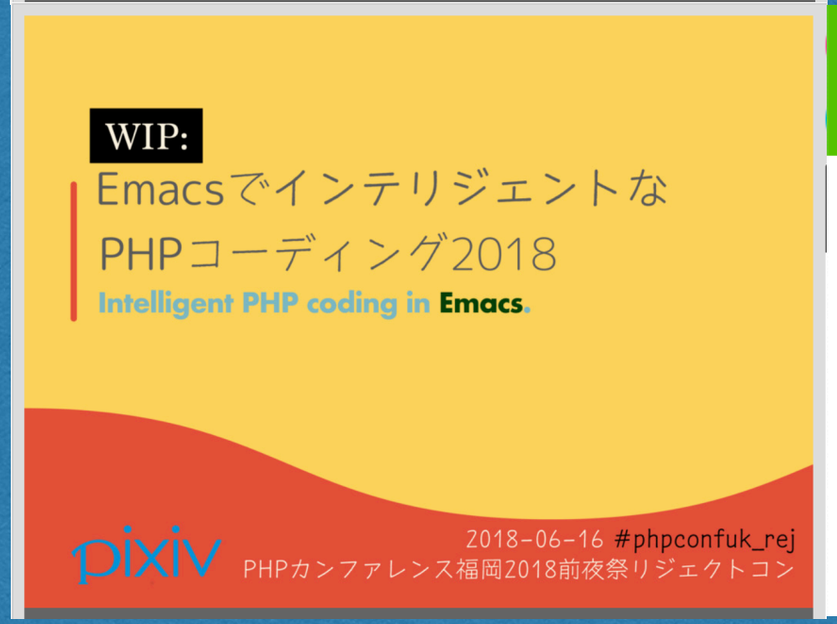
公開版

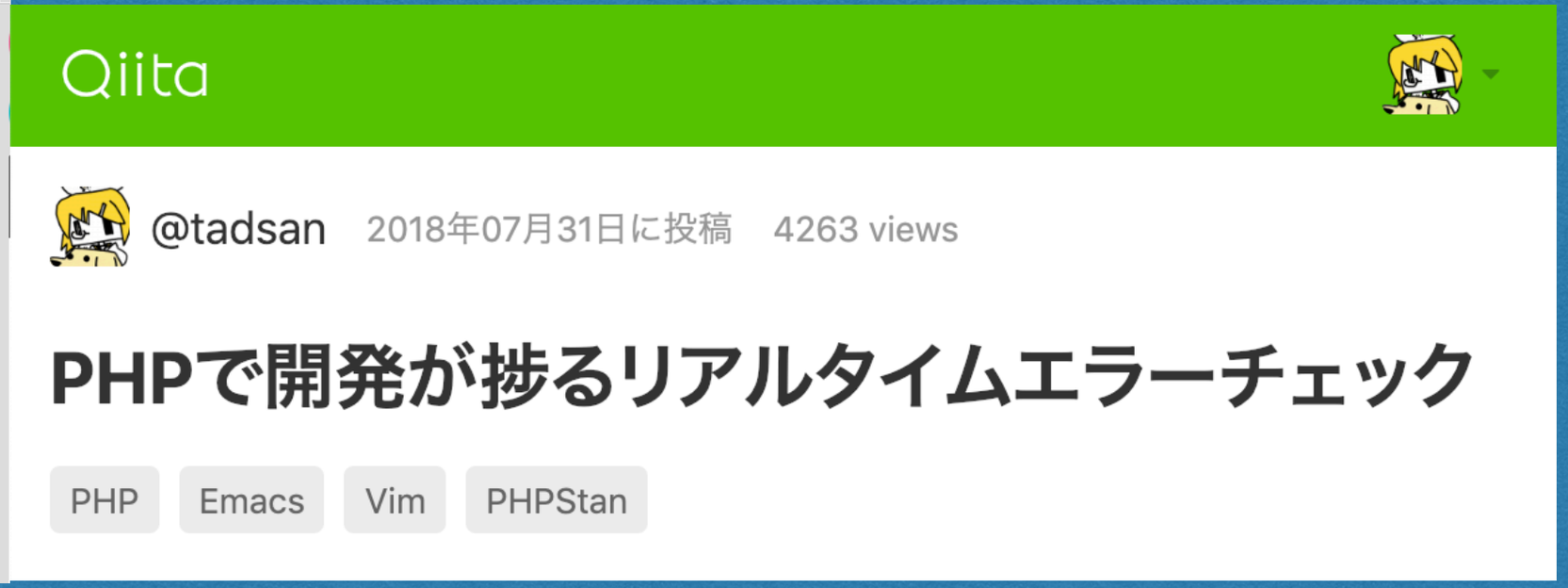
2018-11-23 Akiba Tokyo, Japan

VimConf 2018 **#vimconf**

日本語でおｋ

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



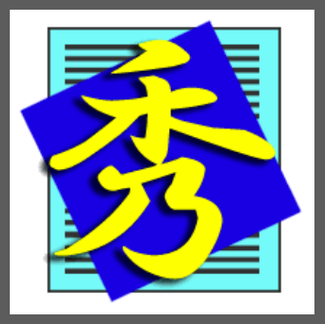


Who am I...?

aka @tadsan

- Kenta Usami (うさみけんた, @zonuexe)
- 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）

Mery

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”

宗教戦争

Code of Conduct

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

Windows

VS

UNIX

Tab

vs

Space

Statically typed
vs
Dynamic typing

...and

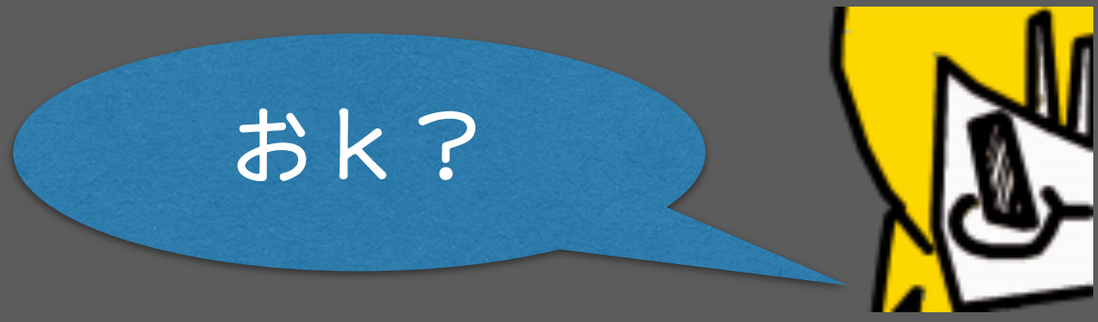
Emacs

vs

vi

No

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

JET BRAINS

IDEs Team Tools Dev Guide

Rainbow Brackets

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

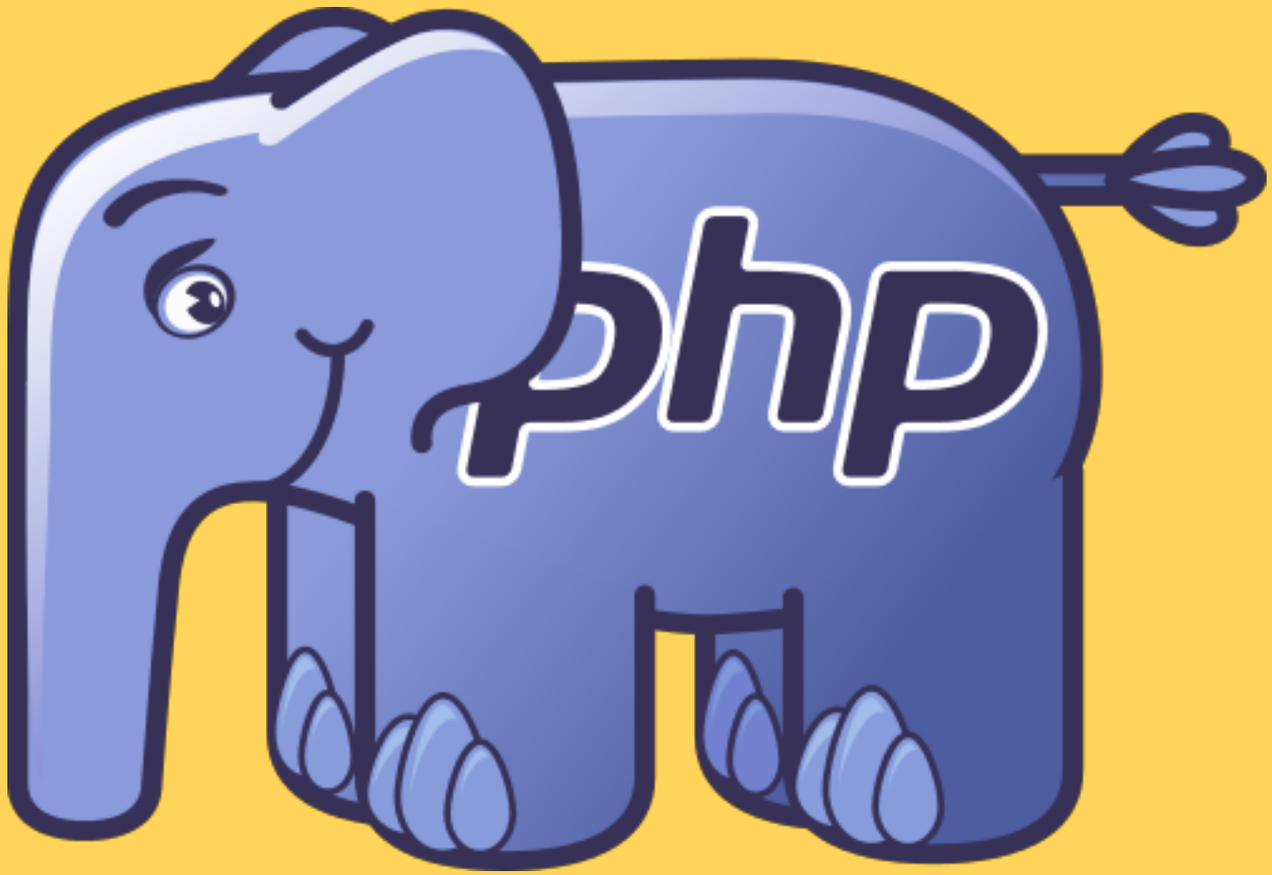
Nov 20, 2018 367 240 ★★★★★

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# ...

ElePHPant


php

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.

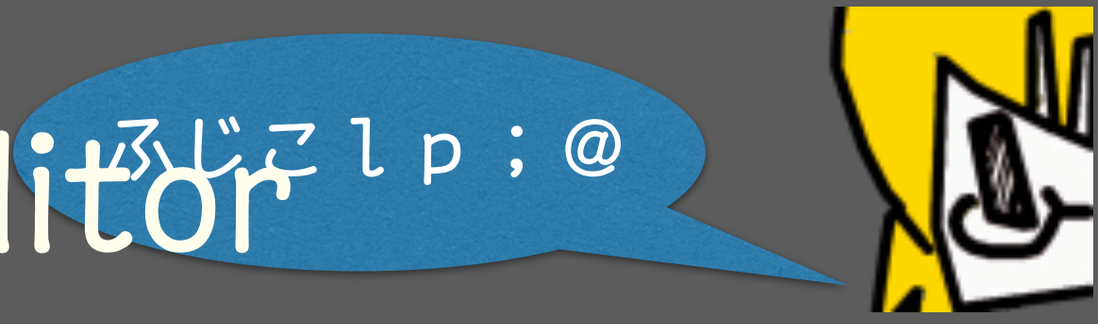
- PHP as a HTML template,
  PHP as a CGI script,
  PHP as a OOP language...

- Various people share PHP.

PHP needs IDE?

- 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.

PHP with text editor



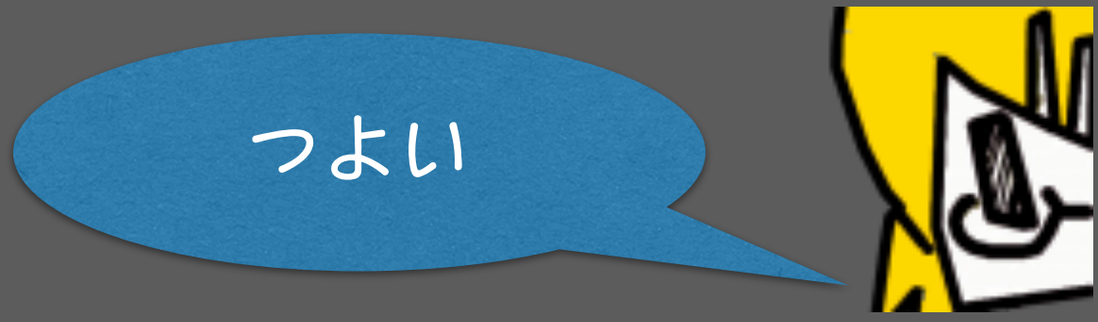
- The usual way to code PHP with a text editor is **tag jump**.
- But project has multiple methods with the same name in OOP.
- There is no smart input completion.

Refactoring...?

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

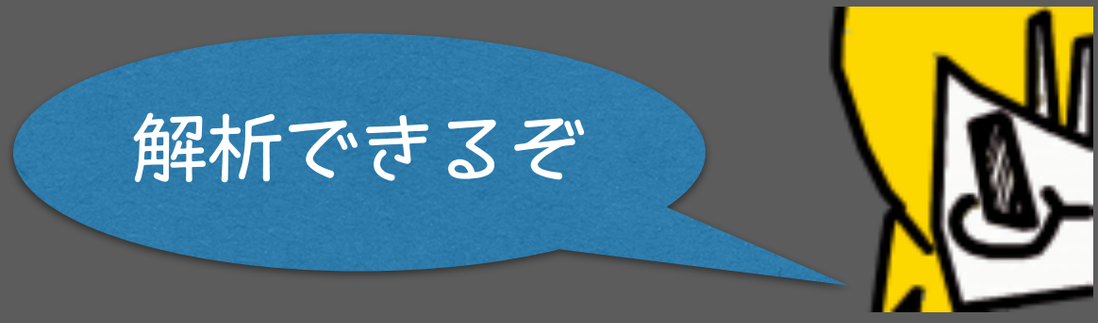
PhpStorm

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 path not executed in test.
- PhpStorm can check mistakes with high accuracy if conditions for specifying types are available.

Coding on PhpStorm

```
11      foreach (x() as $dt) {
12          $dd->~
```

Undefined variable $dd more... (⌘F1)

```
14
15      $str = 'string';
16      echo count($str);
```

Expected array|Countable, got string more... (⌘F1)

Coding on PhpStorm

スマート

Typed

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

```
diff(datetime2 : \DateTimeInterface, [absolute : b…   DateInterval
format(format : string)                                      string
getOffset()                                                     int
getTimestamp()                                                  int
getTimezone()                                          DateTimeZone
Press ^Space again to see more variants >>                       π
```

Coding on PhpStorm

わかりやすい

Popup signature

```
datetime2 : \DateTimeInterface, [absolute : bool = false]
        $dt->diff()
    }
```

Awesome!

PhpStorm

But, do we have to purchase PhpStorm to write PHP?

No, No.

Since we are developers, we can create FREE implementations other than PhpStorm.

PHP QA Projects

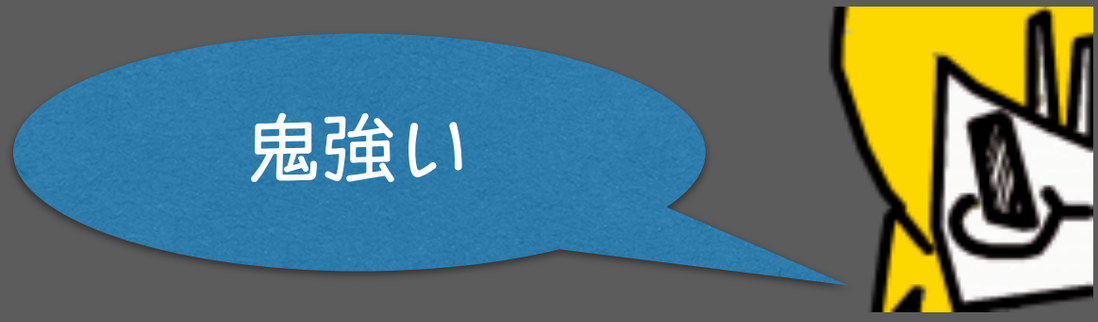
Several PHP static analyzer projects are active

Phan

PHPStan

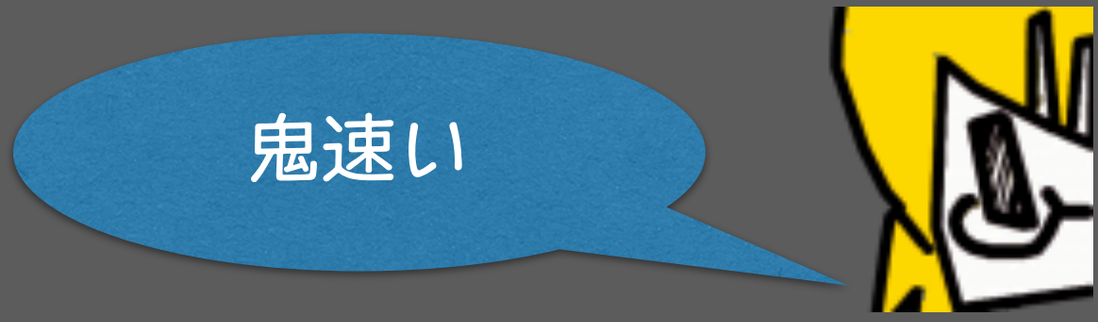
Phpactor

Phan



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

PHPStan

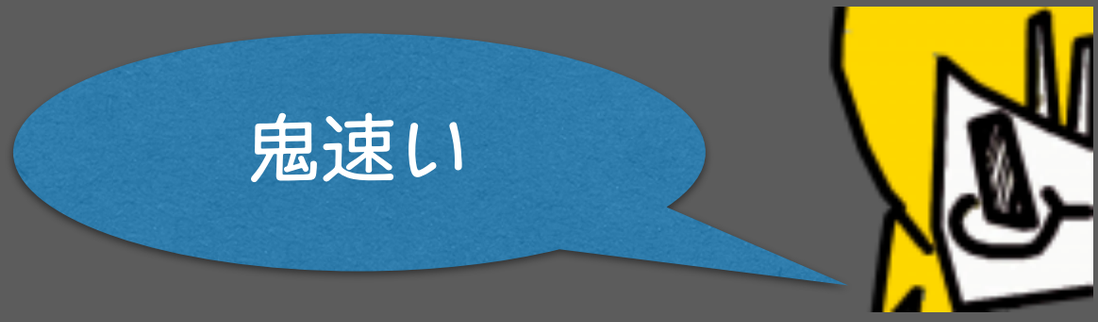


- https://github.com/phpstan/phpstan
- Dynamic and Static hybrid
- Very fast and accurate
- Specific RPC and LSP

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

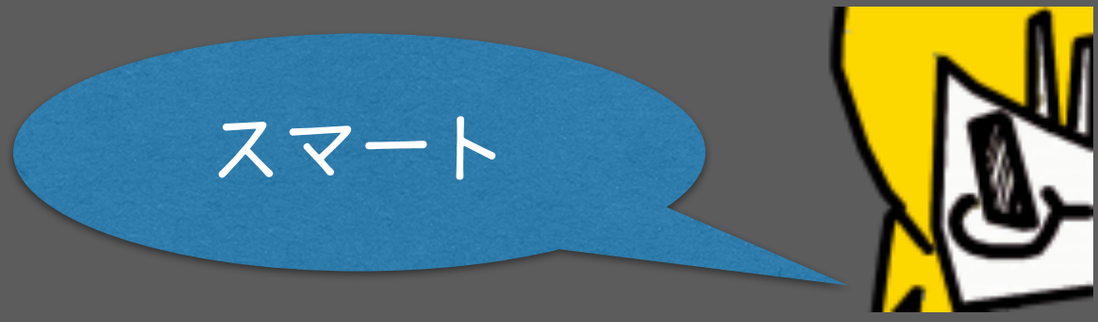
Phpactor



- http://phpactor.github.io/phpactor/
- 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

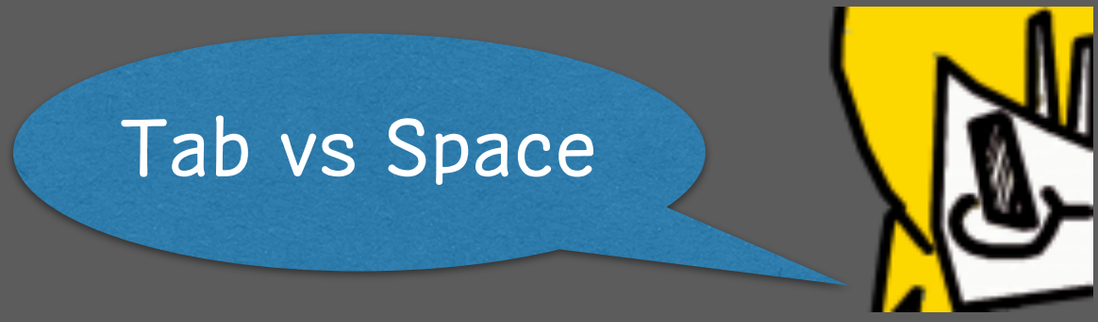
LSP



- 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/
- Indent and Newline code can be set for each file name and extension.

EditorConfig

```
# 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
```

AC
AppCode

ATOM

Brackets

CLion

Coda

Code::Blocks

eclipse

Emacs

Geany

gedit

jEdit

micro

NetBeans

Notepad++

PS
PhpStorm

S
Sublime Text

Textadept

textmate

Vim

Visual Studio
Code

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

Coding on Vim+ALE

```
--          if (php_sapi_nama() === 'cli') {
                try {
                    $this->addPlugin('Bake');
                } catch (MissingPluginExcepti
                    // Do not halt if the plu
                }
src/Application.php
Function php_sapi_nama not found.
```

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

--          echo $a + $b;

            if (PHP_SAPI === 'cli') {
                try {
                    $this->addPlugin('Bake');
                } catch (MissingPluginException $e) {
src/Application.php
Binary operation "+" between 1 and array() results in an error.
```

Coding on Vim+ALE

```
>>      * @return \Cake\Http\MiddlewareQueue The updated middleware queue.
        */
    public function middleware($middlewareQueue)
    {
--          return 1;
            $middlewareQueue
                // Catch any exceptions in the lower layers,
                // and make an error page/response
                ->add(ErrorHandlerMiddleware::class)
```

```
src/Application.php
Method App\Application::middleware() should return Cake\Http\MiddlewareQueue but returns int.
```

Typed

Phpactor

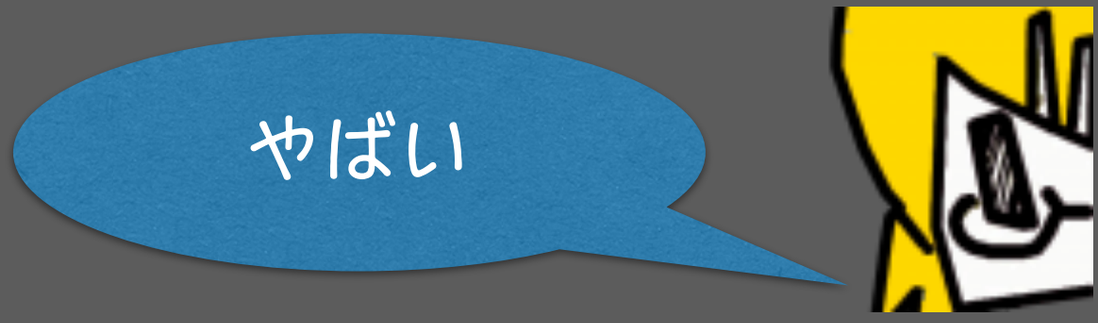
- Phpactor Vim Plugin Provides
  - Context menu
  - Code Navigation
  - Completion (It supports Vim's Omni-completion, Deoplete, NeoVim's NCM and NCM 2)

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.

Veonim



- 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