Un ensemble de bibliothèques PHP

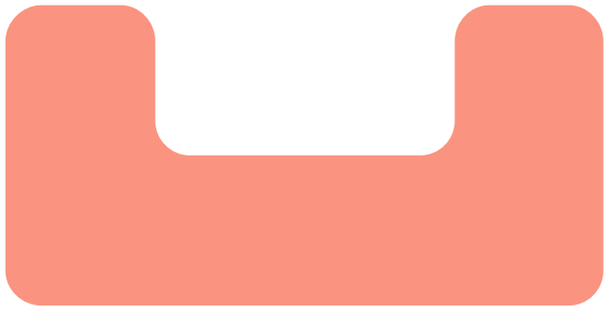
15 Février 2018

Qui suis-je ?

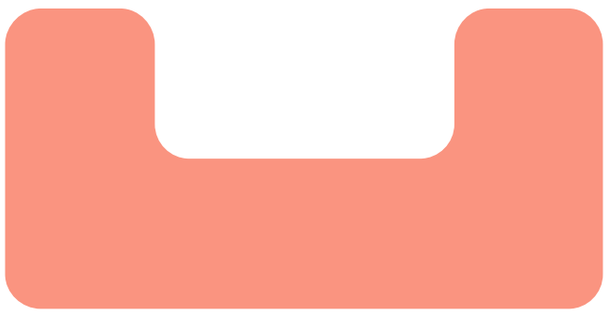
- Alexis von Glasow
-  @ashgenesis
- https://matters.tech
- contributeur:

http://atoum.org 

https://hoa-project.net 








~ 60

Bibliothèques

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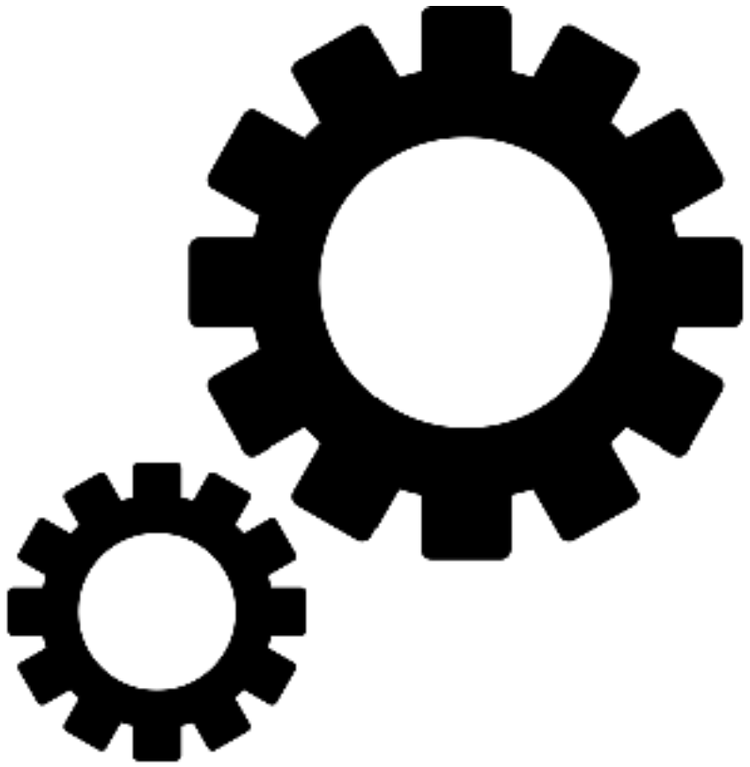
Compiler

Compiler



credits: Rodrigo Álvarez Virgós from noun project

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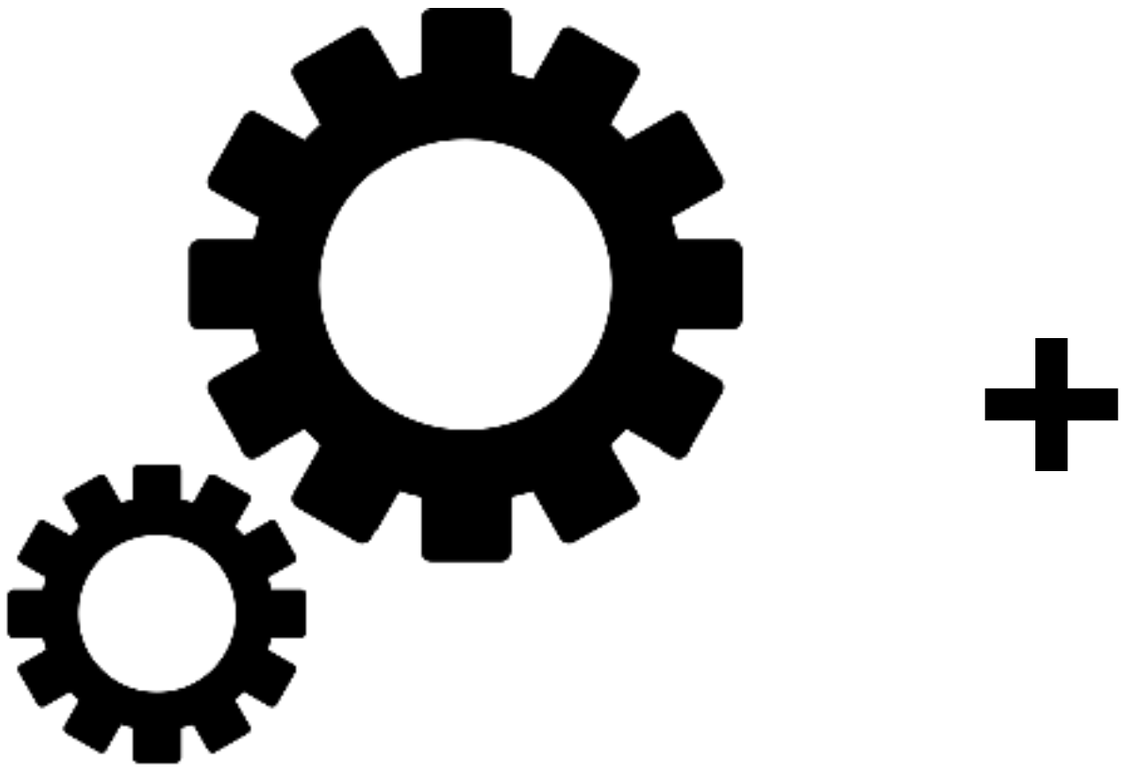

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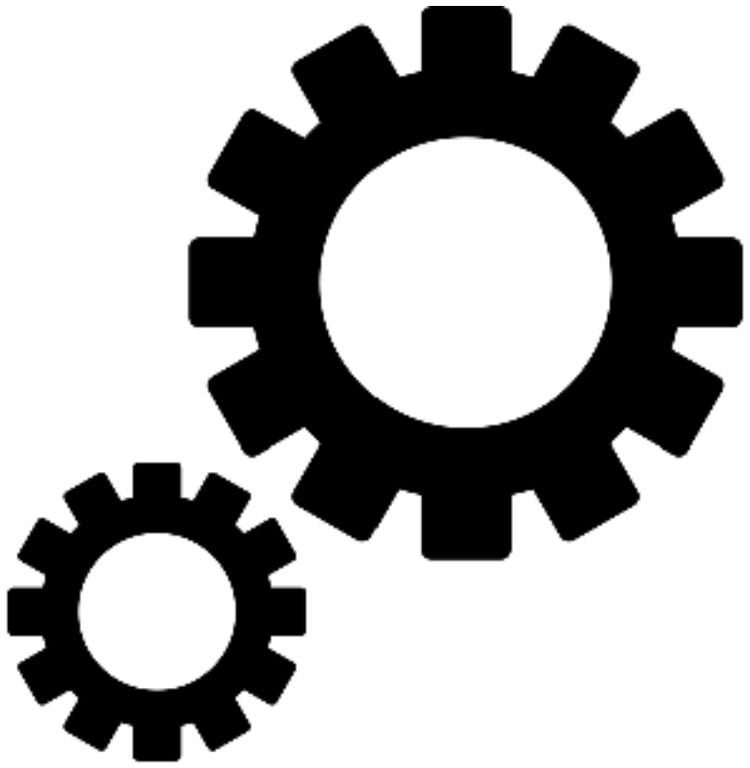

+ **Grammaire**

credits: Rodrigo Álvarez Virgós from noun project

Compiler

Grammaire

Compiler

Grammaire

=

Compiler

Grammaire

=

Lexèmes (tokens)

Compiler

Grammaire

=

Lexèmes (tokens)

+

Compiler

Grammaire

=

Lexèmes (tokens)

+

Règles

Compiler

```
%token      T_OP_PLUS       plus
%token      T_OP_MINUS      moins
%token      T_OP_MULTI      multiplié par
%token      T_OP_DIVIDE     divisé par
%token      T_OP_EQUAL      égale
%token      T_FN            \.[a-zA-Z_][a-zA-Z0-9_]*
%token      T_VAR           @[a-zA-Z_][a-zA-Z0-9_]*
%token      T_CONST         [A-Z_][A-Z0-9_]*
%token      T_NUMBER        \-?[1-9][0-9]*
%token      T_OPEN_PAREN    \(
%token      T_CLOSE_PAREN   \)
%token      T_COMMA         ,
```

Compiler

```
%token      T_OP_PLUS       plus
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%token      T_OP_MULTI      multiplié par
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%token      T_OPEN_PAREN   \(
%token      T_CLOSE_PAREN  \)
%token      T_COMMA        ,
```

Compiler

```
#tml:
    ( fn() | expr() | assign() | str() )+
#expr:
    ( <T_NUMBER> | <T_CONST> | rvar() | fn() )
( operator() expr() )?
#assign:
    lvar() ::T_OP_EQUAL:: rval()
#fn:
    <T_FN> ::T_OPEN_PAREN:: arguments() ::T_CLOSE_PAREN::
#str:
    ::T_QUOTE:: <T_CHAR>* ::T_QUOTE::
#rvar:
    <T_VAR>
#lvar:
    <T_VAR>
```

Compiler

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#tml:
    ( fn() | expr() | assign() | str() )+
#expr:
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#str:
    ::T_QUOTE:: <T_CHAR>* ::T_QUOTE::
#rvar:
    <T_VAR>
#lvar:
    <T_VAR>
```

Compiler

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( operator() expr() )?
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#str:
     ::T_QUOTE:: <T_CHAR>* ::T_QUOTE::
#rvar:
     <T_VAR>
#lvar:
     <T_VAR>
```

10 minutes language

```
@neuf égal 4 plus 5
@trois égal @neuf divisé par 3
@mon_age égal @trois multiplié par 10 plus 6

affiche J'ai @mon_age ans 😅
```

10 minutes language

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@neuf égal 4 plus 5
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affiche J'ai @mon_age ans 😅
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```
J'ai 36 ans 😅
```

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Console

```
$functions = get_defined_functions();

$readline->setAutocompleter(
    new Hoa\Console\Readline\Autocompleter\Aggregate([
        new Hoa\Console\Readline\Autocompleter\Path(),
        new Hoa\Console\Readline\Autocompleter\Word(
            $functions['internal'])
        ]
    )
);
```

Console

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        ]
    )
);
```

Console

https://github.com/hoaproject/Console#readline

Console

https://github.com/hoaproject/Console#readline

Console

```
$options = new Hoa\Console\GetOption(
    array(
        array('colonnes',  Hoa\Console\GetOption::REQUIRED_ARGUMENT, 'y'),
        array('lines',  Hoa\Console\GetOption::REQUIRED_ARGUMENT, 'x'),
        array('random',   Hoa\Console\GetOption::OPTIONAL_ARGUMENT, 'r'),
        array('glider-gun', Hoa\Console\GetOption::OPTIONAL_ARGUMENT, 'g'),
        array('help',   Hoa\Console\GetOption::OPTIONAL_ARGUMENT, 'h'),
    ),
    $parser
);
```

Console

```
Hoa\Console\Cursor::clear('↕');
Hoa\Console\Cursor::hide();
Hoa\Console\Cursor::move('↓', 1);

do {
    $hash = $this->computeHash();
    $this->displayWorld();
    $this->computeNewState();
} while ($hash !== $this->computeHash());

Hoa\Console\Cursor::show();
Hoa\Console\Cursor::colorize('default');
Hoa\Console\Cursor::move(
    '↓',
    $this->universe->getWidth()
);
```

Console

```
Hoa\Console\Cursor::clear('↕');
Hoa\Console\Cursor::hide();
Hoa\Console\Cursor::move('↓', 1);

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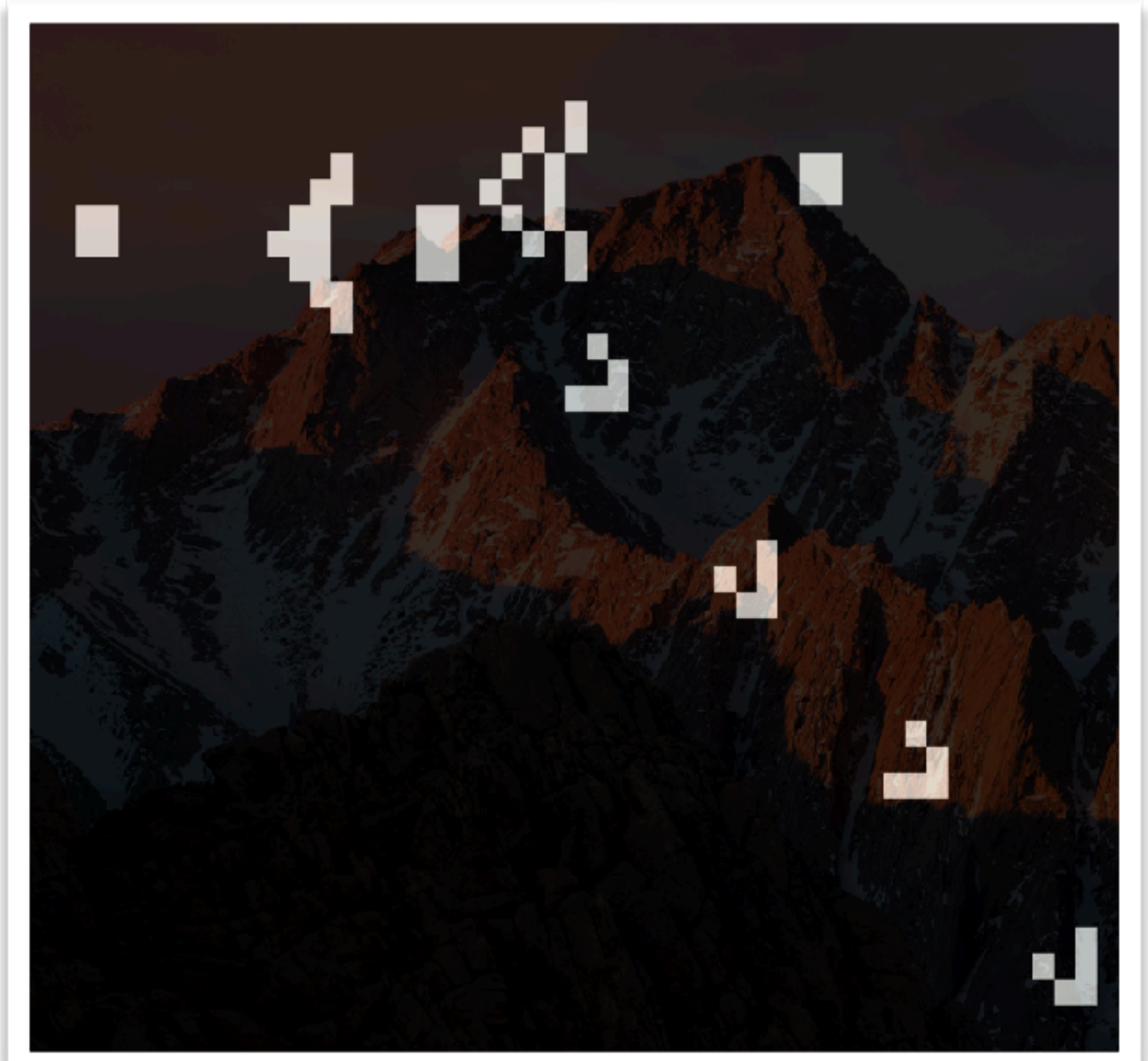

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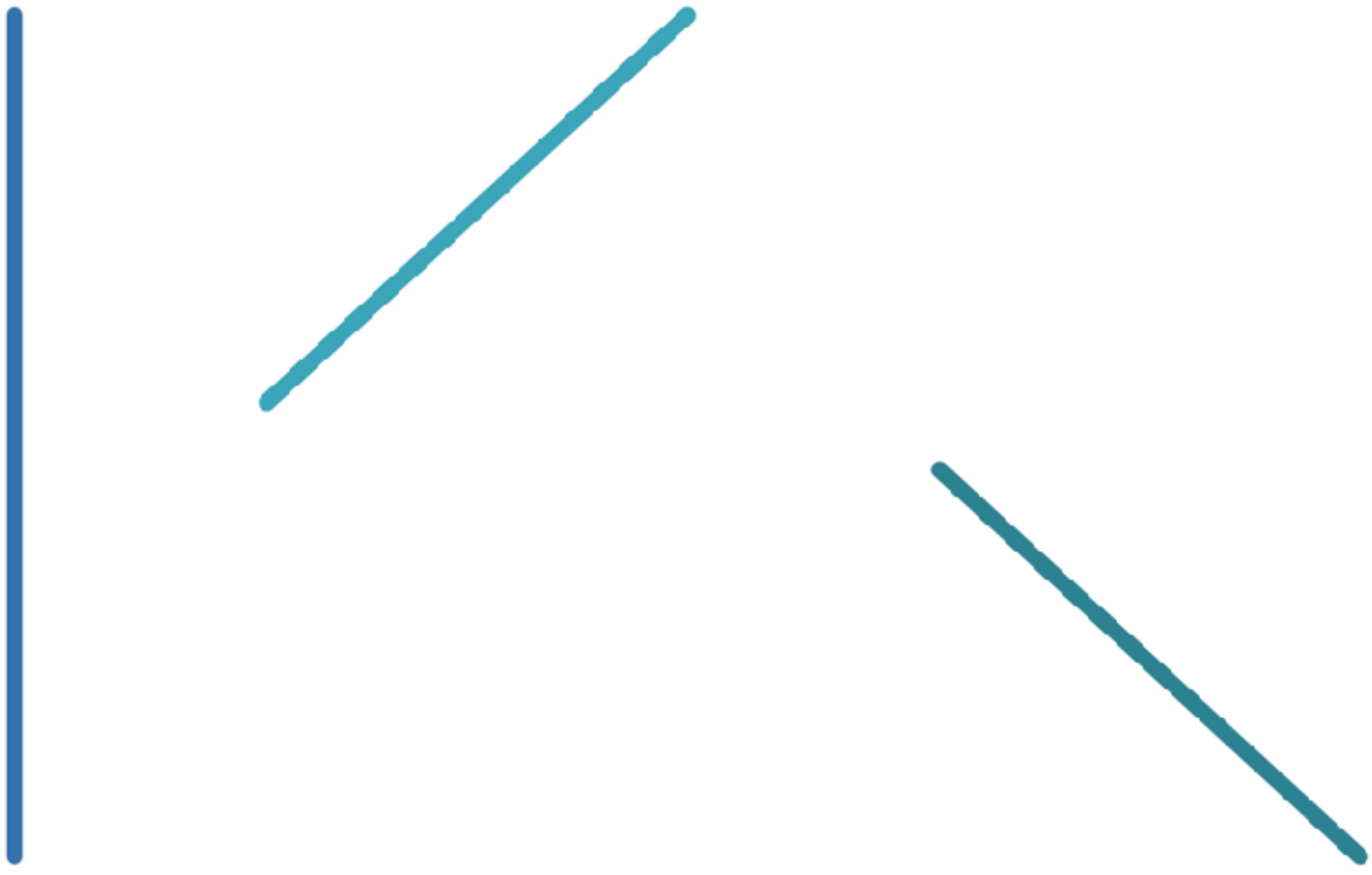
Kitab



Kitab

```
/**
 * This is a block of documentation, attached to a
PHP class.
 *
 * # Examples
 *
 * An example illustrates how to use the documented
entity, here the
 * class `C`.
 *
 * ```php
 * $c = new C();
 * ```
 */
class C { }
```

Kitab

```php
namespace Kitab;
/**
 * Configuration structure for the Kitab project.
 *
 * This structure contains all the configuration items used by Kitab.
 * All these items are public. Use it as a regular structure.
 *
 * # Examples
 *
 * Assuming the `foo` item is correctly declared:
 *
 * ```php
 * $configuration = new class () extends Kitab\Configuration {
 *     public $foo = null;
 * };
 * $configuration->foo = 'bar';
 *
 * assert('bar' === $configuration->foo);
 * ```
 */
abstract class Configuration
{
    /**
     * Get a configuration item value, or â€šÃÃ®if `null`â€šÃÃ® return a default value.
     * If the configuration item is not set, it will be considered as `null`.
     *
     * # Examples
     *
     * ```php
     * $configuration = new class () extends Kitab\Configuration {
     *     public $foo = null;
     * };
     *
     * assert($configuration->foo === null);
     * assert($configuration->getOr('foo', 'foobar') === 'foobar');
     * ```
     */
    public function getOr(string $item, $default)
    {
        if (null === $value = $this->$item) {
            return $default;
        }
        return $value;
    }
}
```

Kitab

```php
namespace Kitab;
/**
 * Configuration structure for the Kitab project.
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     * ```
     */
    public function getOr(string $item, $default)
    {
        if (null === $value = $this->$item) {
            return $default;
        }
        return $value;
    }
}
```

Class `Kitab\Configuration`

[src]

```
abstract class Configuration
{
    pub fn getOr(string $item, $default);
}
```


Configuration structure for the Kitab project.

This structure contains all the configuration items used by Kitab. All these items are public. Use it as a regular structure.

Examples

Assuming the `foo` item is correctly declared:

```
$configuration = new class () extends Kitab\Configuration {
    pub $foo = null;
};
$configuration->foo = 'bar';

assert('bar' === $configuration->foo);
```

Search anything...

Class `Kitab\Configuration`

[src]

```
abstract class Configuration
{
    pub fn getOr(string $item, $default);
}
```

Kitab

Classes

`Finder`
`Configuration`

Configuration structure for the Kitab project.

This structure contains all the configuration items used by Kitab. All these items are public. Use it as a regular structure.

Examples

Assuming the `foo` item is correctly declared:

```
$configuration = new class () extends Kitab\Configuration {
    pub $foo = null;
};
$configuration->foo = 'bar';

assert('bar' === $configuration->foo);
```

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Option

This library is an implementation of the famous `Option` polymorphic type (also called `Maybe`)

Option

```
$x = Some(42);
$y = None();

assert($x->isSome());
assert($y->isNone());
```

Bibliothèques

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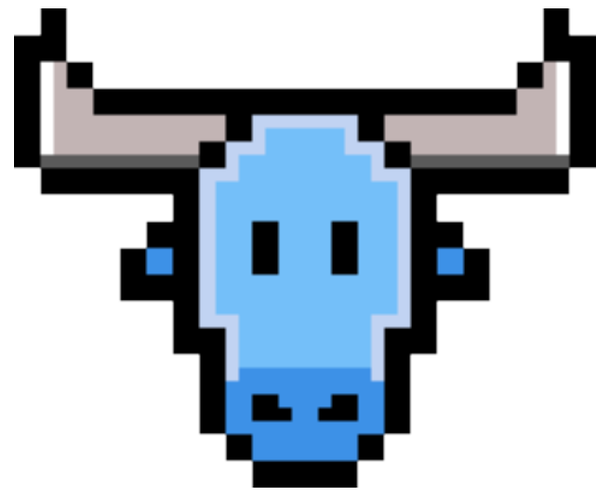
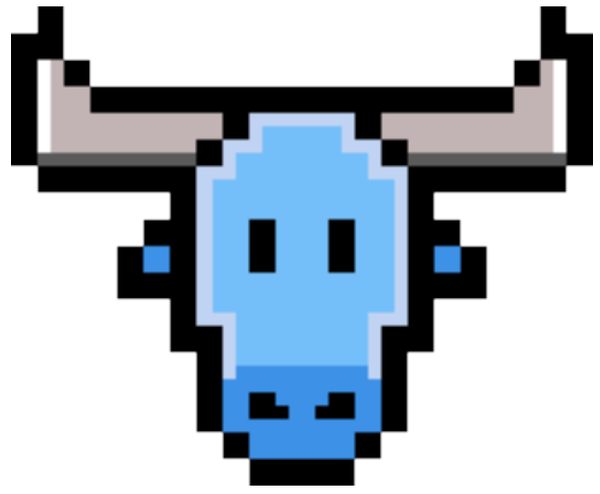
Praspel



Praspel

+



Praspel

```
$this->sample(
    $this->realdom->boundinteger(7, 13)
        ->or->boundinteger(42, 153)
)
```

```
$data = $this->realdom
    ->regex('/[\w\-_]+(\.[\w\-\_]+)*@\w\.(net|org)/');
$this->string($this->sample($data))
     ->contains(…)->…;
```

Praspel

```
$this->sample(
    $this->realdom->boundinteger(7, 13)
        ->or->boundinteger(42, 153)
)
```

```
$data = $this->realdom
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$this->string($this->sample($data))
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        ->or->boundinteger(42, 153)
)
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$data = $this->realdom
    ->regex('/[\w\-_]+(\.[\w\-\_]+)*@\w\.(net|org)/');
$this->string($this->sample($data))
    ->contains(…)->…;
```

Praspel

```
%token  true            true
%token  false           false
%token  null            null
//…
%token  brace_          {
%token _brace           }
%token  bracket_        \[
%token  number          \-?(0|[1-9]\d*)(\.\d+)?([eE][\+\-]?\d+)?

value:
    <true> | <false> | <null> | string() | object() | array() | number()

number:
    <number>

#object:
    ::brace_:: pair() ( ::comma:: pair() )* ::_brace::

#pair:
    string() ::colon:: value()

#array:
    ::bracket_:: value() ( ::comma:: value() )* ::_bracket::

//…
```

Praspel

```
%token  true            true
%token  false           false
%token  null            null
//…
%token  brace_          {
%token _brace           }
%token  bracket_        \[
%token  number          \-?(0|[1-9]\d*)(\.\d+)?([eE][\+\-]?\d+)?
```

```
value:
    <true> | <false> | <null> | string() | object() | array() | number()

number:
    <number>

#object:
    ::brace_:: pair() ( ::comma:: pair() )* ::_brace::

#pair:
    string() ::colon:: value()

#array:
    ::bracket_:: value() ( ::comma:: value() )* ::_bracket::

//…
```

Praspel

```
%token  true            true
%token  false           false
%token  null            null
//…
%token  brace_          {
%token _brace           }
%token  bracket_        \[
%token  number          \-?(0|[1-9]\d*)(\.\d+)?([eE][\+\-]?\d+)?
```

```
value:
    <true> | <false> | <null> | string() | object() | array() | number()

number:
    <number>

#object:
    ::brace_:: pair() ( ::comma:: pair() )* ::_brace::

#pair:
    string() ::colon:: value()

#array:
    ::bracket_:: value() ( ::comma:: value() )* ::_bracket::

//…
```

Praspel

```
public function testJsonExhaustively()
{
    $compiler = \Hoa\Compiler\Llk\Llk::load(
       new \Hoa\File\Read(__DIR__ . DS .  'JsonGrammar.pp')
    );
    $sampler  = new \Hoa\Compiler\Llk\Sampler\BoundedExhaustive(
        $compiler,
        new \Hoa\Regex\Visitor\Isotropic(new \Hoa\Math\Sampler\Random()),
        5
    );

    foreach($sampler as $json) {

        json_decode($json);

        $this->integer(json_last_error())
             ->isEqualTo(JSON_ERROR_NONE);
    }
}
```

Praspel

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public function testJsonExhaustively()
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}
```

Praspel

```
> atoum path: /private/tmp/praspel/vendor/atoum/atoum/vendor/bin/atoum
> atoum version: 2.6.1
> PHP path: /usr/local/Cellar/php70/7.0.12_5/bin/php
> PHP version:
=> PHP 7.0.12 (cli) (built: Oct 14 2016 09:56:59) ( NTS )
=> Copyright (c) 1997-2016 The PHP Group
=> Zend Engine v3.0.0, Copyright (c) 1998-2016 Zend Technologies
=>     with Zend OPcache v7.0.12, Copyright (c) 1999-2016, by Zend Technologies
=>     with Xdebug v2.4.1, Copyright (c) 2002-2016, by Derick Rethans
> Praspel\tests\units\Example...
[SSS_____________________________________________________________][3/3]
=> Test duration: 0.84 second.
=> Memory usage: 4.00 Mb.
> Total test duration: 0.84 second.
> Total test memory usage: 4.00 Mb.
> Running duration: 0.41 second.
Success (1 test, 3/3 methods, 0 void method, 0 skipped method, 2129 assertions)!
```

Praspel

```
> atoum path: /private/tmp/praspel/vendor/atoum/atoum/vendor/bin/atoum
> atoum version: 2.6.1
> PHP path: /usr/local/Cellar/php70/7.0.12_5/bin/php
> PHP version:
=> PHP 7.0.12 (cli) (built: Oct 14 2016 09:56:59) ( NTS )
=> Copyright (c) 1997-2016 The PHP Group
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Bibliothèques

Acl	Dispatcher	Iterator	Notification	**Ruler**	Ustring
Bench	Dns	Json	**Option**	Serialize	View
Cache	Event	**Kitab**	**Praspel**	Session	Visitor
Cli	Eventsource	Locale	Promise	Socket	**Websocket**
Compiler	Exception	Log	Protocol	Stream	Worker
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Console	File	Math	Realdom	Stringbuffer	Xmlrpc
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Bibliothèques

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Ruler

```php
$ruler                = new Hoa\Ruler\Ruler();
$rule                 = 'logged(user) and points > 30';

$context              = new Hoa\Ruler\Context();
$context['user']      = new User();
$context['points']    = 42;

// Declare the `logged` function.
$asserter = new Hoa\Ruler\Visitor\Asserter();
$asserter->setOperator('logged', $logged);

$ruler->setAsserter($asserter);

// Assert!
var_dump(
    $ruler->assert($rule, $context)
);

/**
 * Will output:
 *     bool(true)
 */
```

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 * Will output:
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```

RulerZ

```
$highRankFemalesRule = 'gender = "F" and points > 9000';
```

```
// or an array of objects
$playersObj = [
    new Player('Joe',   'M', 40, 2500),
    new Player('Moe',   'M', 55, 1230),
    new Player('Alice', 'F', 27, 9001),
];
```

```
$isHighRankFemale = $rulerz->satisfies($playersObj[0], $highRankFemalesRule);
```

RulerZ

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$highRankFemalesRule = 'gender = "F" and points > 9000';
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// or an array of objects
$playersObj = [
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$isHighRankFemale = $rulerz->satisfies($playersObj[0], $highRankFemalesRule);
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RulerZ

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Websocket

```
$server = new Websocket\Server(
    new Socket\Server(
        'ws://127.0.0.1:8080')
    );

$server
    ->getConnection()
    ->setNodeName(Player::class);

$server->on(
    'open',
    function (Event\Bucket $bucket) {
        echo 'New player', "\n";
    }
);
```

Websocket

```
$server = new Websocket\Server(
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        'ws://127.0.0.1:8080')
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    new Socket\Server(
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    );

$server
    ->getConnection()
    ->setNodeName(Player::class);

$server->on(
    'open',
    function (Event\Bucket $bucket) {
        echo 'New player', "\n";
    }
);
```

Websocket

```
$server->on(
    'message',
    function (Event\Bucket $bucket) use ($scores) {
        //…

        if (false === $message = @json_decode($data['message'])) {
            $bucket->getSource()->close();

            return;
        }

        switch ($message->type) {
            case 'server/player/new':
                //…
                break;

            case 'server/bubble/new':
                //…
                break;

            case 'server/bubble/delete':
                $bucket->getSource()->broadcast(
                    json_encode([
                        'type' => 'client/bubble/delete',
                        'id'   => $message->id
                    ])
                );
        }
    }
);
```

Websocket

```php
$server->on(
    'message',
    function (Event\Bucket $bucket) use ($scores) {
        //…

        if (false === $message = @json_decode($data['message'])) {
            $bucket->getSource()->close();

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        }

        switch ($message->type) {
            case 'server/player/new':
                //…
                break;

            case 'server/bubble/new':
                //…
                break;

            case 'server/bubble/delete':
                $bucket->getSource()->broadcast(
                    json_encode([
                        'type' => 'client/bubble/delete',
                        'id'   => $message->id
                    ])
                );
        }
    }
);
```
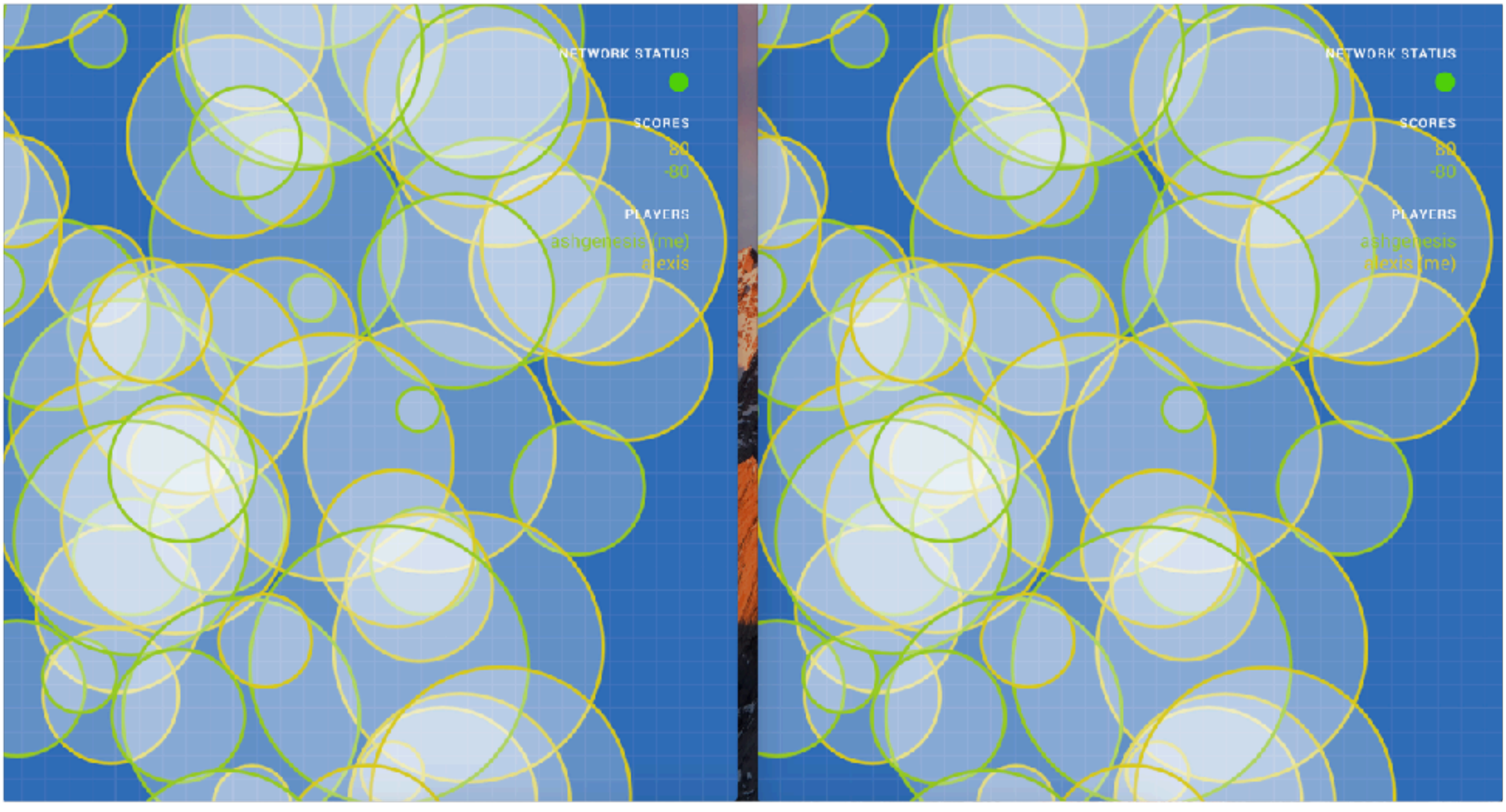
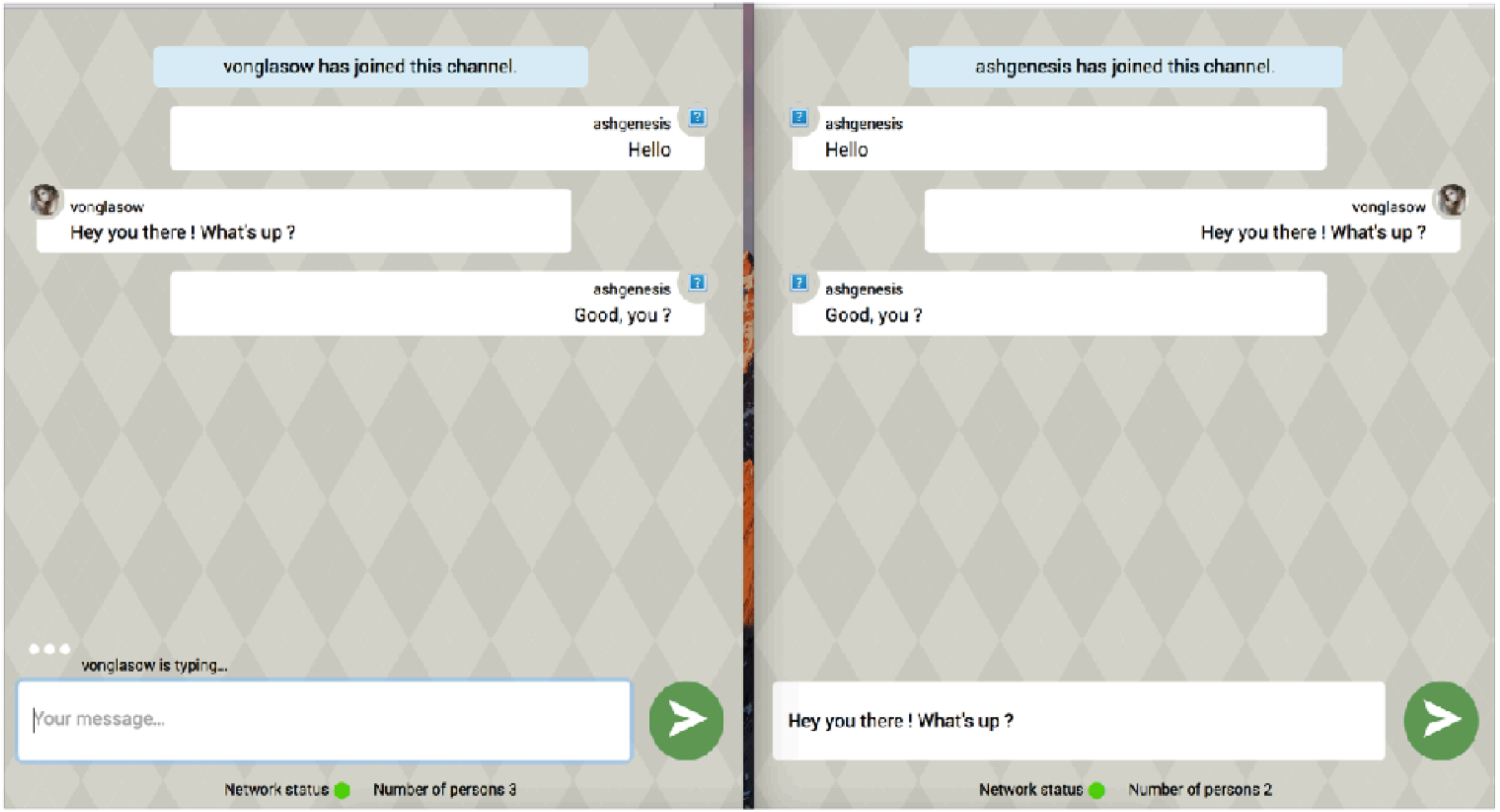
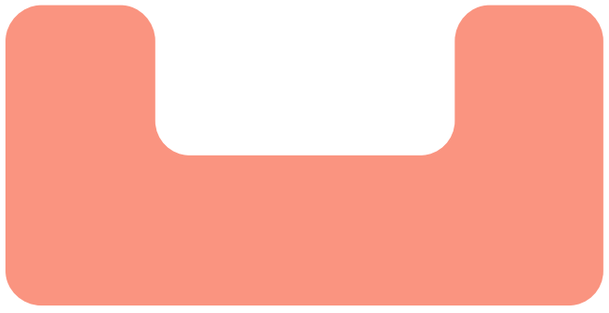

Bubble Game

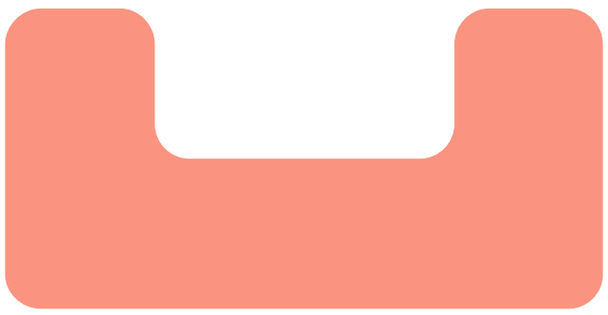

NETWORK STATUS
SCORES
80
-80
PLAYERS
ashgenesis (me)
alexis
NETWORK STATUS
SCORES
80
-80
PLAYERS
ashgenesis
alexis (me)

Chat

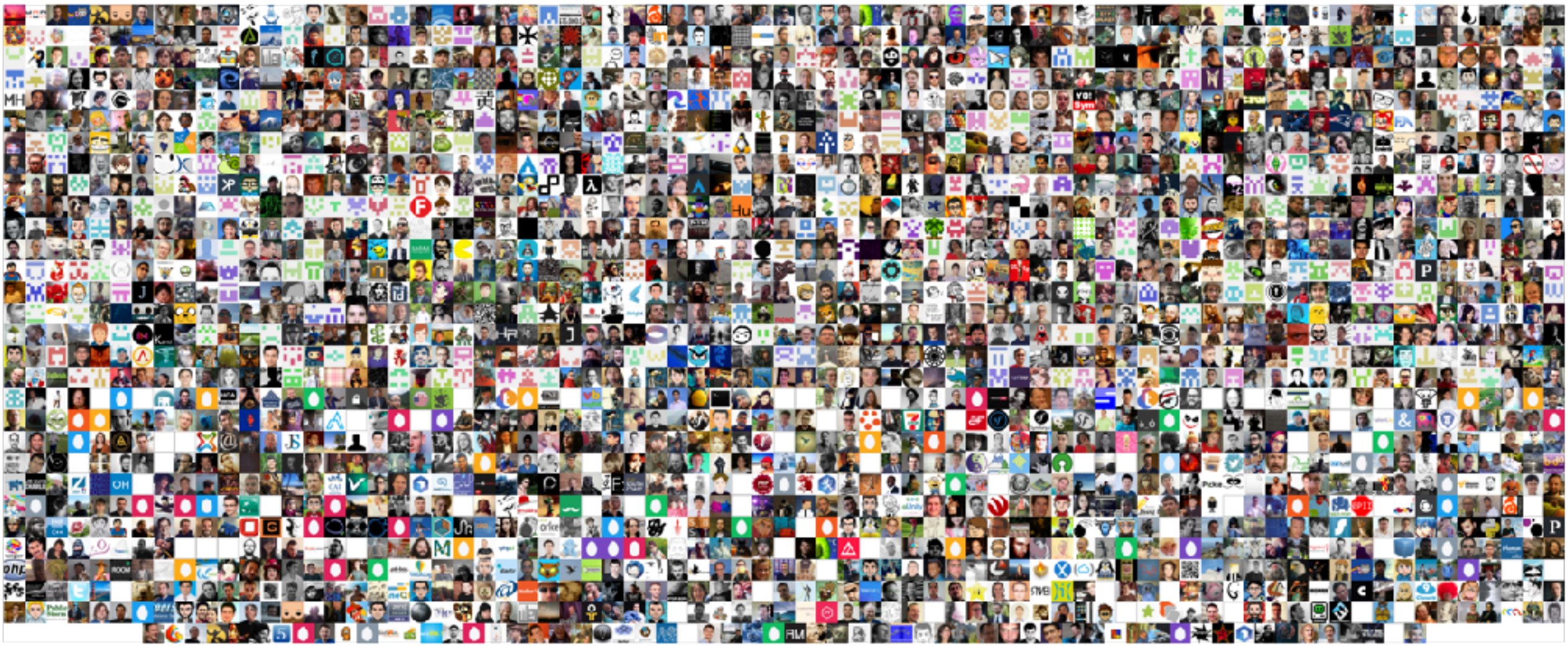

vonglasow has joined this channel.
ashgenesis
Hello
vonglasow
Hey you there ! What's up ?
ashgenesis
Good, you ?
vonglasow is typing...
Your message...
Network status
Number of persons 3
ashgenesis has joined this channel.
ashgenesis
Hello
vonglasow
Hey you there ! What's up ?
ashgenesis
Good, you ?
Hey you there ! What's up ?
Network status
Number of persons 2





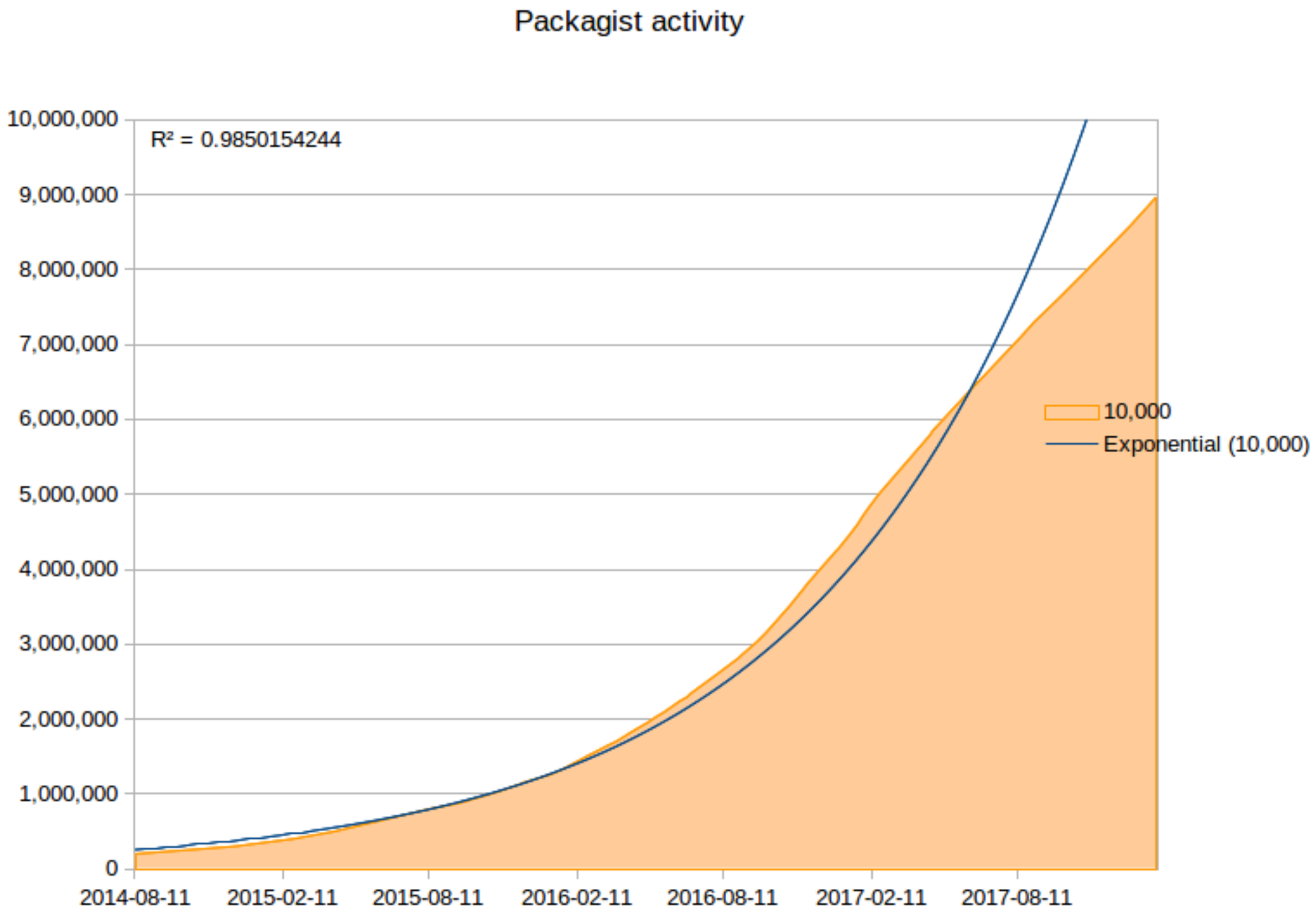



Communauté

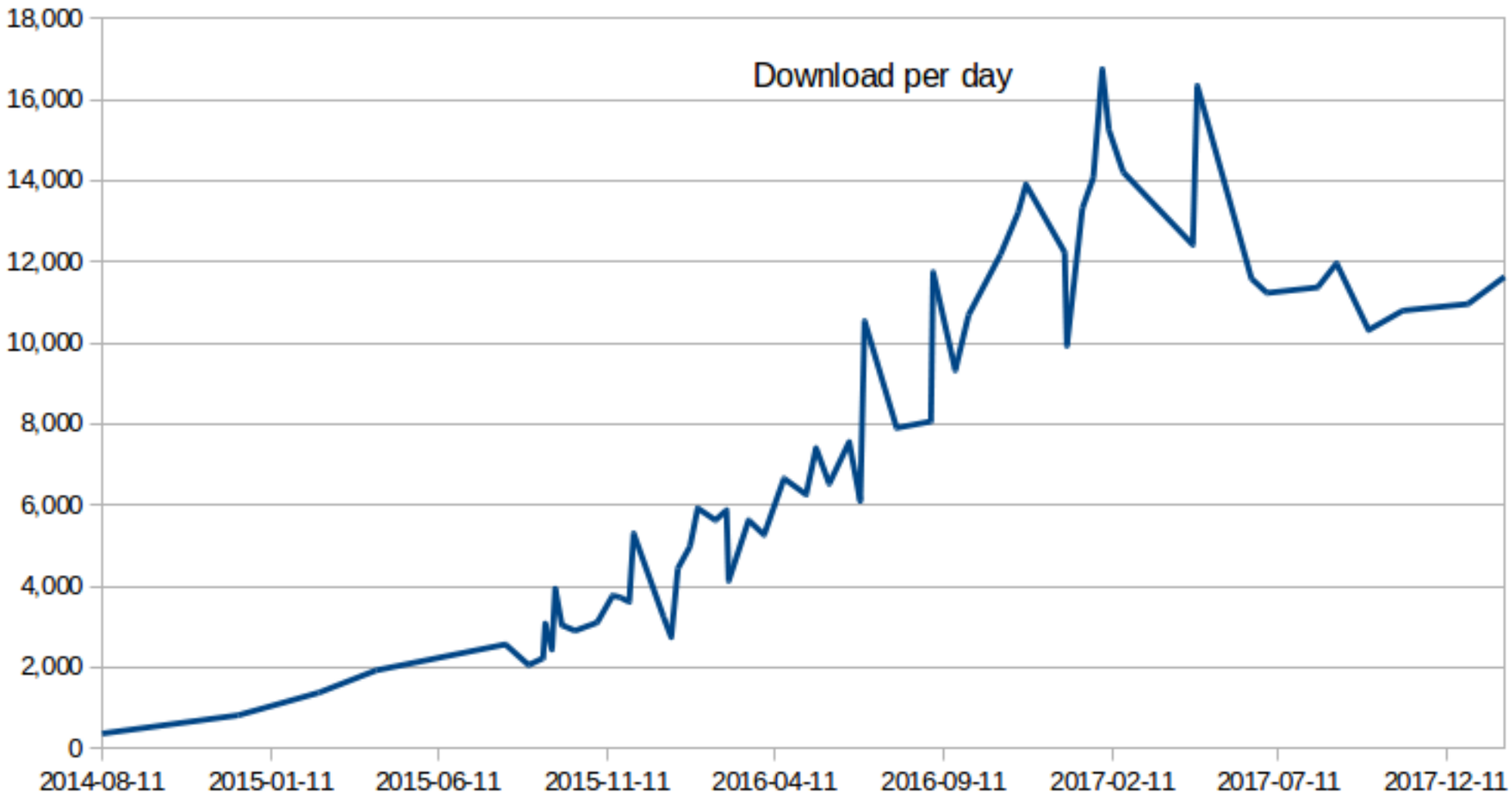


~2200 personnes

Packagist


Packagist activity
R² = 0.9850154244
10,000,000
9,000,000
8,000,000
7,000,000
6,000,000
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
0
2014-08-11
2015-02-11
2015-08-11
2016-02-11
2016-08-11
2017-02-11
2017-08-11
10,000
Exponential (10,000)

Téléchargement



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wallabag

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Merci

- https://hoa-project.net
- @hoaproject
- irc: freenode #hoaproject
- https://github.com/doctrine/annotations/pull/75
- http://psysh.org
- https://github.com/hoaproject/Contributions-Atoum-PraspelExtension
- https://github.com/vonglasow/game-of-life
- https://github.com/jubianchi/tml
- https://github.com/Hywan/ForumPHP2016
- https://github.com/K-Phoen/rulerz
- https://hoa-project.net/Fr/Awecode/Console-readline.html
- https://hoa-project.net/Fr/Awecode/Websocket.html
- https://github.com/hoaproject/Kitab