

Riotのウラガワ: ver 3とソースコード解説

RIOT

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Librize LLC / OpenSource Cafe, Shimokitazawa



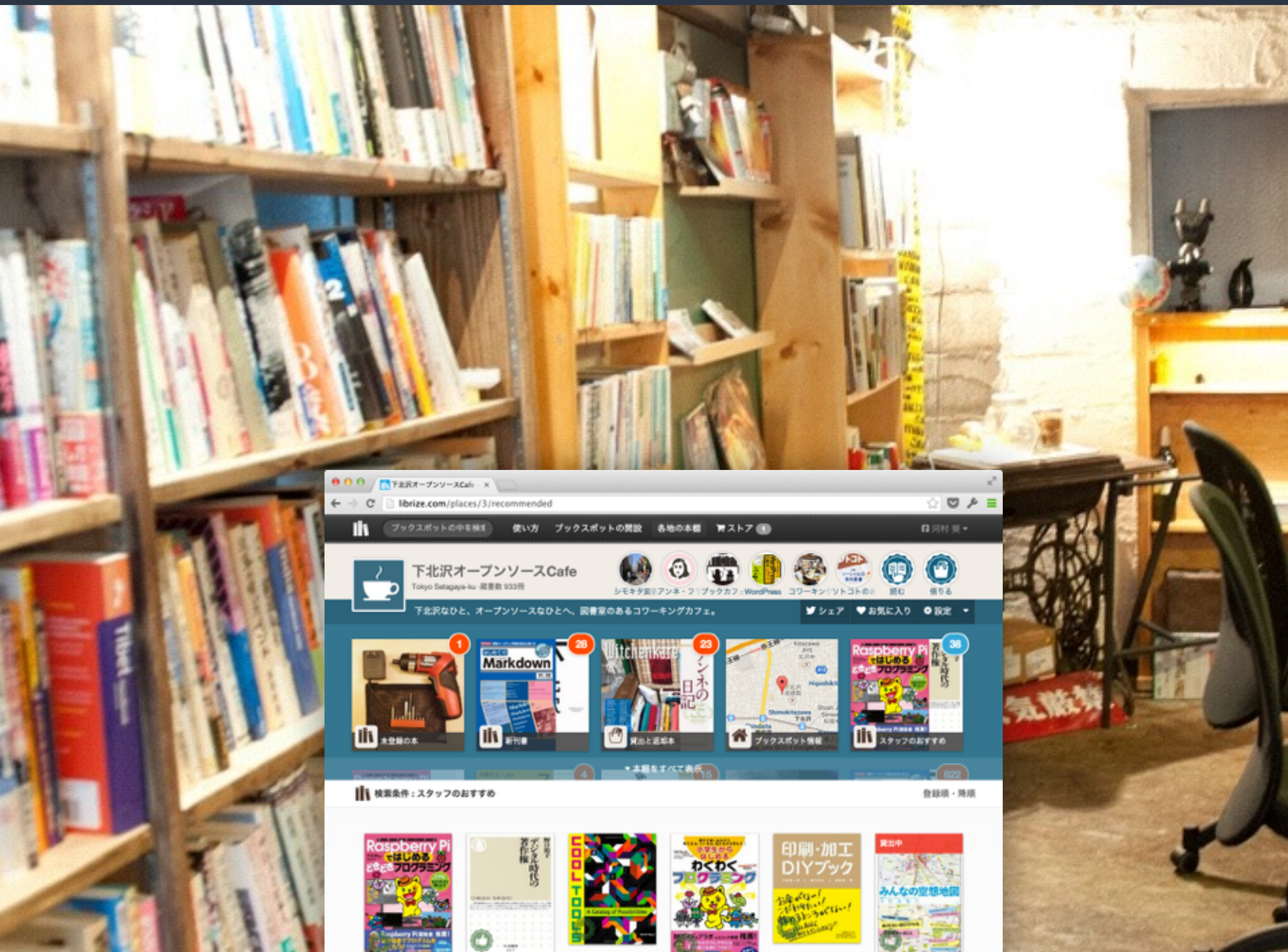
cognitom



OpenSource Cafe
· Mon-Thu 10am-8pm
· Fri Closed
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Cafe & Library for Coding,
OpenSource Activities, and more!!

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リブライズ

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The screenshot shows the GitHub interface for the 'Riot' repository. The browser tab is titled 'Riot' and the address bar shows 'https://github.com/riot'. The repository name 'Riot' is displayed in large text, with the description 'A React- like, user interface library' and the website 'http://riotjs.com'. Below this, there are tabs for 'Repositories', 'People' (10), 'Teams' (2), and 'Settings'. A search bar with the text 'Find a repository...' and a '+ New repository' button are visible. The repository details show 'HTML' as the selected language, with 30 stars and 3 forks. A section titled 'examples' mentions 'Demos and examples for Riot and submodules' and notes it was 'Updated 2 hours ago'.

Riot

A React- like, user interface library

<http://riotjs.com>

Repositories People 10 Teams 2 Settings

Filters Find a repository... + New repository

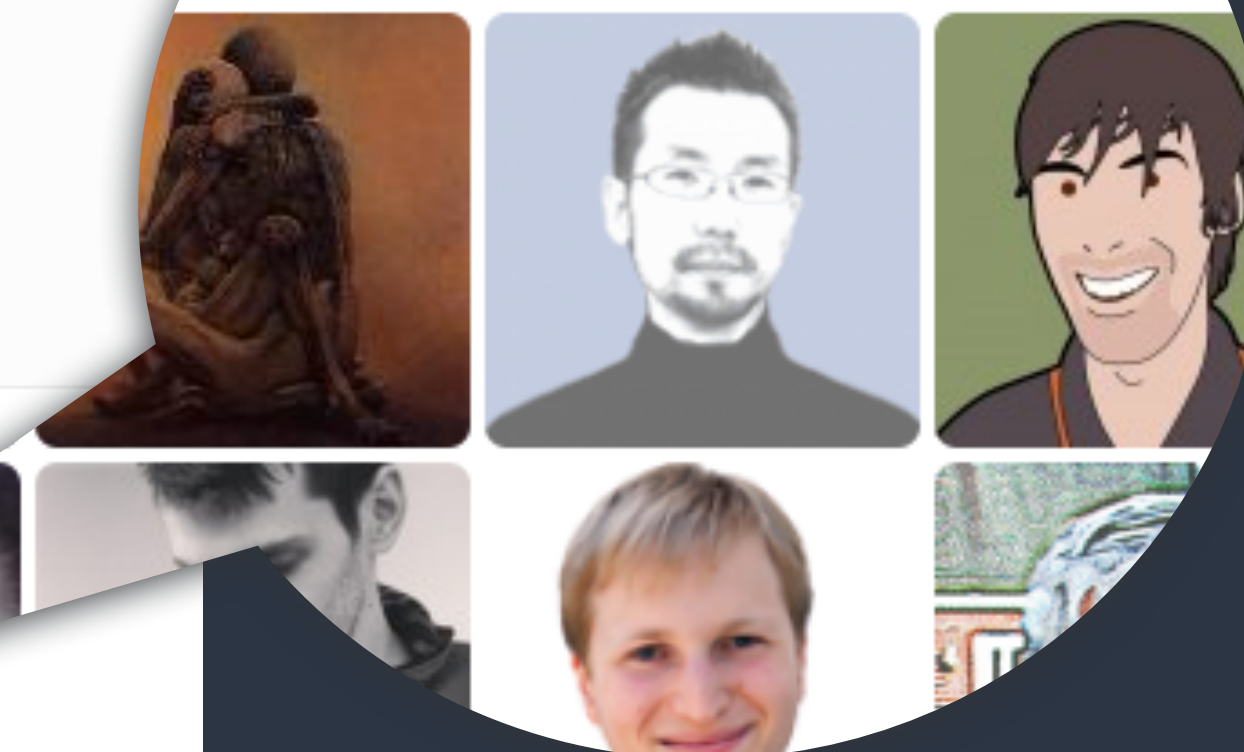
HTML ★ 30 🍴 3

examples

Demos and examples for Riot and submodules

Updated 2 hours ago

Tsutomu



今日、話すこと

RIOT

- ・ Riot の近況
- ・ Riot の開発体制
- ・ 2.0→3 で何が変わったの？
- ・ ソースコードを覗いてみよう

このあたりを話そうかと

RIOT

Riot の近況

RIOT

2016年夏 ver.3 (予定)

RIOT

じわじわきてる 🧐

riot/riot: A React-like, user interface library

Tsutomu

← → ↻

GitHub, Inc. [US] https://github.com/riot/riot

☆

🔒

ℹ

👁

📄

☰

>

🐙

This repository

Search

Pull requests

Issues

Gist

🔔

+ ▾

👤 ▾

📄 riot / riot

👁 Unwatch ▾ 404

★ Unstar 9,932

🍴 Fork 826

<> Code

🔔 Issues 99

🔗 Pull requests 2

📖 Wiki

⚡ Pulse

📊 Graphs

⚙ Settings

A React-like, user interface library <http://riotjs.com/> — Edit

🕒 2,300 commits

🔗 5 branches

📦 56 releases

👥 139 contributors

Branch: master ▾

New pull request

Create new file

Upload files

Find file

Clone or download ▾

👤 GianlucaGuarini 2.5.0

Latest commit 67e8c5b 23 days ago

📁 .github

Update PULL_REQUEST_TEMPLATE.md

5 months ago

もうすぐ ★10K

RIOT

GitHubのスター	★9932
コントリビュータ	139人
プルリクエストの数	647件
Qiitaの記事	66件

	v2.0	v3.0
ファイルサイズ	2.5KB	9.3KB
公式リポジトリ	1個	13個
コアコミッター	2人	6人

若干ぽっちゃり 🤪

RIOT

Framework Size Comparison

Framework	Version	Minified Size (gzip)
Angular2	2.0.0-beta.17	125.29kb
Ember	2.6.1	112.94kb
Angular	1.5.7	56.02kb
Polymer + Web Components Polyfill Lite	1.4.0	54.48kb
React	15.2.0	45.49kb
Web Components Polyfill	0.7.22	33.66kb
Vue	1.0.26	26.66kb
Riot	2.5.0	9.25kb

RIOT

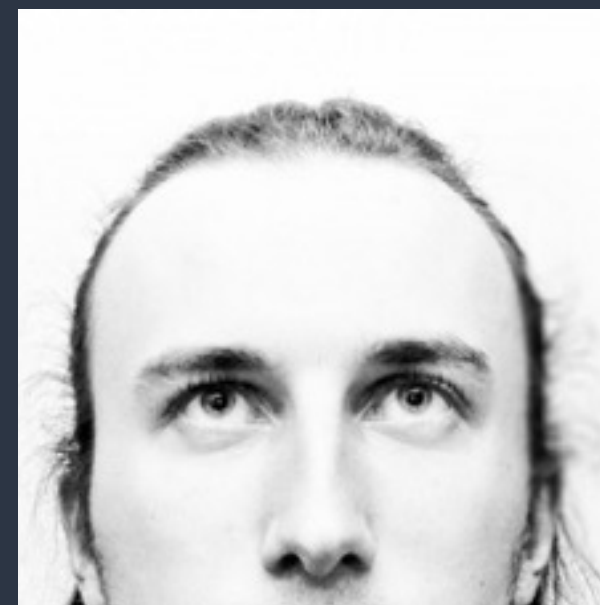
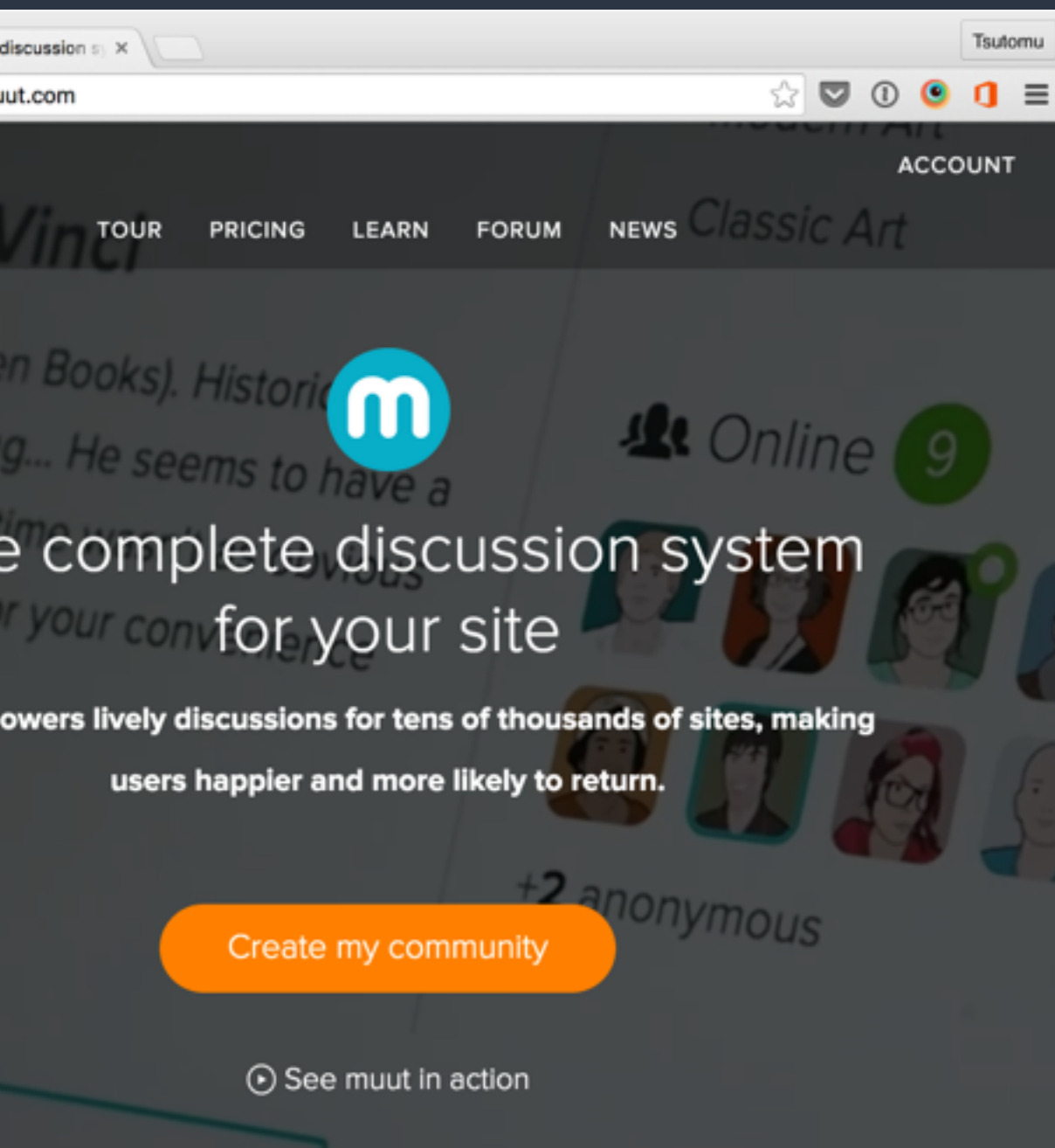
Riot の開発体制

RIOT



コアコミッターの居場所

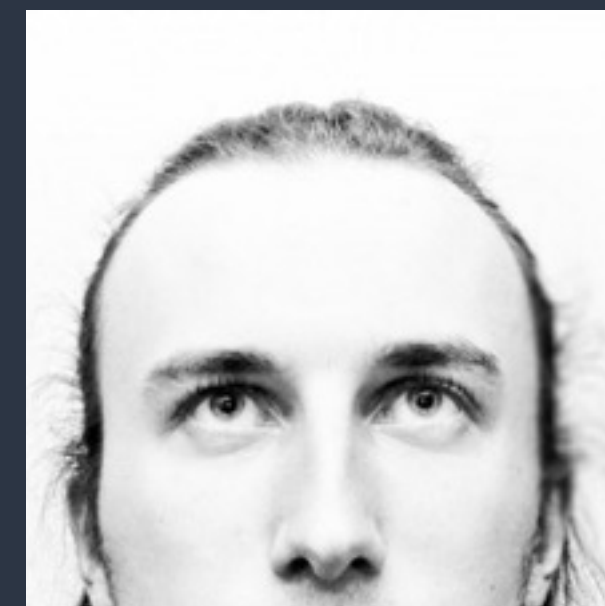
フィンランド



2015年1月 v2.0

RIOT

アジアの砂漠へ



スイスから

2015年春

RIOT



会長職的な



テキサスから



東京から



メキシコから

2015年夏

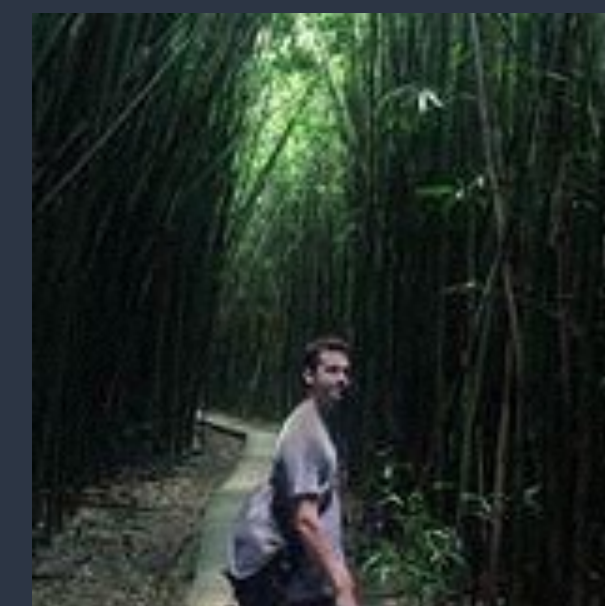
RIOT



時々降臨



どこから



2016年

RIOT



が、Riotでやっていること

RIOT

- ・ 2.0 初期のテスト大量追加
- ・ <style>タグ対応
- ・ Scoped CSS 対応
- ・ ドキュメントの国際化
- ・ riot/example
- ・ riot/route
- ・ karma-riot
- ・ rollup-plugin-riot

ほか



のコントリビューション

RIOT

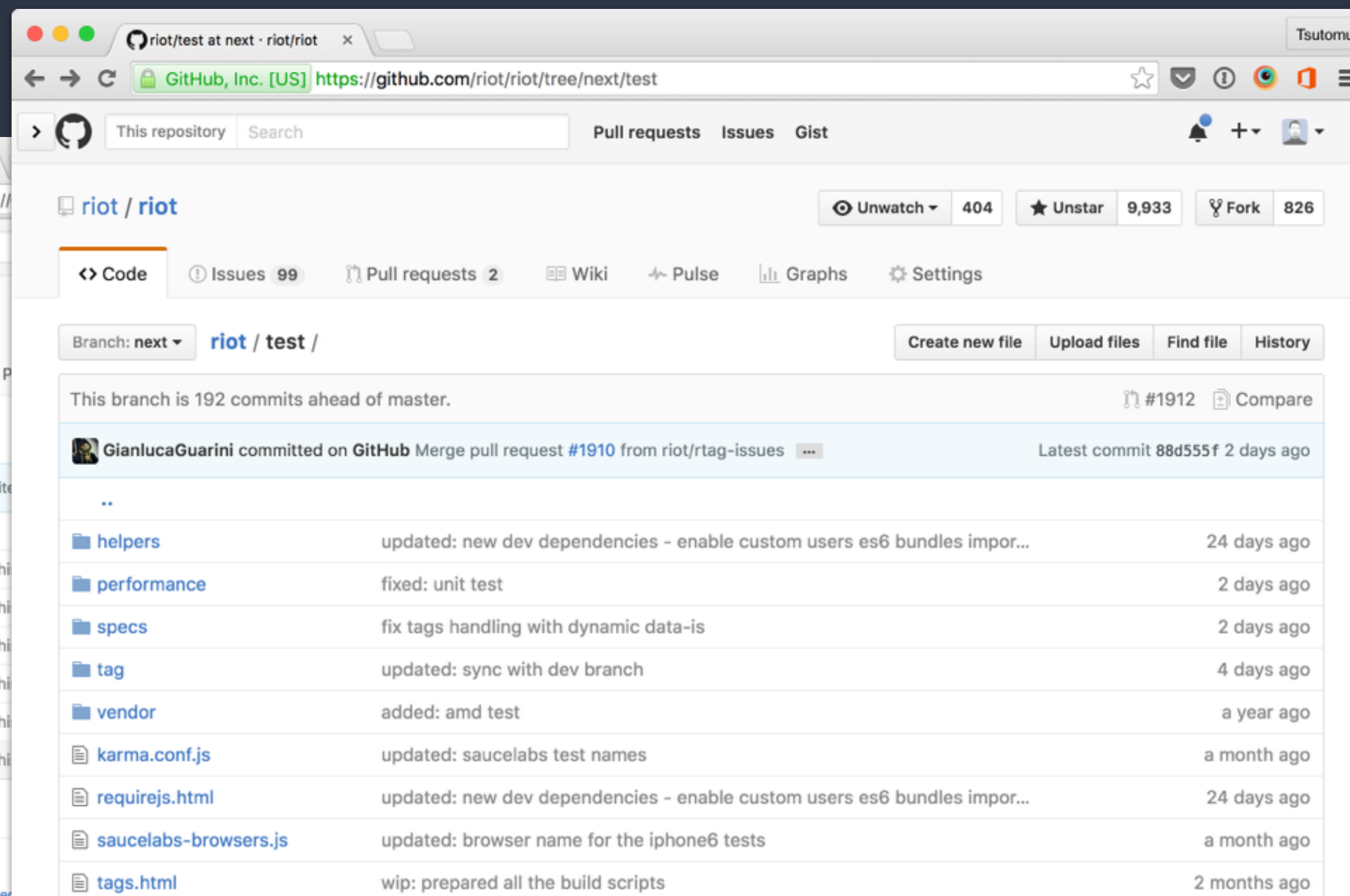
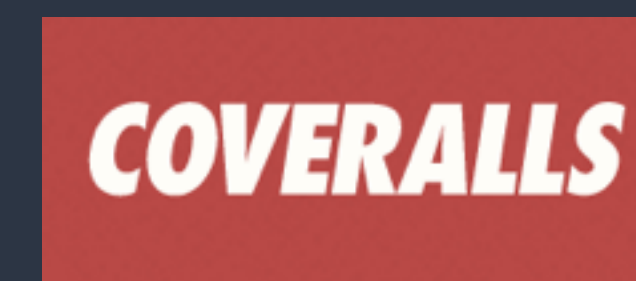
2.0→3 で何が変わったの？

RIOT

**3.0で追加される機能、
というよりは、
2.0から変わってきたところ**



テスト



build **passing** muut **JOIN CHAT→** GITTER **JOIN CHAT →**

npm **v2.5.0** downloads **13k/month** license **MIT** coverage **93%** code climate **4.0**

 Android	 Firefox	 Chrome	 IE	 Safari
4.0  * ✓	45  * ✓	48  * ✓	9  7	7  10.9 ✓
5.1  * ✓			10  8 ✓	
			11  8.1 ✓	

RIOT



Scoped CSS

v2.0.12~

```
<p>WP-D Week</p>
```

```
<style scoped>
```

```
  :scope { /* コンポーネントそのもののスタイル */ }
```

```
  p { /* コンポーネント内のpタグのみに有効 */ }
```

```
</style>
```

RIOT



<yield />

v2.0.15~

```
<my-tag>  
  <p>Hello <yield/></p>  
  this.text = 'world'  
</my-tag>
```

+

```
<my-tag>  
  <b>{ text }</b>  
</my-tag>
```

```
=  
  <my-tag>  
    <p>Hello <b>world</b><p>  
  </my-tag>
```

RIOT



mixin

v2.1.0~

```
var logMixin = {  
  log: function(m) {  
    console.log(m)  
  }  
}
```

```
<my-tag>  
  <h1>{ opts.title }</h1>  
  <script>  
    this.mixin(logMixin)  
    this.log('hey!')  
  </script>  
</my-tag>
```

RIOT



riot-route

v2.3.0~

```
riot.route('/fruit', function(name) {  
  console.log('The list of fruits')  
})
```

```
riot.route('/fruit/*', function(name) {  
  console.log('The detail of ' + name)  
})
```

RIOT



riot-compiler, -tmpl

v2.3.0~

GitHub repository page for **riot/compiler**. The page shows 247 commits, 5 branches, 8 releases, and 10 contributors. The latest commit is by GianlucaGuarini, updating the release. The commit history includes updates to the `dist` folder, `doc` folder, `lib` folder, `src` folder, `test` folder, `.codeclimate.yml`, `.editorconfig`, `.eslintignore`, and `.eslintrc.yml`.

File	Commit Message	Time Ago
<code>dist</code>	updated: bump release	a month ago
<code>doc</code>	Update guide.md	6 months ago
<code>lib</code>	updated: bump release	a month ago
<code>src</code>	Fix #72: `undefined` is not a function when evaluating `parsers._req`	a month ago
<code>test</code>	added: test for the es6 import	2 months ago
<code>.codeclimate.yml</code>	v2.3.0-beta.4	9 months ago
<code>.editorconfig</code>	First commit	a year ago
<code>.eslintignore</code>	v2.3.23	5 months ago
<code>.eslintrc.yml</code>	Updated .eslintrc.yml	2 months ago

GitHub repository page for **riot/tmpl**. The page shows 133 commits, 2 branches, 5 releases, and 2 contributors. The latest commit is by GianlucaGuarini, updating dependencies. The commit history includes updates to the `dist` folder, `doc` folder, `src` folder, `test` folder, `.codeclimate.yml`, `.editorconfig`, `.eslintignore`, `.eslintrc.yml`, and `.gitignore`.

File	Commit Message	Time Ago
<code>dist</code>	updated: dependencies	3 months ago
<code>doc</code>	v2.3.21	6 months ago
<code>src</code>	updated: dependencies	3 months ago
<code>test</code>	updated: using umd export for the tmpl.csp file	3 months ago
<code>.codeclimate.yml</code>	v2.3.0-beta.3	9 months ago
<code>.editorconfig</code>	first commit	11 months ago
<code>.eslintignore</code>	added: notevil as local dependency	
<code>.eslintrc.yml</code>	added: notevil	
<code>.gitignore</code>	removed: dist from the gitignore	

RIOT



riot-cli, -observable

v2.3.0~

GitHub repository page for **riot/cli**. The page shows the repository name, navigation tabs (Code, Issues, Pull requests, Wiki, Pulse, Graphs, Settings), and repository statistics (73 commits, 2 branches, 0 releases, 2 contributors). The commit history table is as follows:

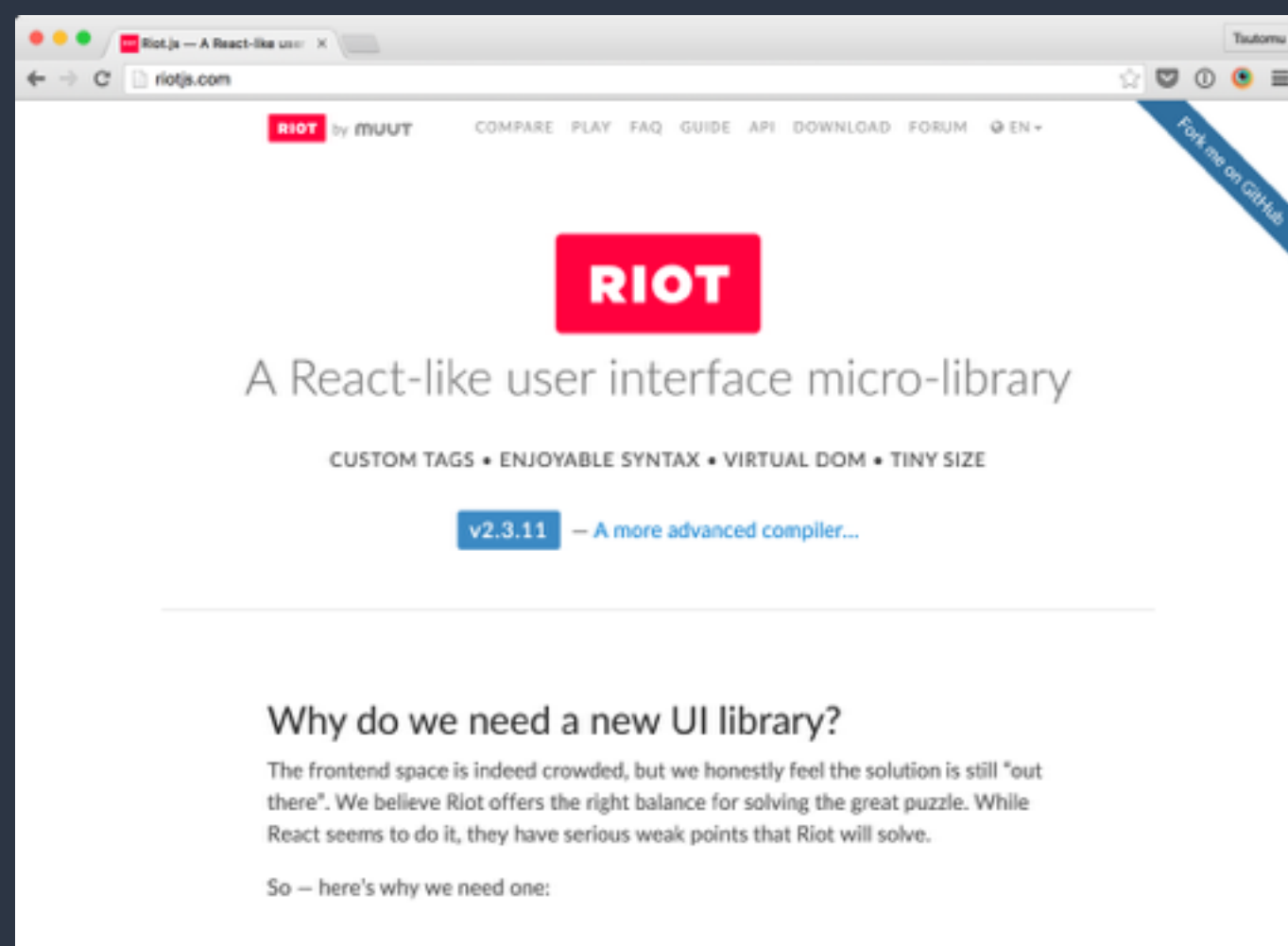
Commit	Message	Time
GianlucaGuarini	updated: riot compiler and fixed parsers validation	a month ago
lib	updated: riot compiler and fixed parsers validation	a month ago
test	updated: riot compiler and fixed parsers validation	a month ago
.codeclimate.yml	added: readme file	10 months ago
.eslintrc	update: closes #13	a month ago
.gitignore	stable release	8 months ago
.travis.yml	updated: dependencies	a month ago
LICENSE	Initial commit	a year ago
Makefile	fix tests	8 months ago
README.md	updated: readme file	9 months ago

GitHub repository page for **riot/observable**. The page shows the repository name, navigation tabs (Code, Issues, Pull requests, Pulse, Graphs, Settings), and repository statistics (58 commits, 2 branches, 11 releases, 5 contributors). The commit history table is as follows:

Commit	Message	Time
GianlucaGuarini	updated: node for the travis tests	2 days ago
dist	fixed: unit test	2 days ago
doc	updated: removed namespaced events and closes riot/route#63	2 days ago
lib	fixed: unit test	2 days ago
test	updated: removed namespaced events and closes riot/route#63	2 days ago
.codeclimate.yml	updated: more comments, better code, multi trigger	11 months ago
.editorconfig	wip	a year ago
.eslintrc	added: tests for the namespaced events and benchmarks	
.gitignore	wip	
.travis.yml	updated: node for the travis tests	

RIOT

ドキュメントの国際化



riotjs.com

EN

ES

RU

FR

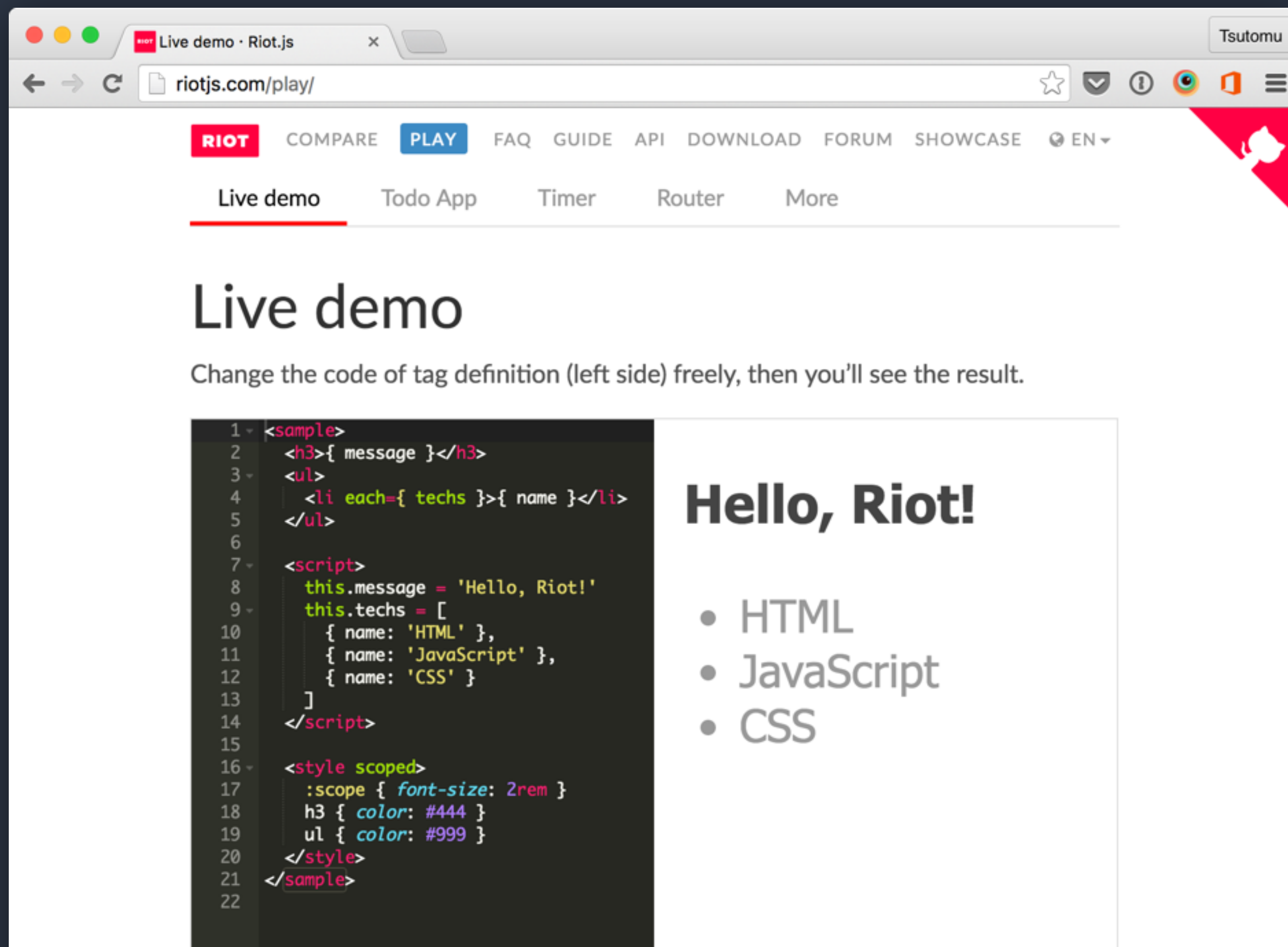
ZH

JA

DE

RIOT

Examples

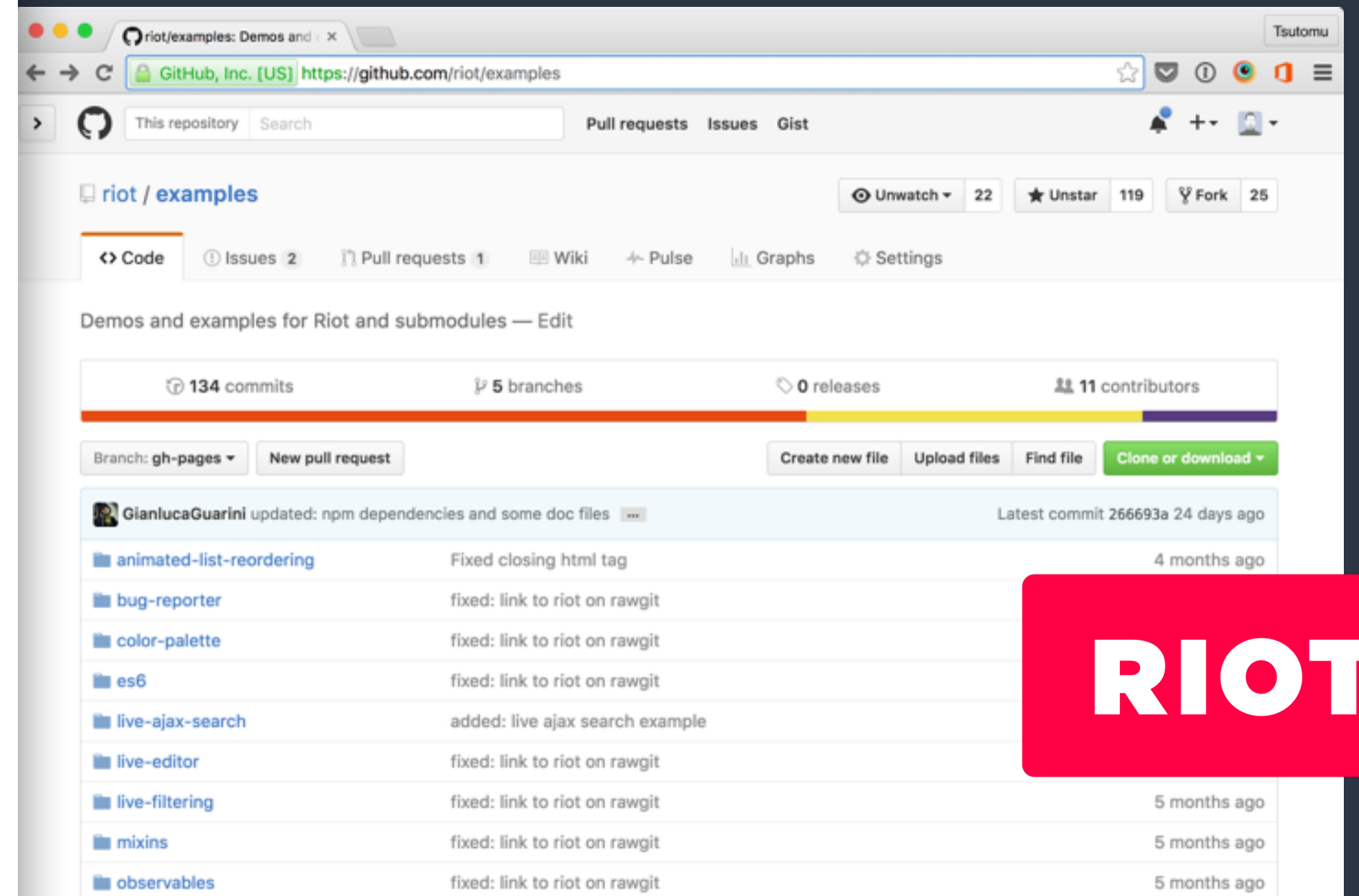


The screenshot shows the Riot.js live demo website. The browser address bar shows `riotjs.com/play/`. The navigation bar includes links for **RIOT**, **COMPARE**, **PLAY**, **FAQ**, **GUIDE**, **API**, **DOWNLOAD**, **FORUM**, **SHOWCASE**, and **EN**. Below the navigation bar, there are tabs for **Live demo**, **Todo App**, **Timer**, **Router**, and **More**. The main heading is **Live demo**, followed by the instruction: "Change the code of tag definition (left side) freely, then you'll see the result." On the left, a code editor shows the following HTML and JavaScript code:

```
1 <sample>
2   <h3>{ message }</h3>
3   <ul>
4     <li each={ techs }>{ name }</li>
5   </ul>
6
7   <script>
8     this.message = 'Hello, Riot!'
9     this.techs = [
10      { name: 'HTML' },
11      { name: 'JavaScript' },
12      { name: 'CSS' }
13    ]
14   </script>
15
16   <style scoped>
17     :scope { font-size: 2rem }
18     h3 { color: #444 }
19     ul { color: #999 }
20   </style>
21 </sample>
22
```

On the right, the rendered output displays the text **Hello, Riot!** and a bulleted list:

- HTML
- JavaScript
- CSS



The screenshot shows the GitHub repository page for **riot / examples**. The repository has 134 commits, 5 branches, 0 releases, and 11 contributors. A list of examples is shown, each with a description and the time since the last commit:

Example	Description	Last Commit
animated-list-reordering	Fixed closing html tag	4 months ago
bug-reporter	fixed: link to riot on rawgit	
color-palette	fixed: link to riot on rawgit	
es6	fixed: link to riot on rawgit	
live-ajax-search	added: live ajax search example	
live-editor	fixed: link to riot on rawgit	
live-filtering	fixed: link to riot on rawgit	5 months ago
mixins	fixed: link to riot on rawgit	5 months ago
observables	fixed: link to riot on rawgit	5 months ago

RIOT

global mixin

v2.3.16~

```
var logMixin = {  
  log: function(m) {  
    console.log(m)  
  }  
}
```

```
riot.mixin(logMixin)
```

```
<my-tag>  
  <h1>{ opts.title }</h1>  
  <script>  
    this.log('hey!')  
  </script>  
</my-tag>
```

RIOT

data-is

v2.3.17~

`<my-tag></my-tag>`

||

`<div riot-tag="my-tag"></div>`



`<div data-is="my-tag"></div>`

RIOT

<virtual>

v2.3.?~

```
<d1>
```

```
  <virtual each={item in items}>
```

```
    <dt>{item.key}</dt>
```

```
    <dd>{item.value}</dd>
```

```
  </virtual>
```

```
</d1>
```

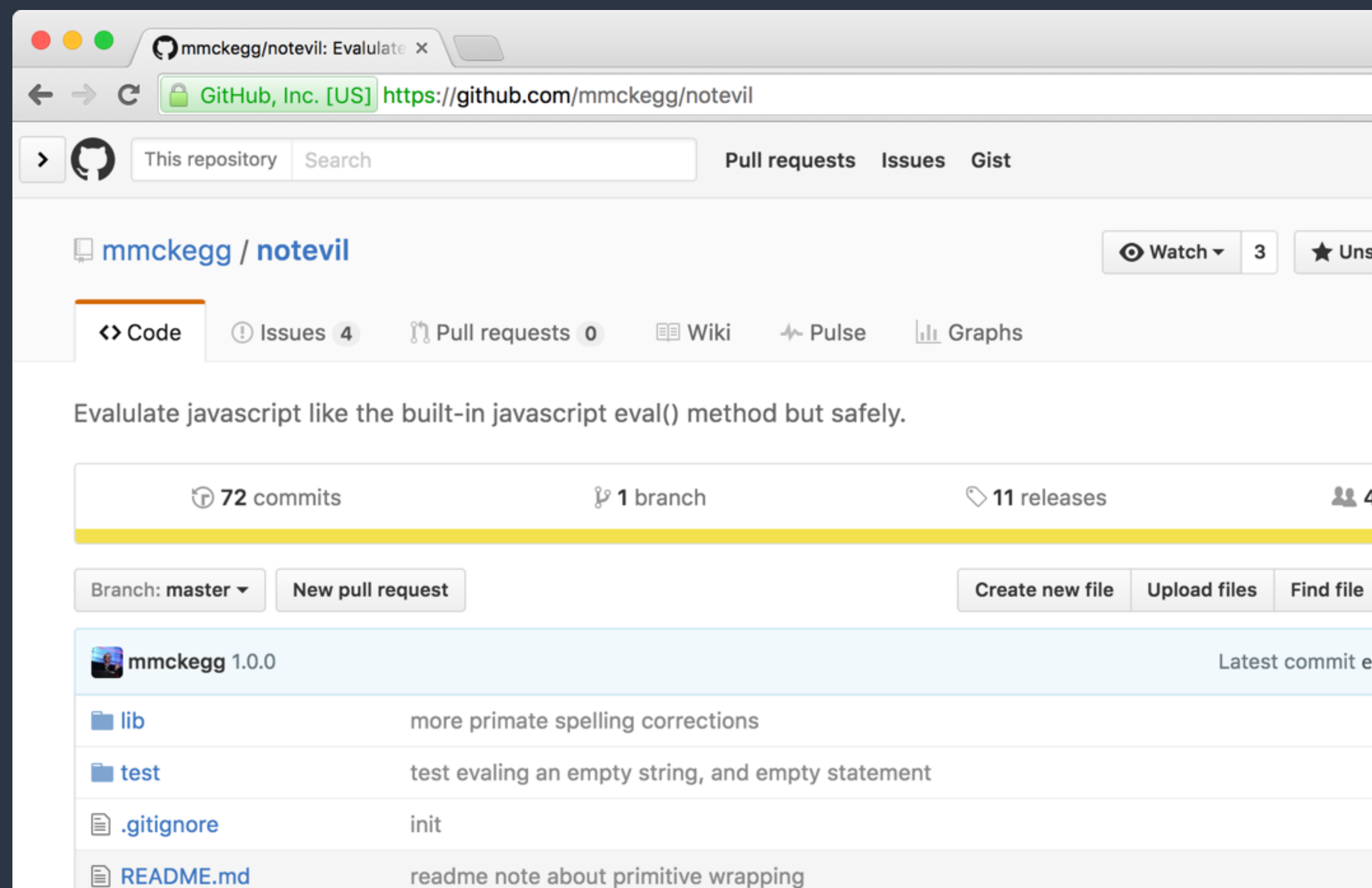
RIOT



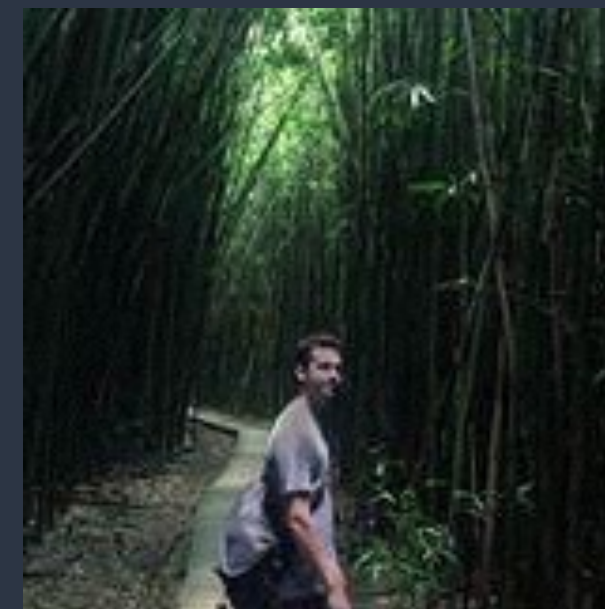
Content Security Policy CSP 対応

v2.4.0~

- Chromeの
プラグインで困る件
- riot.csp.js



高速化 & 最適化 ループの挙動のfix



m(_ _)m

RIOT

重要

if属性の挙動

v3.0~

- ・ if属性をつけた時に、
falseでもマウントされてしまう

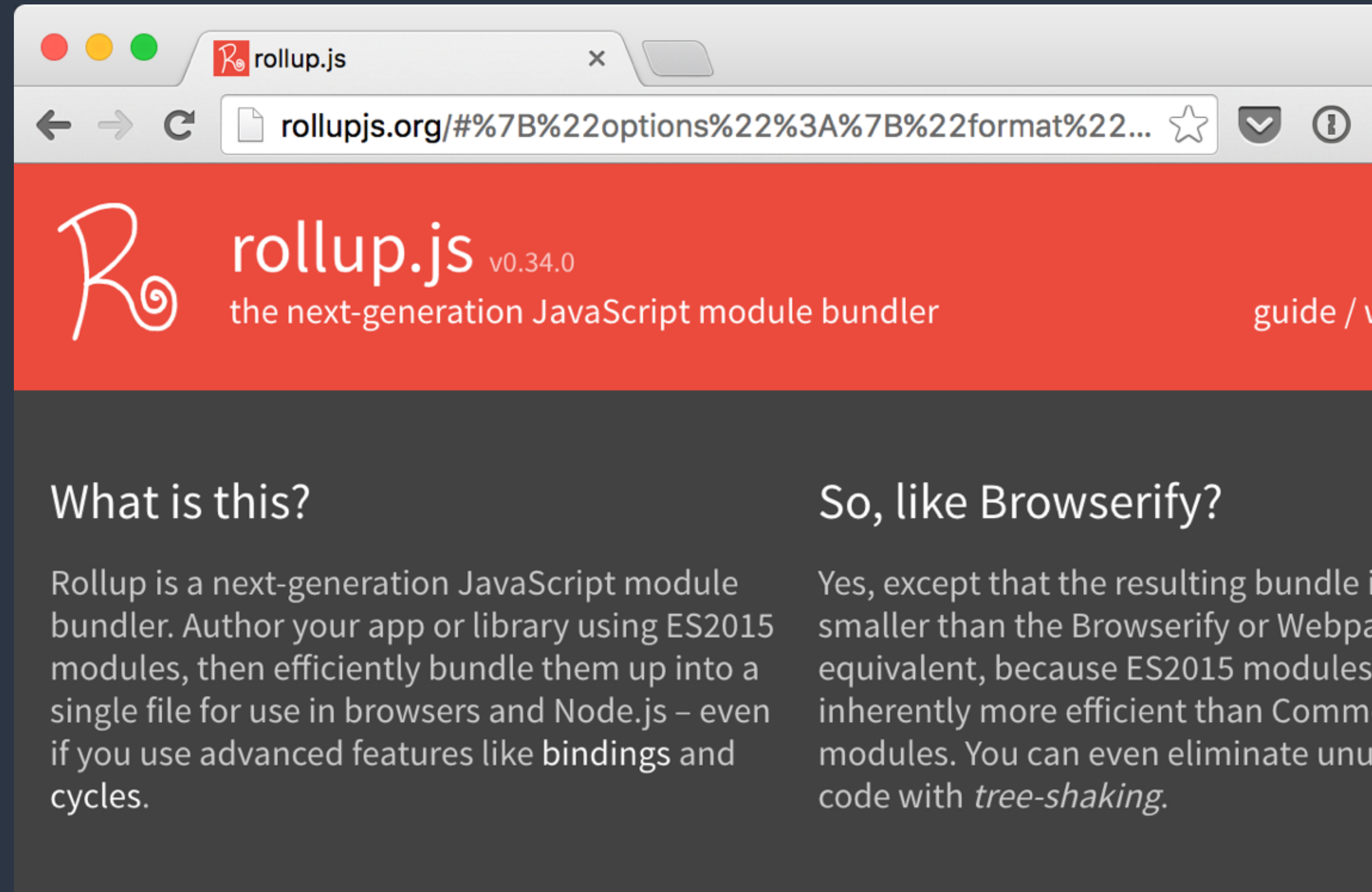


- ・ if属性をつけた時に、
trueになるまでマウントされない

RIOT

バンドル方法

- 2.0.0 独自
- 2.1.0 smash
- 3.0.0 rollup



ソースコードを覗いてみよう

RIOT

まずはクローン

The screenshot shows the GitHub repository page for `riot/riot`. The browser address bar displays `https://github.com/riot/riot`. The repository name `riot / riot` is shown with statistics: 405 watchers, 9,934 stars, and 826 forks. The `Code` tab is selected, showing a list of recent commits. The repository description is "A React-like, user interface library <http://riotjs.com/> — Edit".

Repository statistics:

- 2,300 commits
- 5 branches
- 56 releases
- 139 contributors

Actions: Branch: master, New pull request, Create new file, Upload files, Find file, Clone or download.

Recent commits:

Commit	Author	Message	Time
67e8c5b	GianlucaGuarini	Update PULL_REQUEST_TEMPLATE.md	24 days ago
		removed: useless riot+compiler.csp file	5 months ago
		added test for child mixin	24 days ago
		Adjust to CI config and package.json	28 days ago
			9 months ago

RIOT

コーディングスタイル

- ・ 行末のセミコロンなし
- ・ 短いのが正義
- ・ ==や!=は挙動を理解して使う
- ・ if文やfor文で、省略可能であれば{}を使わない
- ・ 演算子の評価順を正しく考慮。冗長な()を使わない
- ・ ES6で書くが、
変換時に長くなるClassなどは使わない (現在のところ)
- ・ 独自の関数を優先的に使う(場面がある)
- ・ Object.assign()ではなく、extend()
- ・ [].forEach()ではなく、each()

バンドル方法

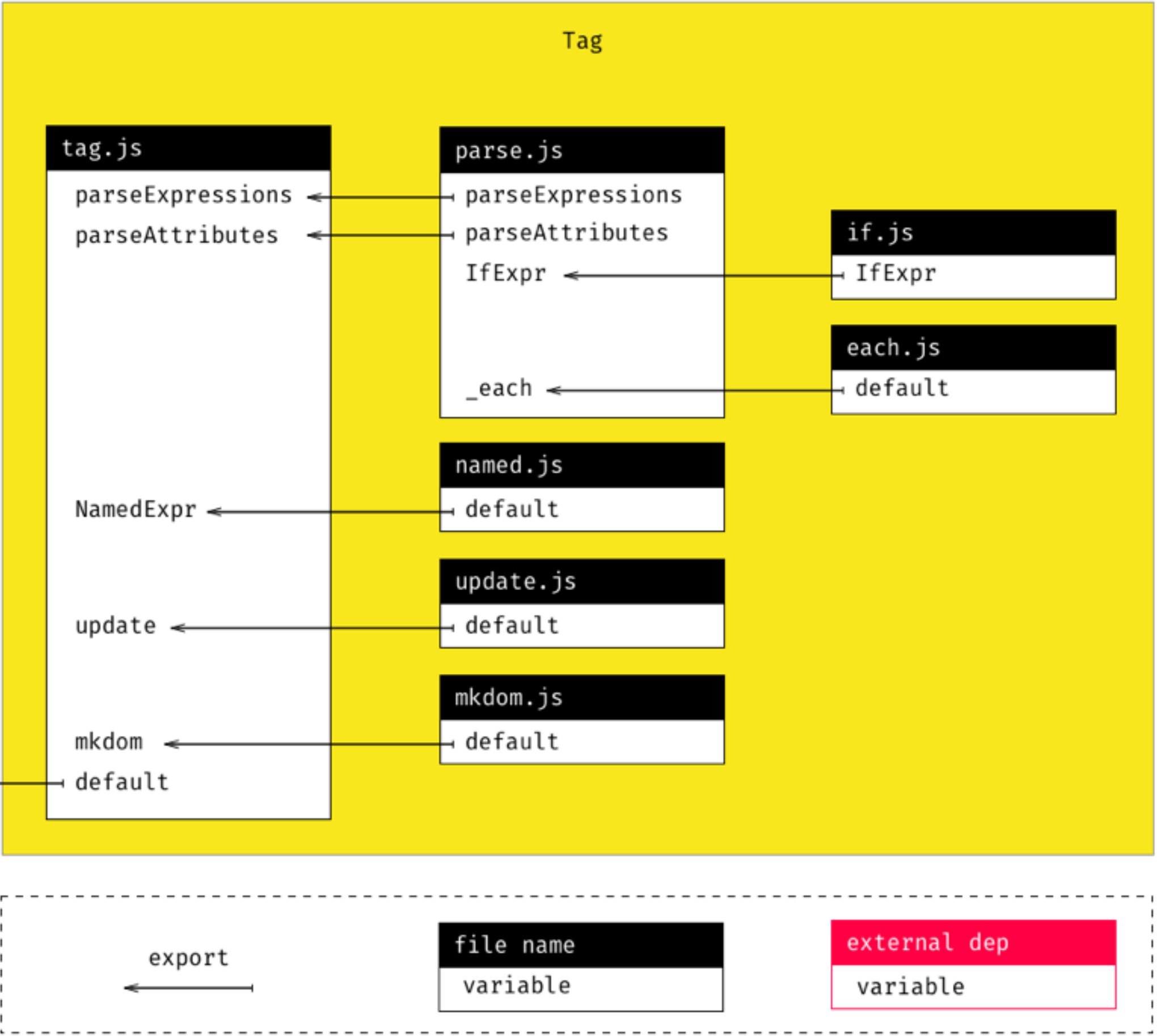
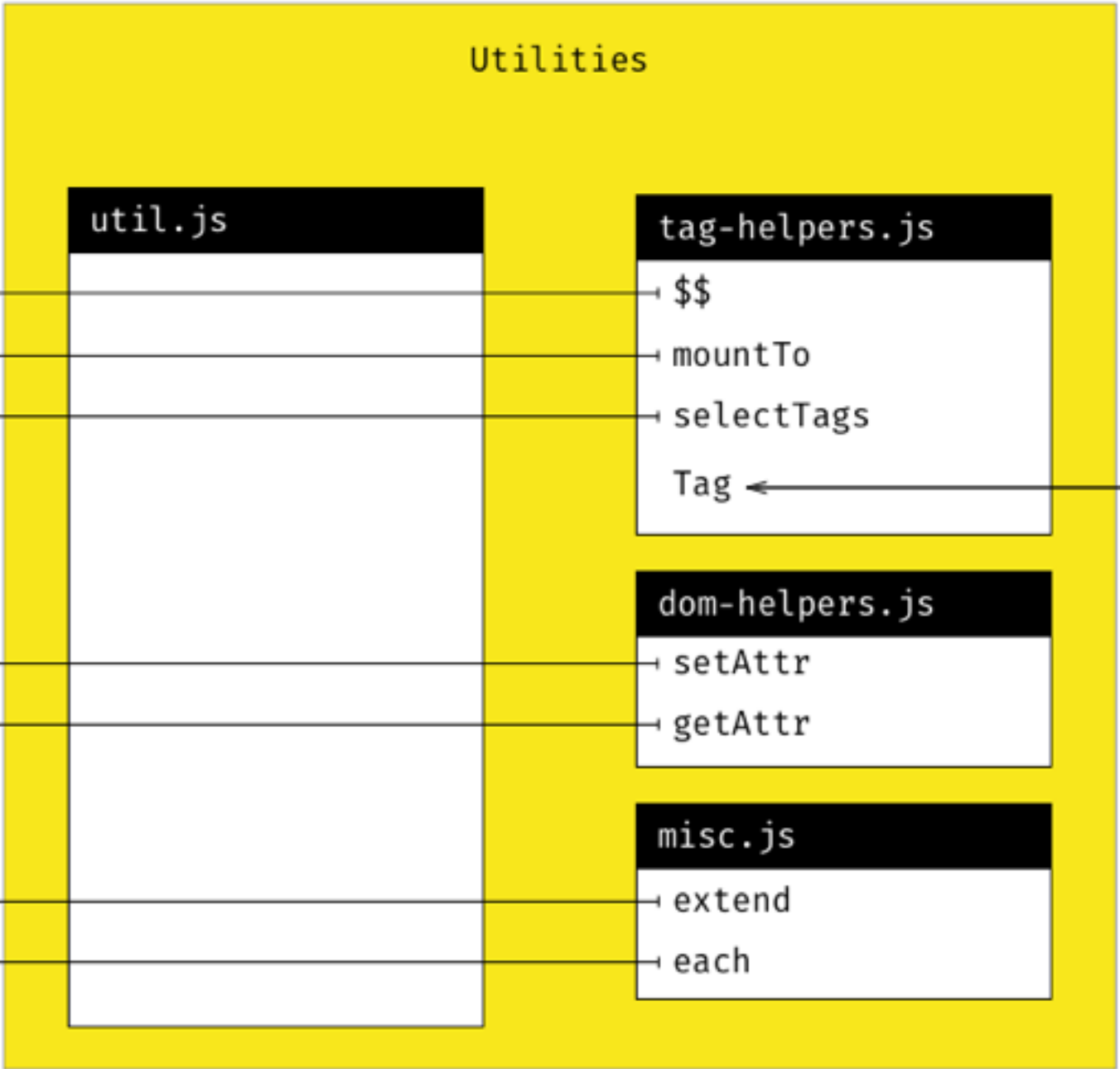
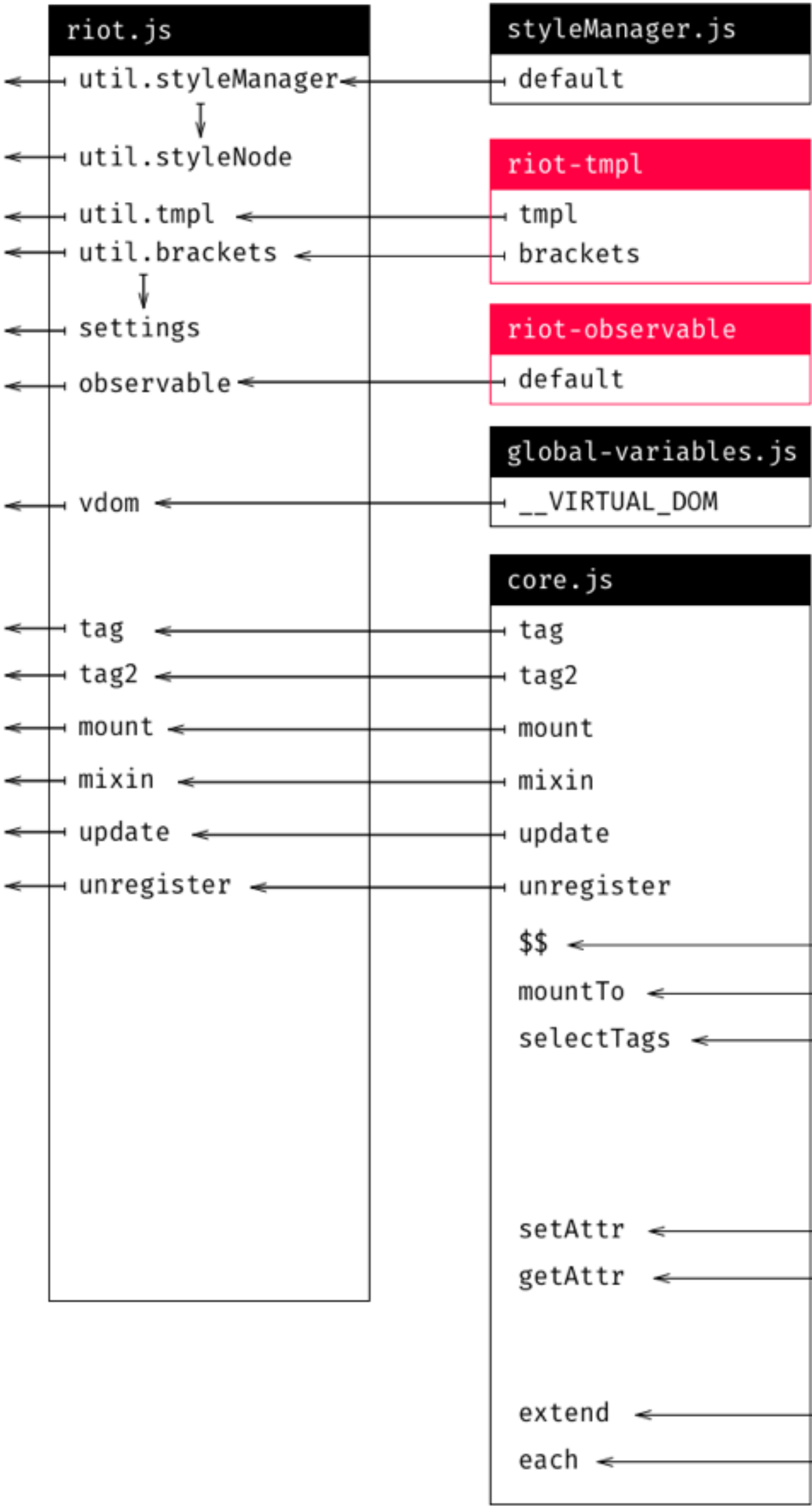
- ・ ビルドなどのタスク実行にはmakeを使う。
- ・ バンドラはRollup
- ・ ES6変換はBabel
- ・ observable, tpl, compilerは外部リポジトリ
※3.0から、riot-routeは含まれない
- ・ 用途別に複数のバージョンを用意

RIOT

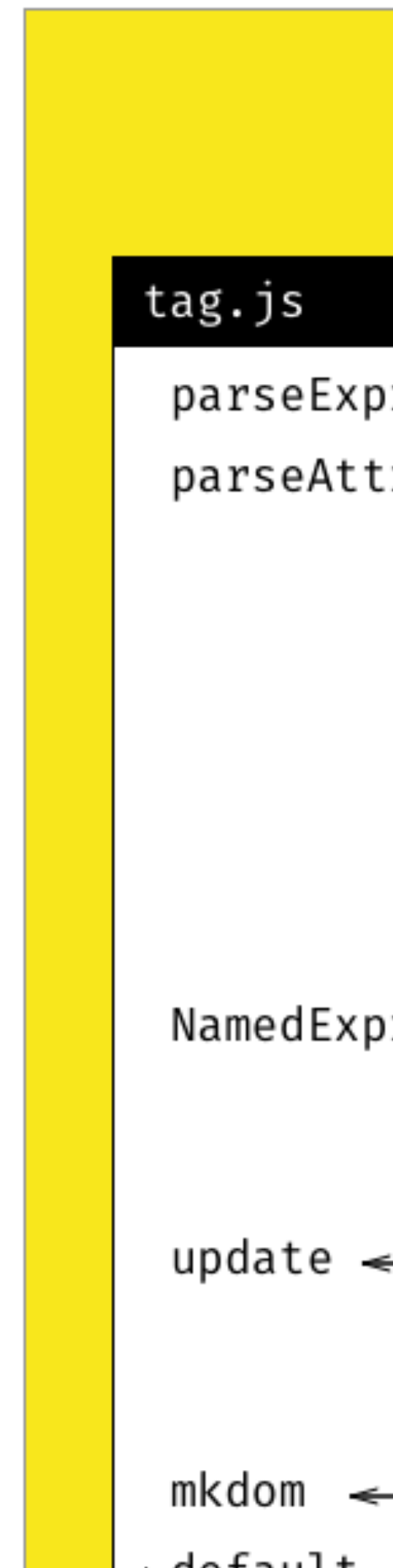
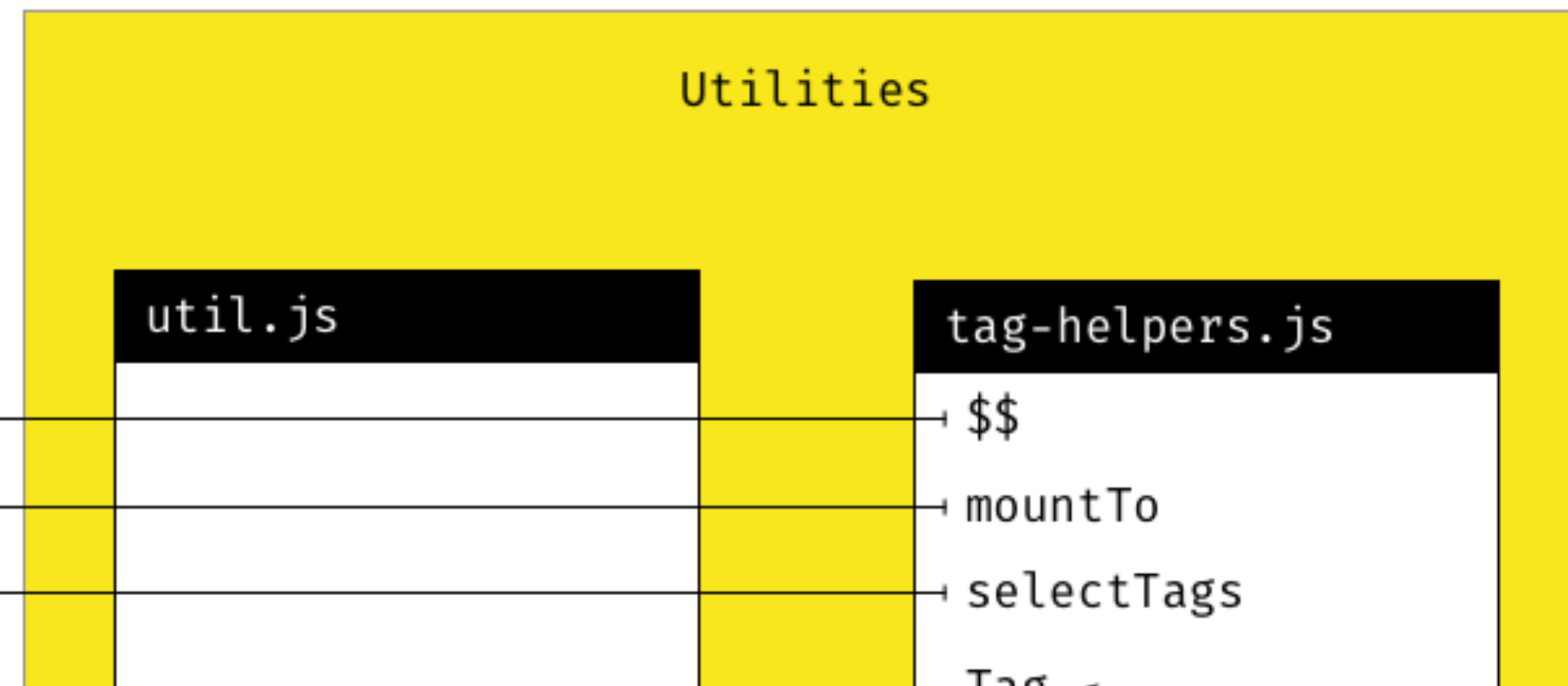
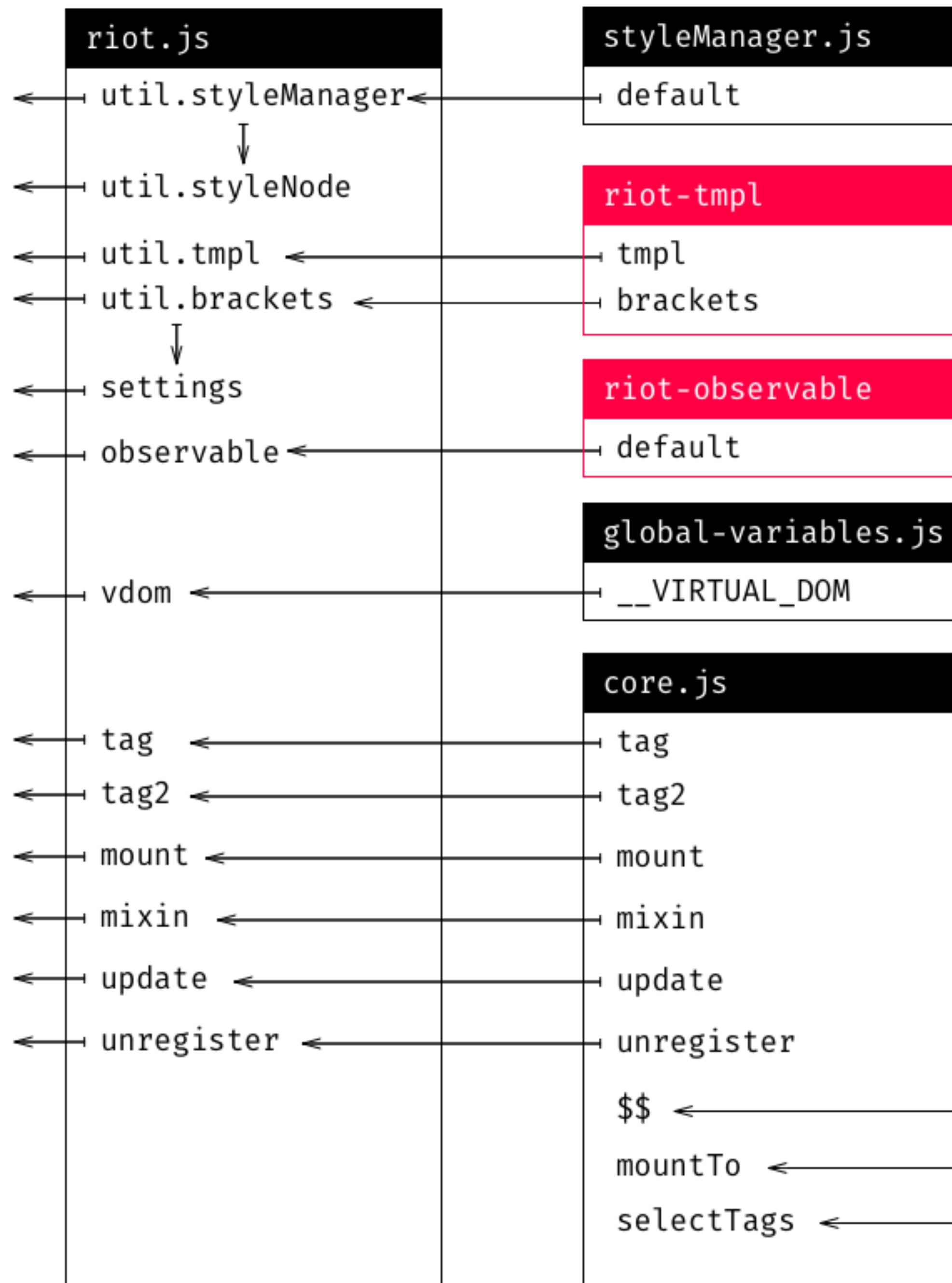
フォルダ構成

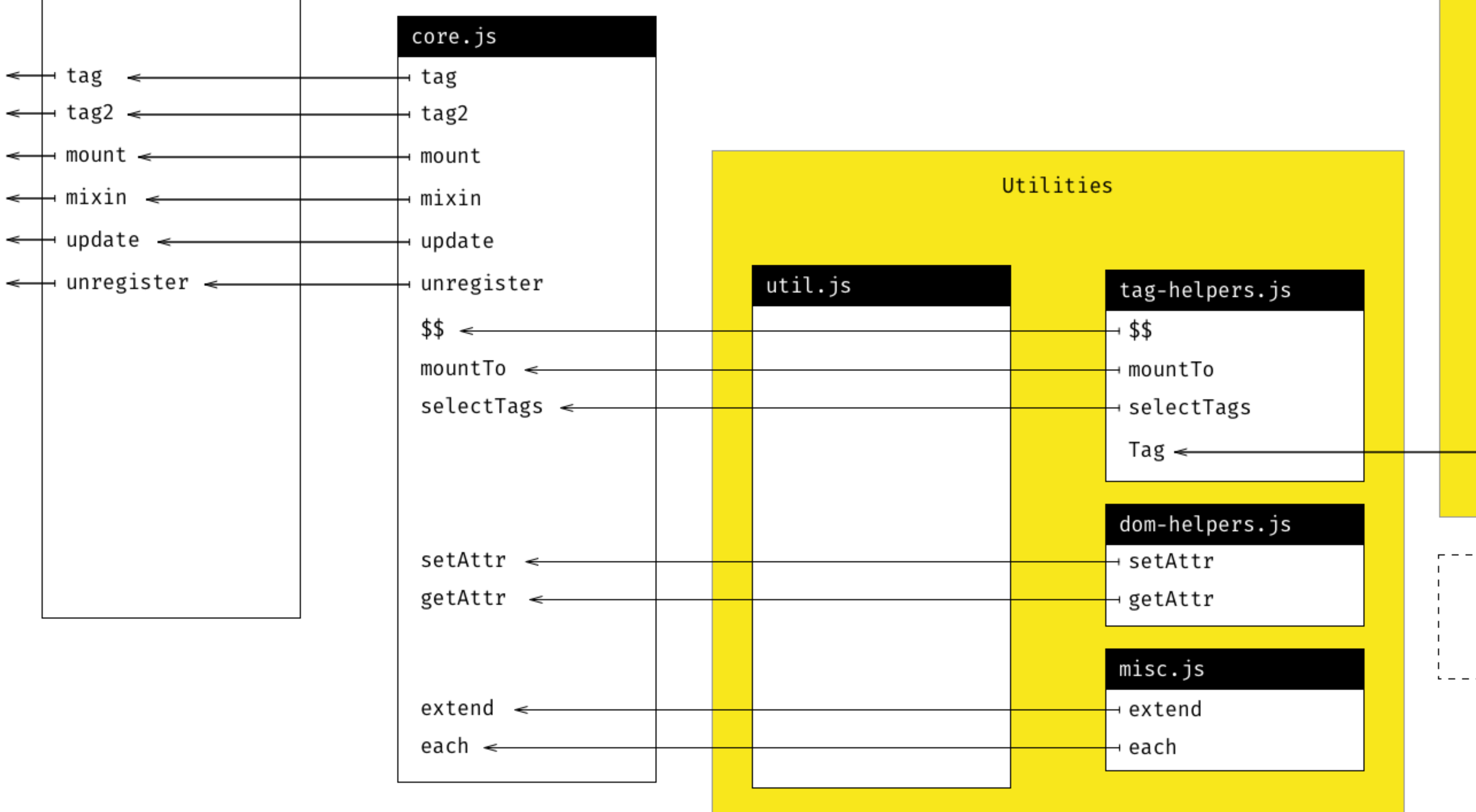
- ・ **公開API:** lib/riot.js
- ・ **Riotのコア部分:** lib/browser/tag/core.js
- ・ タグ/DOM操作の多くは**ユーティリティ関数**で:
 - ・ タグに関するもの: tag-helper.js
 - ・ DOMに関するもの: dom-helper.js
 - ・ その他: misc.js
- ・ **タグそのもの:** lib/browser/tag/tag.js
 - ・ DOMのパース (というよりはtraverse): parse.js
 - ・ 表現(expression): if.js, each.js, named.jsなど
 - ・ 更新: update.js
- ・ **定数:** global-variables.js

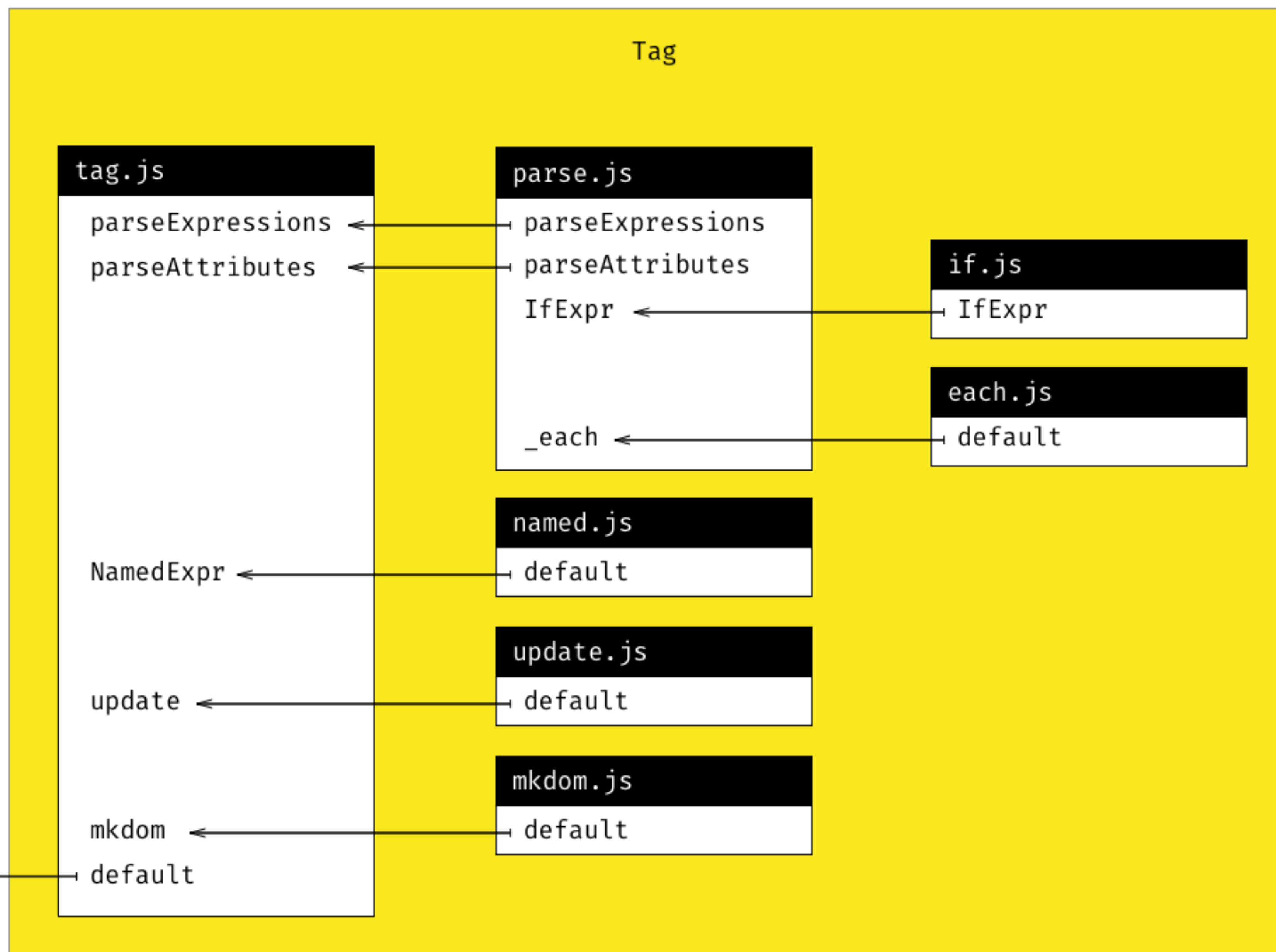
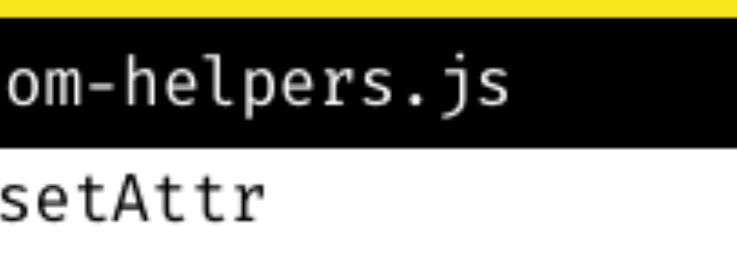
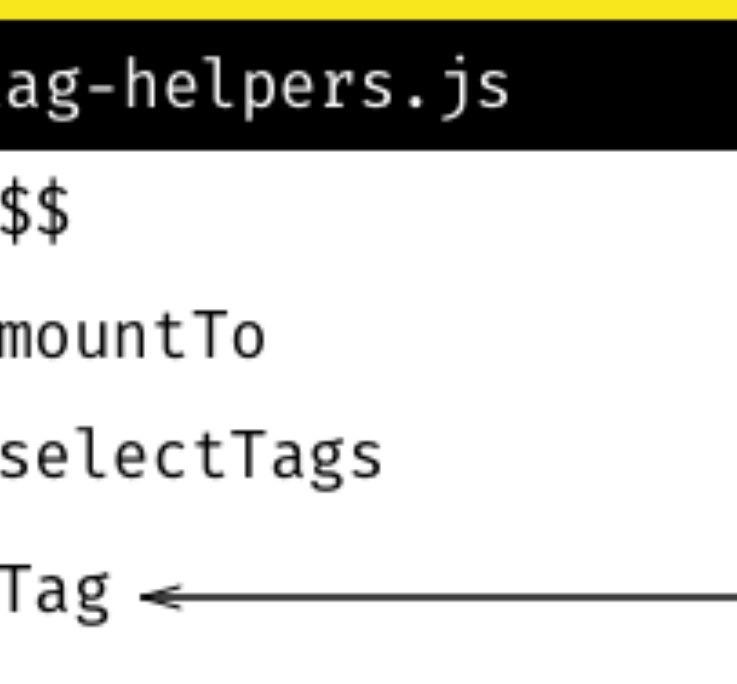
RIOT



Basic parts of **Riot.js 3.x**







マウントするまで

- ・ `riot.tag2()`関数で登録済みの、タグの実装を取得
- ・ タグをインスタンス化
- ・ タグの実装(HTMLテンプレート)をinnerHTMLに突っ込む
- ・ パースする、というよりDOMをトラバースして、解析
- ・ 与えられたデータで、タグの内容を更新
- ・ テンプレート変数(expression)を更新
- ・ マウント完了イベント

RIOT

```
<my-tag>
  <p>{ message }</p>
  <script>
    this.message = "Hello!"
  </script>
</my-tag>
```



```
riot.tag2('my-tag',
  '<p>{ message }</p>',
  function(opts) { this.message = "Hello!" }
)
```

```
riot.mount('#main', 'my-tag')
```

1

<p>
{ message }
</p>

2

<p>
Hello!
</p>

3

#main
<p>
Hello!
</p>

RIOT

```
core.js
function mount(selector, tagName, opts) {
  var tag = mountTo(root, riotTag
}
```

```
tag-helpers.js
function mountTo(root, tagName, opts) {
  var tag = new Tag(tag, conf, innerHTML)
  tag.mount(true)
}
```

```
tag.js
var expressions = [],
    dom = mkdom(impl.tmpl, innerHTML)

function tagMount(forceUpdate) {
  parseAttributes(root, root.attributes,
    parent, (attr, expr) => { ... })
  parseExpressions(dom, self, expressions, false)
  self.update(item)
  root.appendChild(frag)
}

function tagUpdate(data) {
  update(expressions, self)
}
```

```
update.js
function update(expressions, tag) {
  each(expressions, (expr, i) => {
    var value = tmpl(expr.expr, tag)
    if (isFunction(value))
      setEventHandler( ... )
    setAttr(dom, attrName, value)
  })
}
```

```
mkdom.js
function mkdom(templ, html) {
  var el = mkEl(GENERIC, isSVGTag(tagName))
  setInnerHTML(el, templ)
  return el
}
```

```
dom-helpers.js
function setInnerHTML(container, html) {
  container.innerHTML = html
}
```

```
parse.js
function parseAttributes(dom, attrs, tag, fn) {
  each(attrs, attr => {
    if (tmpl.hasExpr(attr.value)) {
      expr = { dom, expr: attr.value, attr: attr.name, bool }
    }
    fn(attr, expr)
  })
}

function parseExpressions(root, tag, expressions, includeRoot) {
  walkNodes(root, (dom, ctx) => {
    if (dom.nodeType === 3 && tmpl.hasExpr(dom.nodeValue)) {
      parent.children.push({dom: dom, expr: dom.nodeValue})
    }
    if (attr = getAttr(dom, 'each')) {
      parent.children.push(_each(dom, tag, attr)); return false
    }
    if (attr = getAttr(dom, 'if')) {
      parent.children.push(new IfExpr(dom, tag, attr)); return false
    }
    var tagImpl = getTag(dom)
    if (tagImpl) {
      parent.children.push(
        initChildTag(tagImpl, conf, dom.innerHTML, tag)
      ); return false
    }
    parseAttributes( ... )
    return {parent: parent}
  }, base)
}
```

```
each.js
function _each(dom, parent, expr) {
  /*
  A
  little
  bit
  complicated
  logics
  to
  make
  array
  of
  tags
  */
}
```

```
if.js
function IfExpr(dom, parentTag, expr) {
  if (newValue && !this.current) {
    this.stub.parentNode.insertBefore( ... )
  }
  else if (!newValue && this.current) {
    this.current.parentNode.removeChild( ... )
  }
}
```

The codes above shows only the most essential lines of them.
This explains the basic flow while mounting the tags in Riot.

Mounting tags in **Riot.js 3.x**

core.js

```
function mount(selector, tagName, opts) {  
  var tag = mountTo(root, riotTag  
}
```

tag-helpers.js

```
function mountTo(root, tagName, opts) {  
  var tag = new Tag(tag, conf, innerHTML)  
  tag.mount(true)  
}
```

tag.js

```
var expressions = [],  
    dom = mkdom(impl.tmpl, innerHTML)  
  
function tagMount(forceUpdate) {  
  parseAttributes(root, root.attributes,  
    parent, (attr, expr) => { ... })  
  parseExpressions(dom, self, expressions, false)  
  self.update(item)  
  root.appendChild(frag)  
}
```

mkdom.js

```
function mkdom(templ, html) {  
  var el = mkEl(GENERIC, isSVGTag(tag  
  setInnerHTML(el, templ)  
  return el  
}
```

parse.js

```
function parseAttributes(d  
  each(attrs, attr => {  
    if (templ.hasExpr(attr.  
      expr = { dom, expr:  
    }  
    fn(attr, expr)  
  })  
}  
  
function parseExpressions(  
  walkNodes(root, (dom, ct  
    if (dom.nodeType = 3  
      parent.children.push  
    }  
    if (attr = getAttr(dom  
      parent.children.push  
    }  
    if (attr = getAttr(dom  
      parent.children.push  
    }  
  }
```

helpers.js

```
function mountTo(root, tagName, opts) {  
  let tag = new Tag(tag, conf, innerHTML)  
  tag.mount(true)  
}
```

tag.js

```
var expressions = [],  
    dom = mkdom(impl.tmpl, innerHTML)  
  
function tagMount(forceUpdate) {  
  parseAttributes(root, root.attributes,  
    parent, (attr, expr) => { ... })  
  parseExpressions(dom, self, expressions, false)  
  self.update(item)  
  root.appendChild(frag)  
}  
  
function tagUpdate(data) {  
  update(expressions, self)  
}
```

update.js

```
function update(expressions, tag) {  
  each(expressions, (expr, i) => {  
    var value = tmpl(expr.expr, tag)  
    if (isFunction(value))  
      setEventHandler(...)  
    setAttr(dom, attrName, value)  
  })  
}
```

parse.js

```
function parseAttributes(dom, attrs, tag, fn) {  
  each(attrs, attr => {  
    if (tmpl.hasExpr(attr.value)) {  
      expr = { dom, expr: attr.value, attr: attr.name, bool }  
    }  
    fn(attr, expr)  
  })  
}  
  
function parseExpressions(root, tag, expressions, includeRoot) {  
  walkNodes(root, (dom, ctx) => {  
    if (dom.nodeType === 3 && tmpl.hasExpr(dom.nodeValue)) {  
      parent.children.push({dom: dom, expr: dom.nodeValue})  
    }  
    if (attr = getAttr(dom, 'each')) {  
      parent.children.push(_each(dom, tag, attr)); return false  
    }  
    if (attr = getAttr(dom, 'if')) {  
      parent.children.push(new IfExpr(dom, tag, attr)); return false  
    }  
    var tagImpl = getTag(dom)  
    if (tagImpl) {  
      parent.children.push(  
        initChildTag(tagImpl, conf, dom.innerHTML, tag)  
      ); return false  
    }  
    parseAttributes(...)  
    return {parent: parent}  
  }, base)  
}
```

each.js

```
function  
  /*  
  A  
  little  
  bit  
  complex  
  logic  
  to  
  make  
  array  
  of  
  tags  
  */  
}
```

if.js

```
function IfExpr  
  if (newValue)  
    this.stub.p  
  }  
  else if (!new  
    this.curren  
  }  
}
```

shows only the most essential lines of them.
basic flow while mounting the tags in Riot.

Mounting tag

暫く眺めてれば、大丈夫 😄

RIOT

詳しくはQiitaへ

2016年7月

2015年2月



プルリクエスト

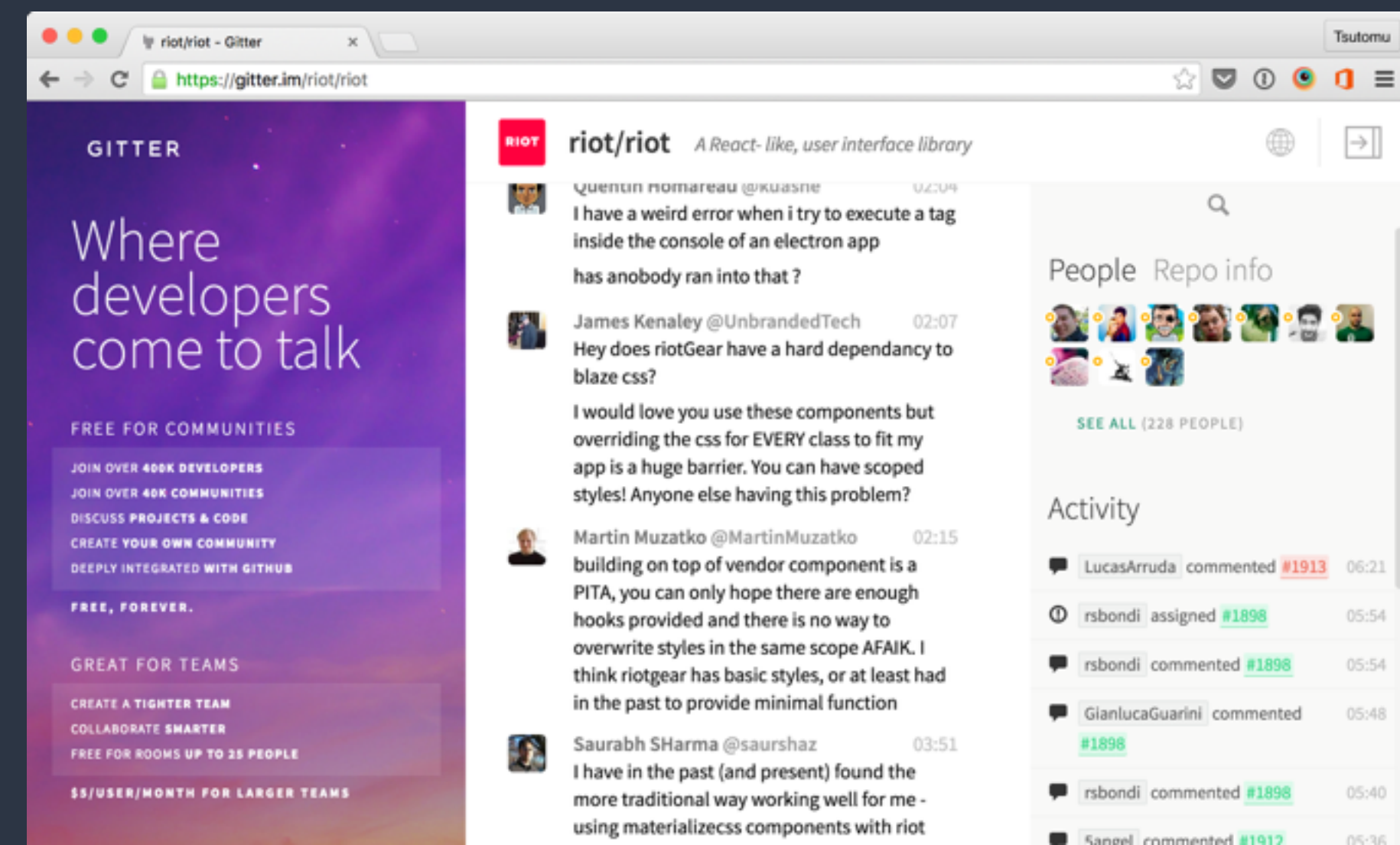
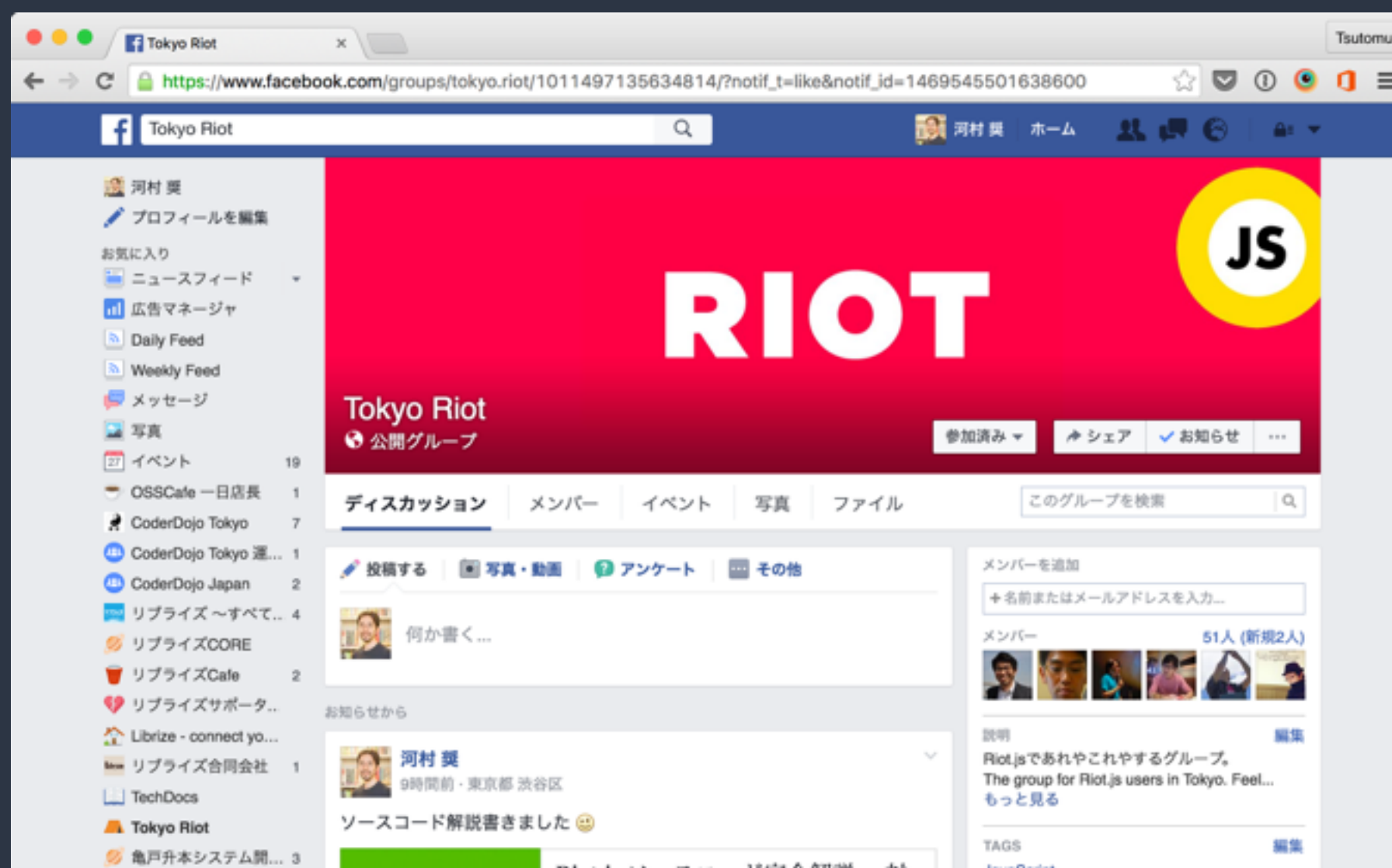
PRお待ちしております

RIOT

Thank you!

[fb.com/groups/tokyo.riot/](https://www.facebook.com/groups/tokyo.riot/)

gitter.im/riot/riot/



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