

BEM METHODOLOGY

WHO AM I?

ANDREW ROTA

Interactive Developer at Sapient Global Markets

- I build HTML5 / JavaScript web applications
- I was a philosophy major
- I'm an avid sea kayaker



WHAT IS BEM?



- Block
- Element
- Modifier

History

tl;dr: Developed by Yandex, Russia's largest search engine company, in 2006/2007 to bring structure to web pages.



DISORGANIZED

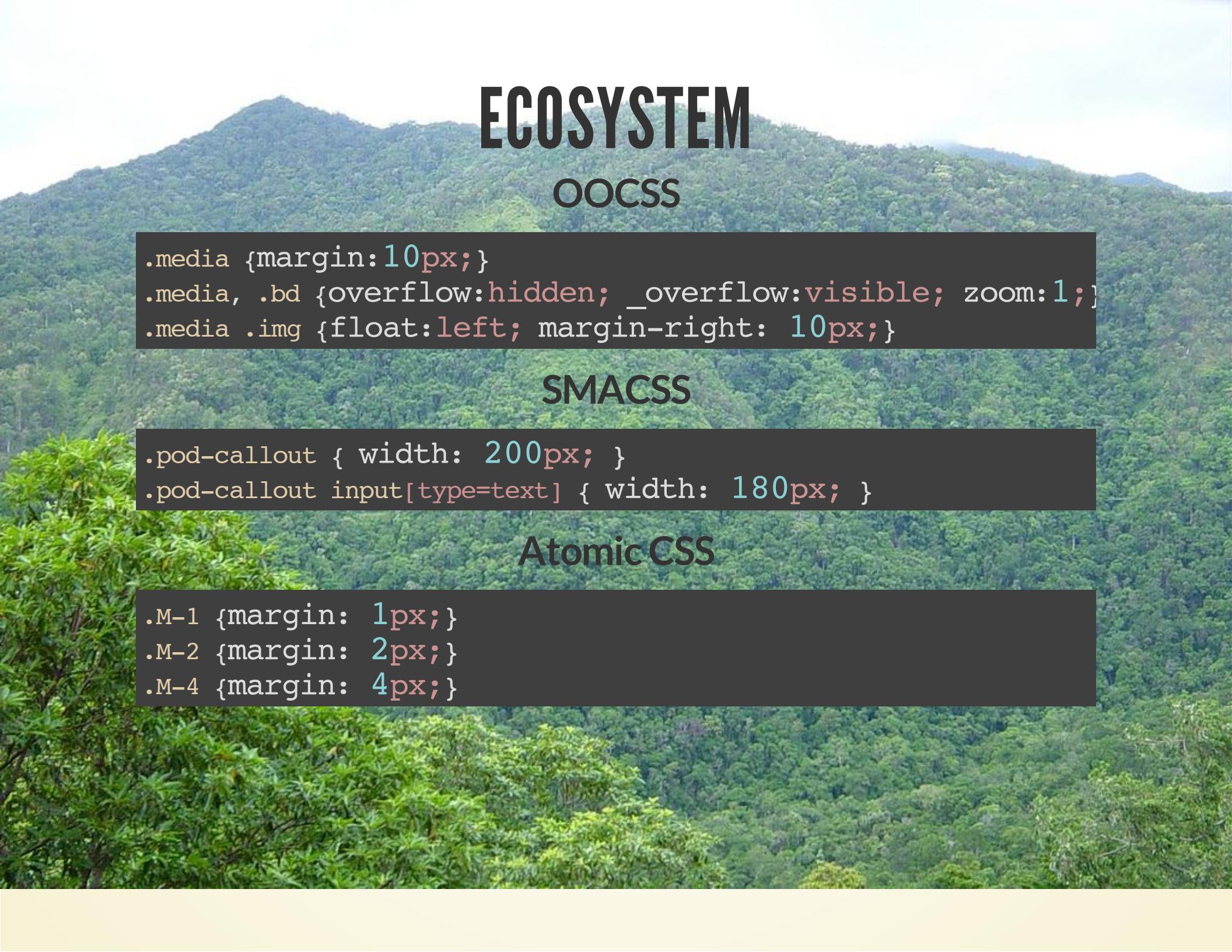
Image by Source: davidd (CC BY 2.0)

OVER SPECIFIC

```
#main .content > .widget .rdiv li a span span {  
    font-weight: bold !important;  
}
```

LOCATION DEPENDENT

Image by Source: Guma89 (CC BY-SA 3.0)



ECOSYSTEM

OOCSS

```
.media {margin:10px;}  
.media, .bd {overflow:hidden; _overflow:visible; zoom:1;}  
.media .img {float:left; margin-right: 10px;}
```

SMACSS

```
.pod-callout { width: 200px; }  
.pod-callout input[type=text] { width: 180px; }
```

Atomic CSS

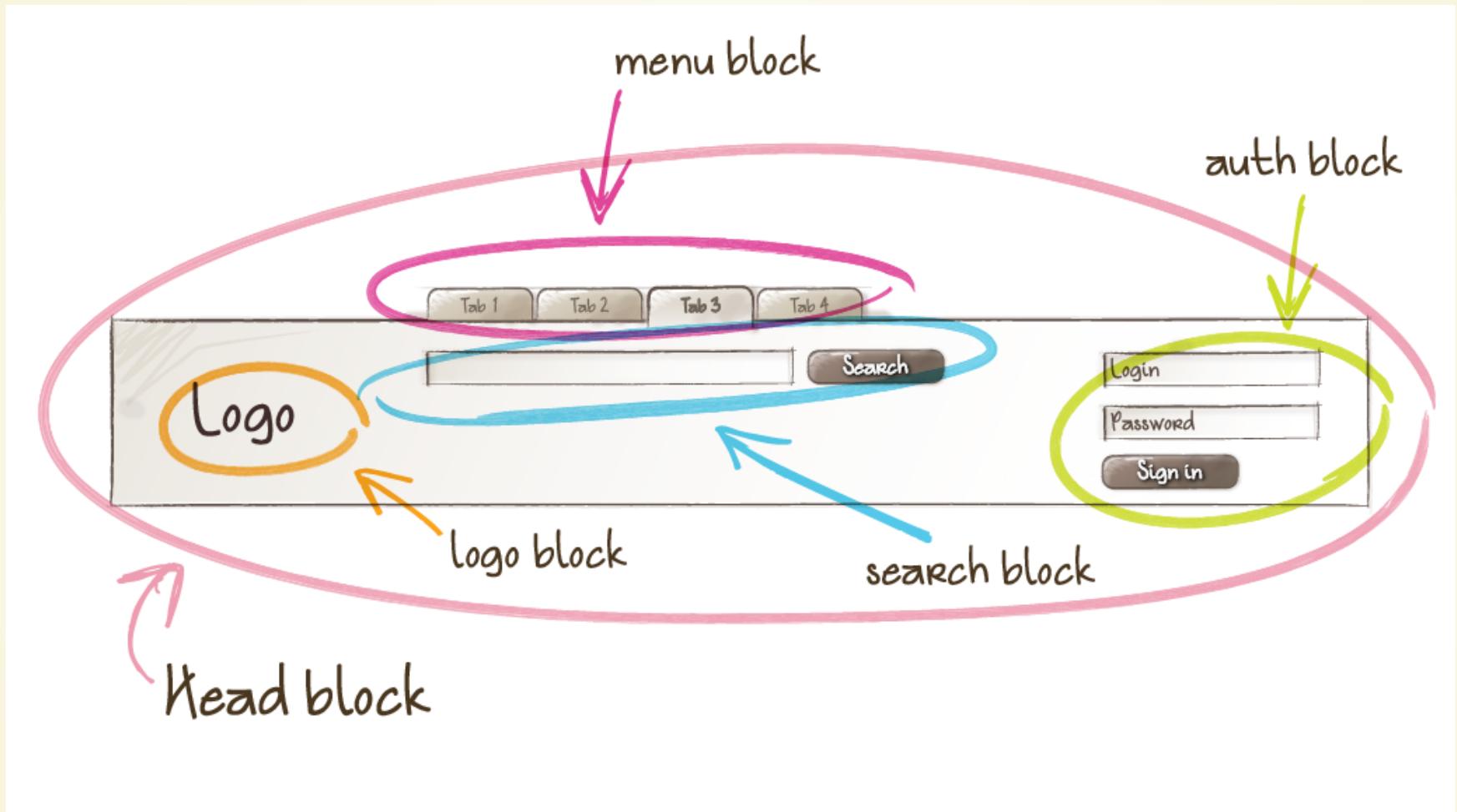
```
.M-1 {margin: 1px;}  
.M-2 {margin: 2px;}  
.M-4 {margin: 4px;}
```

BLOCK

block /blɒk/ n : A *block* is an independent entity, a "building block" of an application. A *block* can be either simple or compound (containing other blocks).

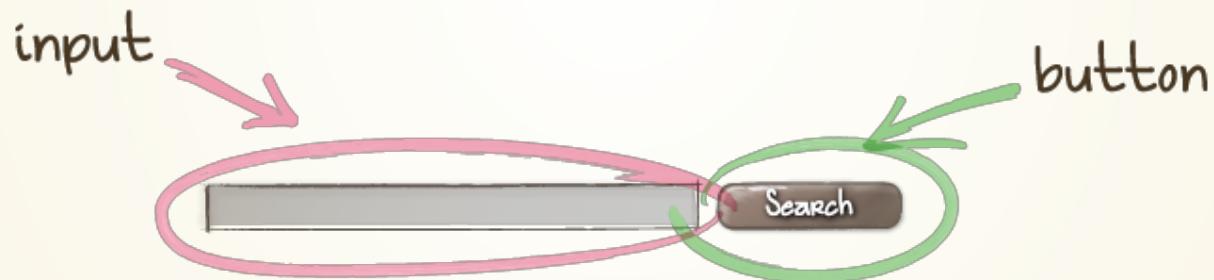
Source: [BEM](#)

BLOCKS



ELEMENT

e•l•e•m•ent /'eləmənt/ n : An element is a part of a block that performs a certain function. Elements are context-dependent: they only make sense in the context of the block they belong to.

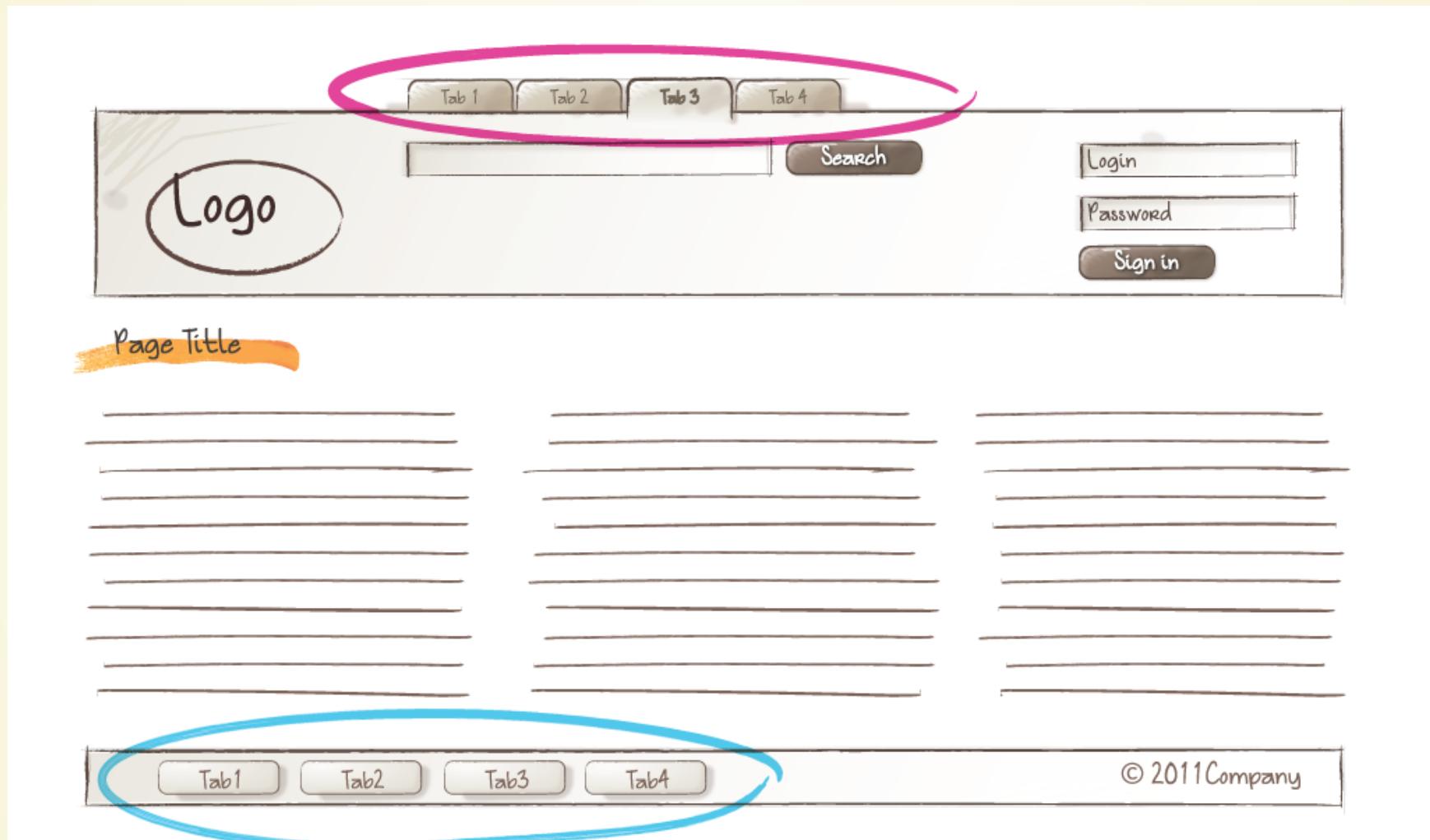


MODIFIER

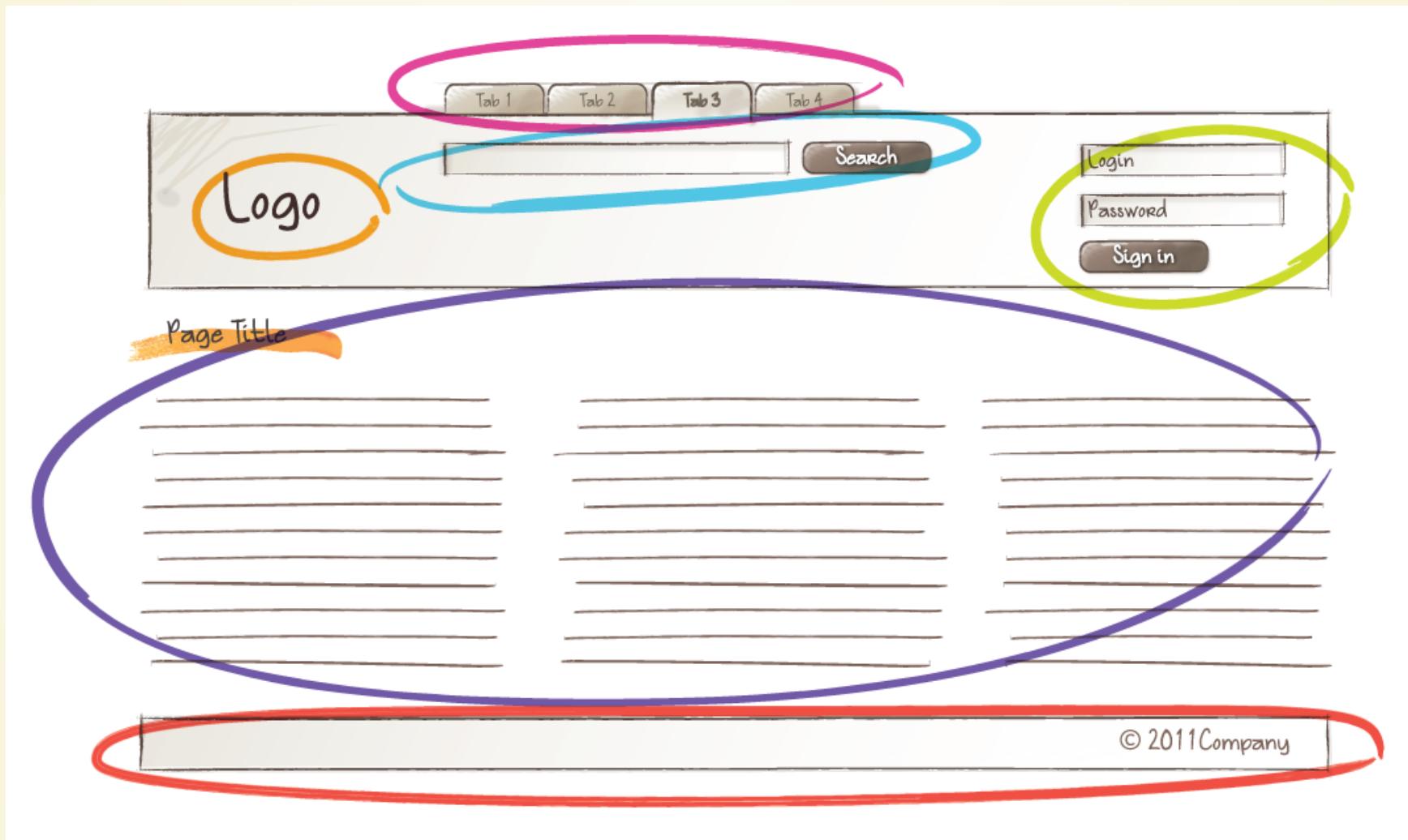
mod•i•fi•er /'mɒdə,faɪər/ n : A *modifier* is a property of a block or an element that alters its look or behavior.

Source: **BEM**

MODIFIERS



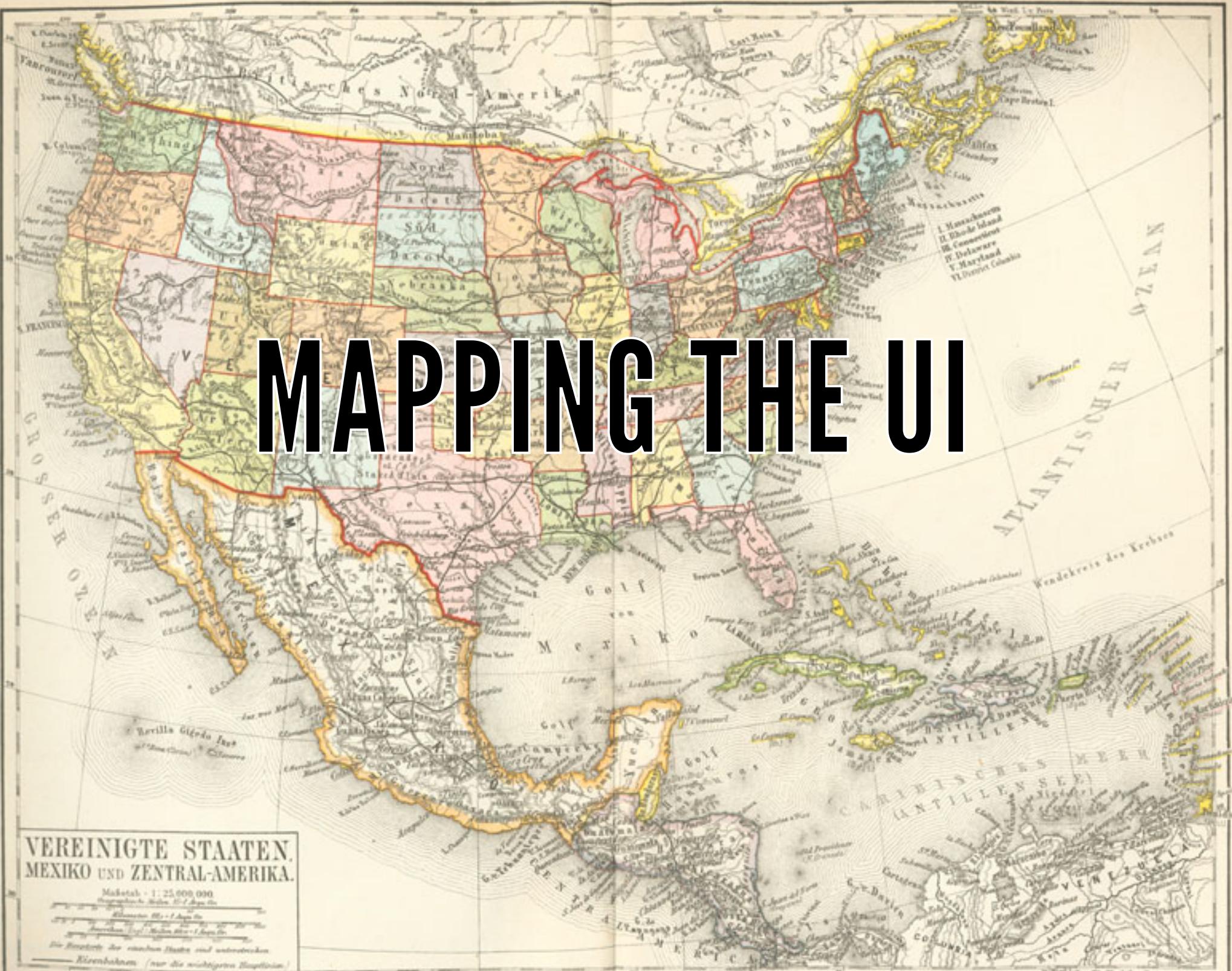
BACK TO BLOCKS



MAPPING THE UI

VEREINIGTE STAATEN,
MEXIKO UND ZENTRAL-AMERIKA.

Maßstab 1: 25.000.000
Geographische Breite 15° Abweichen
Klimatische Breite 15° Abweichen
Astronomische Breite 15° Abweichen
Die Grenzen der einzelnen Staaten und unterstehenden
Eisenbahnen (nur die wichtigsten Hauptlinien).



DEMO APP

A Web Page

http://

Search

Breaking World U.S. Business Politics Opinion Tech Sports

! Breaking: Fusce ut orci placerat, ultrices urna vitae. Ut magna at placerat.

Suspendisse tincidunt eget tristique

Vestibulum placerat ut magna at placerat. Curabitur dignissim, ipsum et tincidunt iaculis, ante mauris mattis sapien, id convallis lacus tellus et tortor. Mauris ultricies, libero sed posuere mattis, nunc magna molestie lectus. Read more...

Advertisement

TOP STORIES

Praesent eu nunc quis tellus adipiscing lacinia vitae a neque.

Fusce consectetur est quis ipsum dignissim ullamcorper.

Morbi id magna id tellus vestibulum rhoncus.

Integer sed quam a turpis egestas elementum id quis magna.

Markets

Mkt	Price	Change	%Change
Nasdaq	380112	-21	0.59%
Dow	15259.23	+2.5	0.01%

Comments

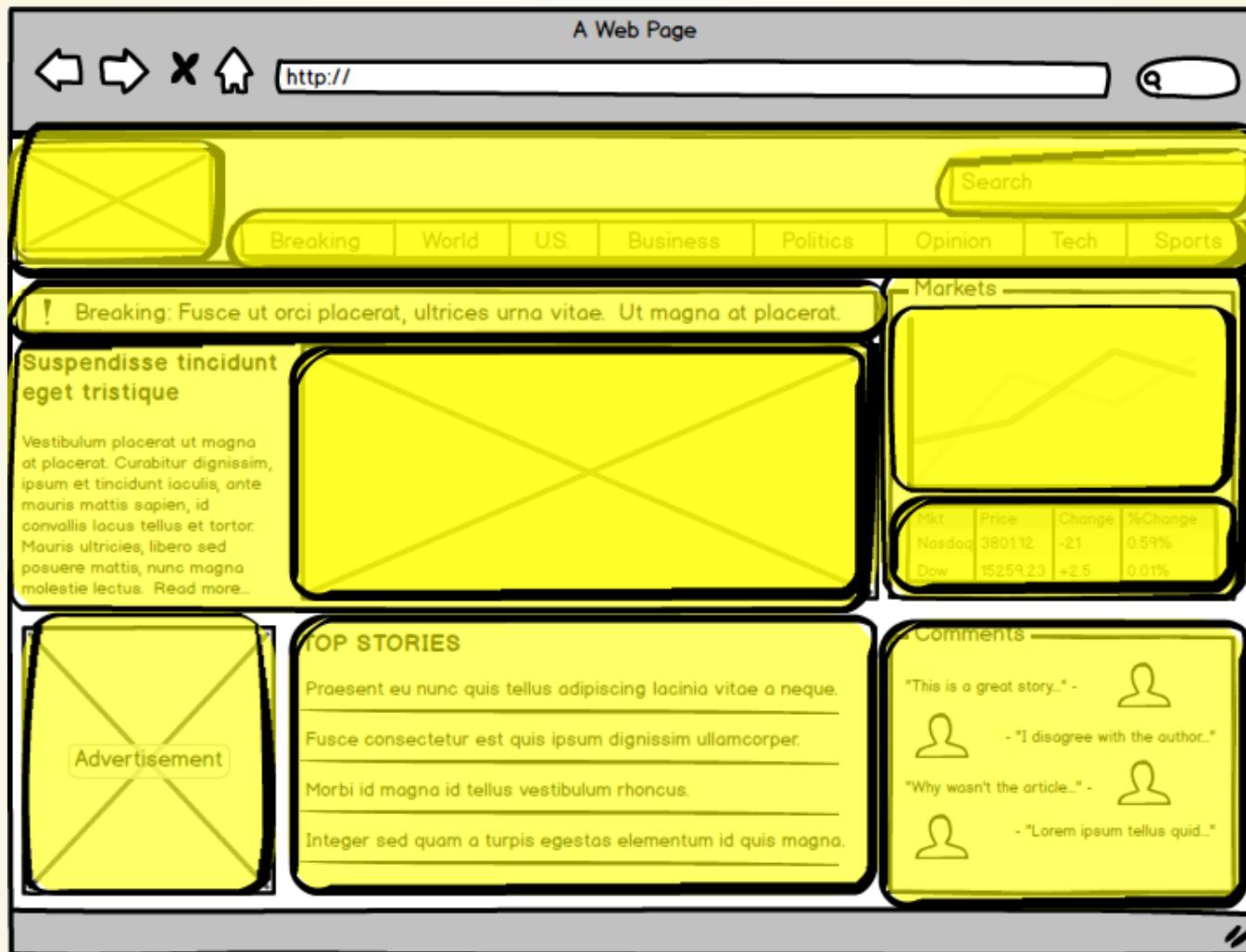
"This is a great story..." -

- "I disagree with the author..."

"Why wasn't the article..." -

- "Lorem ipsum tellus quid..."

DEMO APP



CSS PRINCIPLES

- Avoid descendent or other cascading selectors
- Element selectors must not be used
- ~~CSS ID~~ selectors must not be used

WRITING BLOCKS

```
<nav>
  <ul>
    <li><a href="#">Breaking</a></li>
    <li><a href="#">World</a></li>
    <li><a href="#">U.S.</a></li>
    <li><a href="#">Business</a></li>
    <li><a href="#">Politics</a></li>
    <li><a href="#">Entertainment</a></li>
    <li><a href="#">Technology</a></li>
    <li><a href="#">Sports</a></li>
  </ul>
</nav>
```

WRITING BLOCKS

```
<nav class="nav-menu">
  <ul>
    <li><a href="#">Breaking</a></li>
    <li><a href="#">World</a></li>
    <li><a href="#">U.S.</a></li>
    <li><a href="#">Business</a></li>
    <li><a href="#">Politics</a></li>
    <li><a href="#">Entertainment</a></li>
    <li><a href="#">Technology</a></li>
    <li><a href="#">Sports</a></li>
  </ul>
</nav>
```

WRITING BLOCKS

```
<nav class="nav-menu">
  <ul class="nav-menu--items">
    <li class="nav-menu--item"><a href="#">Breaking</a></li>
    <li class="nav-menu--item"><a href="#">World</a></li>
    <li class="nav-menu--item"><a href="#">U.S.</a></li>
    <li class="nav-menu--item"><a href="#">Business</a></li>
    <li class="nav-menu--item"><a href="#">Politics</a></li>
    <li class="nav-menu--item"><a href="#">Entertainment</a></li>
    <li class="nav-menu--item"><a href="#">Technology</a></li>
    <li class="nav-menu--item"><a href="#">Sports</a></li>
  </ul>
</nav>
```

WRITING BLOCKS

```
.nav-menu {  
    display: block;  
    margin: 0;  
    padding: 0;  
    width: 100%;  
    float: right;  
}  
  
.nav-menu--items {  
    margin: 0;  
    padding: 0;  
}  
  
.nav-menu--item {  
    float: left;  
    list-style-type: none;  
    margin-left: 0.5%;  
    text-align: center;
```

DEFINE MODIFIERS

```
.nav-menu--item__simple {  
  @extend .nav-menu;  
  display: inline;  
  float: none;  
  & > a {  
    line-height: 1;  
    text-decoration: none;  
  }  
  &:after {  
    content: " | ";  
  }  
  &:last-child:after {  
    content: "";  
  }  
}
```

BUILDING YOUR APPLICATION

```
└── blocks
    ├── navMenu
    │   ├── navMenu.css
    │   └── navMenuItem.css
    ├── logo
    │   └── logo.css
    ├── header
    │   └── header.css
    └── search
        ├── search.css
        └── search_autocomplete.css
```

DISADVANTAGES

- Repitive code
- Ugly
- Fighting the platform?
- Classitis

ADVANTAGE: NAMING

```
.my-component-name__title
```

VS

```
.my-component .title
```

ORGANIZATION

Image by Stewart (CC BY 2.0)

ADVANTAGE: PROGRAMMATIC CONTROL

```
block('navMenu').elem('item').click(...);  
block('navMenu').elem('item').setModifier('current');
```

Reference: [BEM](#)

ADVANTAGE: SHARED UI LANGUAGE

There are only two hard things in Computer Science: cache invalidation and naming things.

PREPROCESSORS: LESS

```
.block_name {  
  &__element {  
    color: #f00;  
    &--modifier {  
      font-weight: bold;  
    }  
  }  
}
```

Produces

```
.block_name__element {  
  color: #f00;  
}  
.block_name__element--modifier {  
  font-weight: bold;  
}
```

PREPROCESSORS: SASS

```
$b: ".block_name";  
  
#${$b}__element {  
    color: #f00;  
}  
  
#${$b}__element--modifier {  
    font-weight: bold;  
}
```

Produces

```
.block_name__element {  
    color: #f00;  
}  
.block_name__element--modifier {  
    font-weight: bold;  
}
```

PREPROCESSORS: STYLUS

```
.block_name
  &__element
    color: #f00
    &--modifier
      font-weight: bold
```

Produces

```
.block_name__element {
  color: #f00;
}
.block_name__element--modifier {
  font-weight: bold;
}
```

TOOLS AND FRAMEWORKS: BEMHTML

```
{  
  block: 'navigation',  
  content: [  
    {  
      elem: 'item',  
      content: 'News'  
    }  
  ]  
}
```

TOOLS AND FRAMEWORKS: CSSO

```
.primary-navigation {  
    font-size: 12px;  
    color: red;  
    font-weight: bold;  
}  
  
.secondary-navigation {  
    color: red;  
    font-weight: bold;  
}
```

To...

```
.primary-navigation{  
    font-size:12px  
}  
.primary-navigation, .secondary-navigation{  
    color:red;  
    font-weight:bold  
}
```

TOOLS AND FRAMEWORKS: EMMET

Rather than writing

```
ul.primary-navigation>li.primary-navigation__item*5
```

Instead write:

```
ul.primary-navigation>li.-item*5 | bem
```

Results in:

```
<ul class="primary-navigation">
  <li class="primary-navigation__item"></li>
  <li class="primary-navigation__item"></li>
  <li class="primary-navigation__item"></li>
  <li class="primary-navigation__item"></li>
  <li class="primary-navigation__item"></li>
</ul>
```

TOOLS AND FRAMEWORKS: INUIT.CSS

Example:

```
.pagination {  
    text-align:center;  
    letter-spacing:-0.31em;  
    word-spacing:-0.43em;  
}  
[...]  
.pagination__first a:before {  
    content:"\00AB" "\00A0";  
}  
.pagination__last a:after {  
    content:"\00A0" "\00BB";  
}
```

THE FUTURE (?)

mm / dd / yyyy

Image by Sam Howzit (CC BY 2.0)