



# DRUPALCON VIENNA

CSS-in-JS: unexpected lessons for  
Drupal component design

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[amazeelabs.com](http://amazeelabs.com)

# The “CSS-in-JS” Session Disclaimer

- Lots of JS examples: Don't panic.
- This is a beginners' session.
- I will go fast, but there are lots of URLs.
- No funny Morten slides.



# Building Components in Drupal



# CSS-in-JS

# CSS-and-HTML-in-JS

# CSS-and-HTML-and-JS-in-PHP

#CSSHTMLJSinPHP



## A typical JavaScript developer



## A typical CSS developer





# 1st generation of CSS-in-JS

```
const buttonStyles = {  
  backgroundColor: "#990101",  
  color: "black",  
  border: "1px solid black",  
  borderRadius: "5px",  
};  
  
return <a styles={buttonStyles}>Bye!</a>;
```





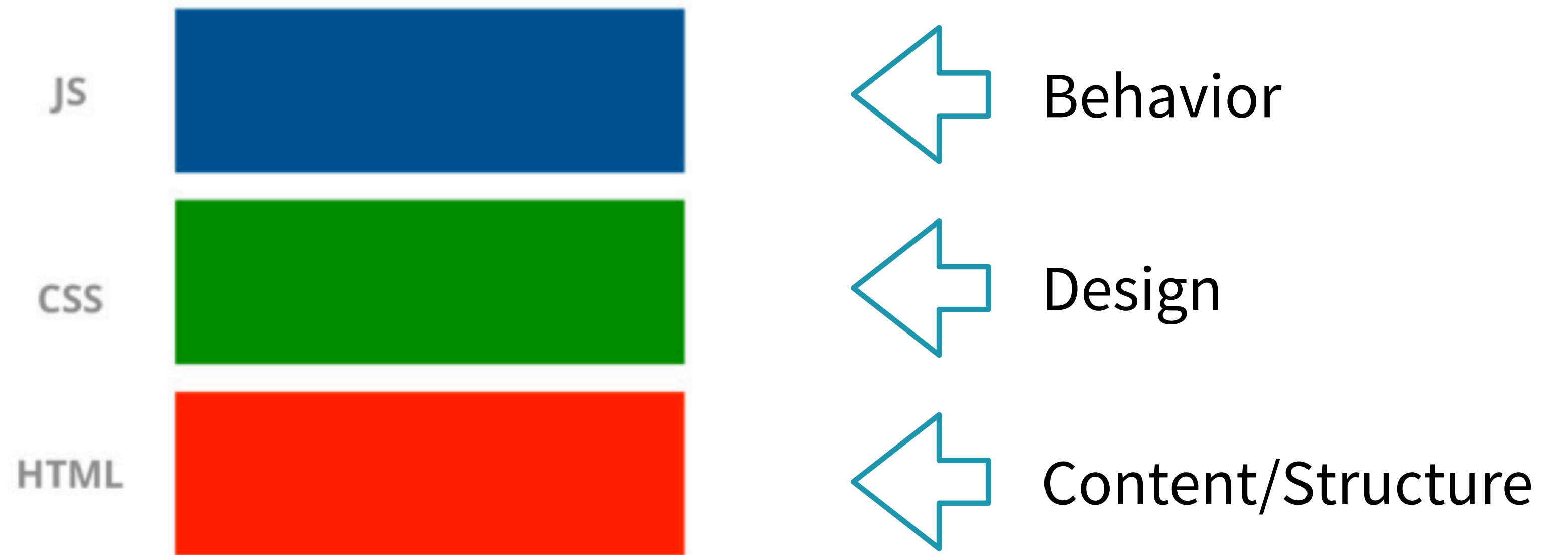
# 1st generation of CSS-in-JS

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const buttonStyles = {  
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};  
  
return <a styles={buttonStyles}>Bye!</a>;
```



# First Lesson Learned

## Separation of Concerns

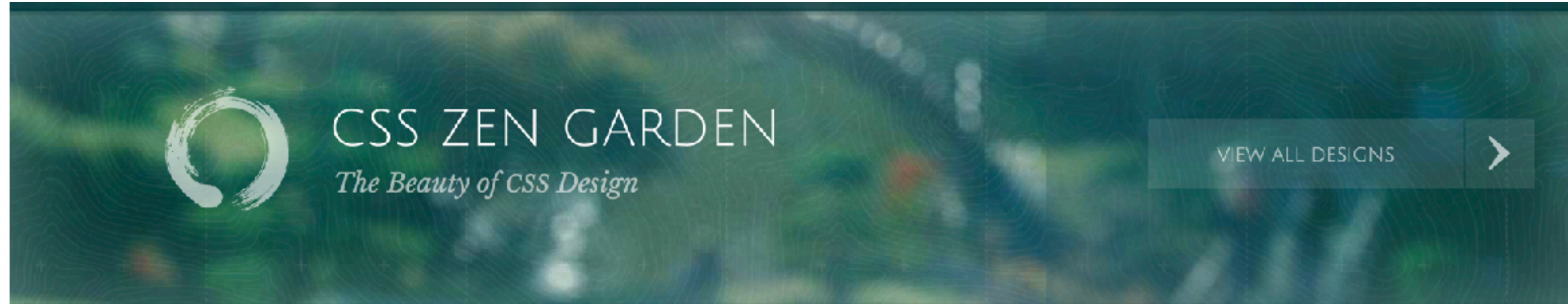


**Kudos to Cristiano Rastelli**

<https://speakerdeck.com/didoo/let-there-be-peace-on-css?slide=58>



# CSS Zen Garden



A demonstration of what can be accomplished through CSS-based design. Select any style sheet from the list to load it into this page.

Download the example [HTML FILE](#) and [CSS FILE](#)

## THE ROAD TO ENLIGHTENMENT

Littering a dark and dreary road lay the past relics of browser-specific tags, incompatible DOMs, broken CSS support, and abandoned browsers.

We must clear the mind of the past. Web enlightenment has been achieved thanks to the tireless efforts of folk like the W3C, WASP, and the major browser creators.

The CSS Zen Garden invites you to relax and meditate on the important lessons of the masters. Begin to see with clarity. Learn to use the time-honored techniques in new and invigorating fashion. Become one with the web.

## SO WHAT IS THIS ABOUT?

MID CENTURY MODERN

*by* Andrew Lohman

GARMENTS

*by* Dan Mall

STEEL

*by* Steffen Knoeller

APOTHECARY

*by* Trent Walton

SCREEN FILLER

*by* Elliot Jay Stocks

FOUNTAIN KISS



# CSS class name "Semantics"

**Content semantics**

vs.

**Design semantics**

```
<a class="article-link"  
href="#">Content</a>
```

```
<a class="green-button"  
href="#">Design</a>
```

*what it is*

*what it looks like*



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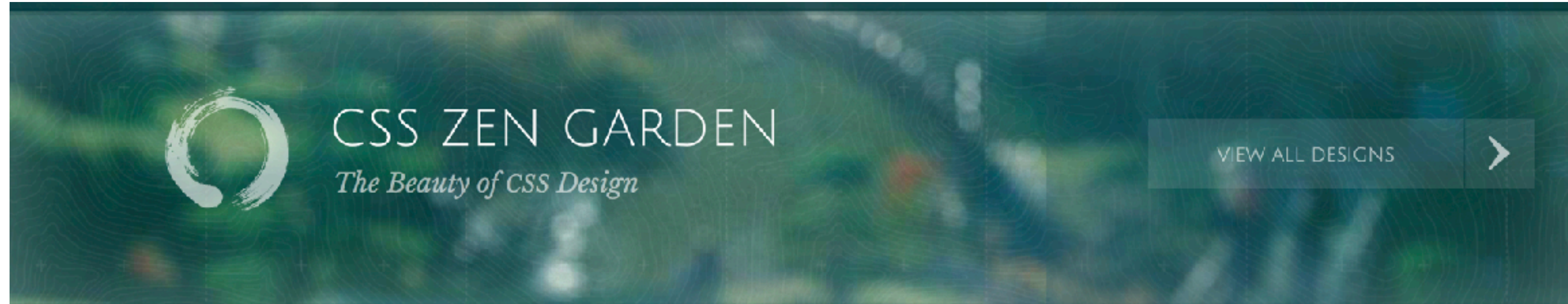
## SO WHAT IS THIS ABOUT?

There is a compelling need to show the beauty of CSS

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <!-- View source is a feature, not a bug. Thanks for your curiosity and interest in participating! Here are the submission
    guidelines for the new and improved csszengarden.com: - CSS3? Of course! Prefix for ALL browsers where necessary. - go
    responsive; test your layout at multiple screen sizes. - your browser testing baseline: IE9+, recent Chrome/Firefox/Safari,
    and iOS/Android - Graceful degradation is acceptable, and in fact highly encouraged. - use classes for styling. Don't use ids.
    - web fonts are cool, just make sure you have a license to share the files. Hosted services that are applied via the CSS file
    (ie. Google Fonts) will work fine, but most that require custom HTML won't. TypeKit is supported, see the readme on this page
    for usage instructions: https://github.com/mezzoblue/csszengarden.com/ And a few tips on building your CSS file: - use :first-
    child, :last-child and :nth-child to get at non-classed elements - use ::before and ::after to create pseudo-elements for
    extra styling - use multiple background images to apply as many as you need to any element - use the Kellum Method for image
    replacement, if still needed. https://goo.gl/GXxdl - don't rely on the extra divs at the bottom. Use ::before and ::after
    instead. -->
  </head>
  <body id="css-zen-garden">
    <div class="page-wrapper">
      <section class="intro" id="zen-intro">
        <header role="banner">
          <h1>
            ::before
            "CSS Zen Garden"
          </h1>
          <h2>
            ::before
            "The Beauty of "
            <abbr title="Cascading Style Sheets">CSS</abbr>
            " Design"
          </h2>
        </header>
        <div class="summary" id="zen-summary" role="article">
          <p>
            "A demonstration of what can be accomplished through "
            <abbr title="Cascading Style Sheets">CSS</abbr>
            "-based design. Select any style sheet from the list to load it into this page."
          </p>
          <p></p>
        </div>
        <div class="preamble" id="zen-preamble" role="article"></div>
        </section>
        <div class="main supporting" id="zen-supporting" role="main"></div>
        <aside class="sidebar" role="complementary"></aside>
        <!-- These superfluous divs/spans were originally provided as catch-alls to add extra imagery. These days we have full
        ::before and ::after support, favour using those instead. These only remain for historical design compatibility. They might
        go away one day. -->
        <div class="extra1" role="presentation"></div>
        <div class="extra2" role="presentation"></div>
        <div class="extra3" role="presentation"></div>
        <div class="extra4" role="presentation"></div>
        <div class="extra5" role="presentation"></div>
        <div class="extra6" role="presentation"></div>
      </body>
    </html>
```



# CSS Zen Garden



A demonstration of what can be accomplished through CSS-based design. Select any style sheet from the list to load it into this page.

Download the example [HTML FILE](#) and [CSS FILE](#)

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FOUNTAIN KISS





# CSS Zen Garden



# CSS Zen Garden

**CSS ZEN GARDEN PRESENTS** A DEMONSTRATION OF WHAT CAN BE ACCOMPLISHED VISUALLY THROUGH CSS-BASED DESIGN. SELECT ANY STYLE SHEET FROM THE LIST TO LOAD IT INTO THIS PAGE.

DOWNLOAD THE EXAMPLE HTML FILE AND CSS FILE

**STARRING**  
IN ORDER OF APPEARANCE

- MID CENTURY MODERN  
by **ANDREW LOHMAN**
- GARMENTS  
by **DAN MALL**
- STEEL  
by **STEFFEN KNOELLER**
- APOTHECARY  
by **TRENT WALTON**
- SCREEN FILM  
by **ELLIOT JAY STOCKS**
- FOUNTAIN KISS  
by **JEREMY CARLSON**
- A ROBOT NAMED JIMMY  
by **MELTMEDIA**
- VERDE MODERNA  
by **DAVE SHEA**

**INVASION OF THE BODY SWITCHERS**  
THE ROAD TO ENLIGHTENMENT

THE CSS ZEN GARDEN INVITES YOU TO RELAX AND MEDITATE ON THE IMPORTANT LESSONS OF THE MASTERS. BEGIN TO SEE WITH CLARITY. LEARN TO USE THE TIME-HONORED TECHNIQUES IN NEW AND INVIGORATING FASHION. BECOME ONE WITH THE WEB.

**ARCHIVES**  
NEXT DESIGNS >  
VIEW ALL DESIGNS

**PRODUCTION**  
VIEW THIS DESIGN'S CSS  
CSS RESOURCES  
FAQ  
SUBMIT A DESIGN

**SO WHAT IS THIS ABOUT?**  
THE ZEN GARDEN AIMS TO EXCITE, INSPIRE, AND ENCOURAGE PARTICIPATION. VIEW SOME OF THE EXISTING DESIGNS IN THE LIST!

CSS ALLOWS COMPLETE AND TOTAL CONTROL OVER THE STYLE OF A HYPERTEXT DOCUMENT. THE ONLY WAY THIS CAN BE ILLUSTRATED IN A WAY THAT GETS PEOPLE EXCITED IS BY DEMONSTRATING WHAT IT CAN TRULY BE. ONCE THE REINS ARE PLACED IN THE HANDS OF THOSE ABLE TO SIBRATE BEAUTY FROM STRUCTURE, DESIGNERS AND CODERS ALIKE HAVE CONTRIBUTED TO THE BEAUTY OF THE WEB; WE CAN ALWAYS PUSH IT FURTHER.

**PARTICIPATION**  
GRAPHIC ARTISTS DESIGN  
YOU MAKE IT



# Drupal's "content semantics" problem

```
.title { }
```

```
.block .title { }
```

```
.node .title { }
```

```
.node-37 .node .title { }
```

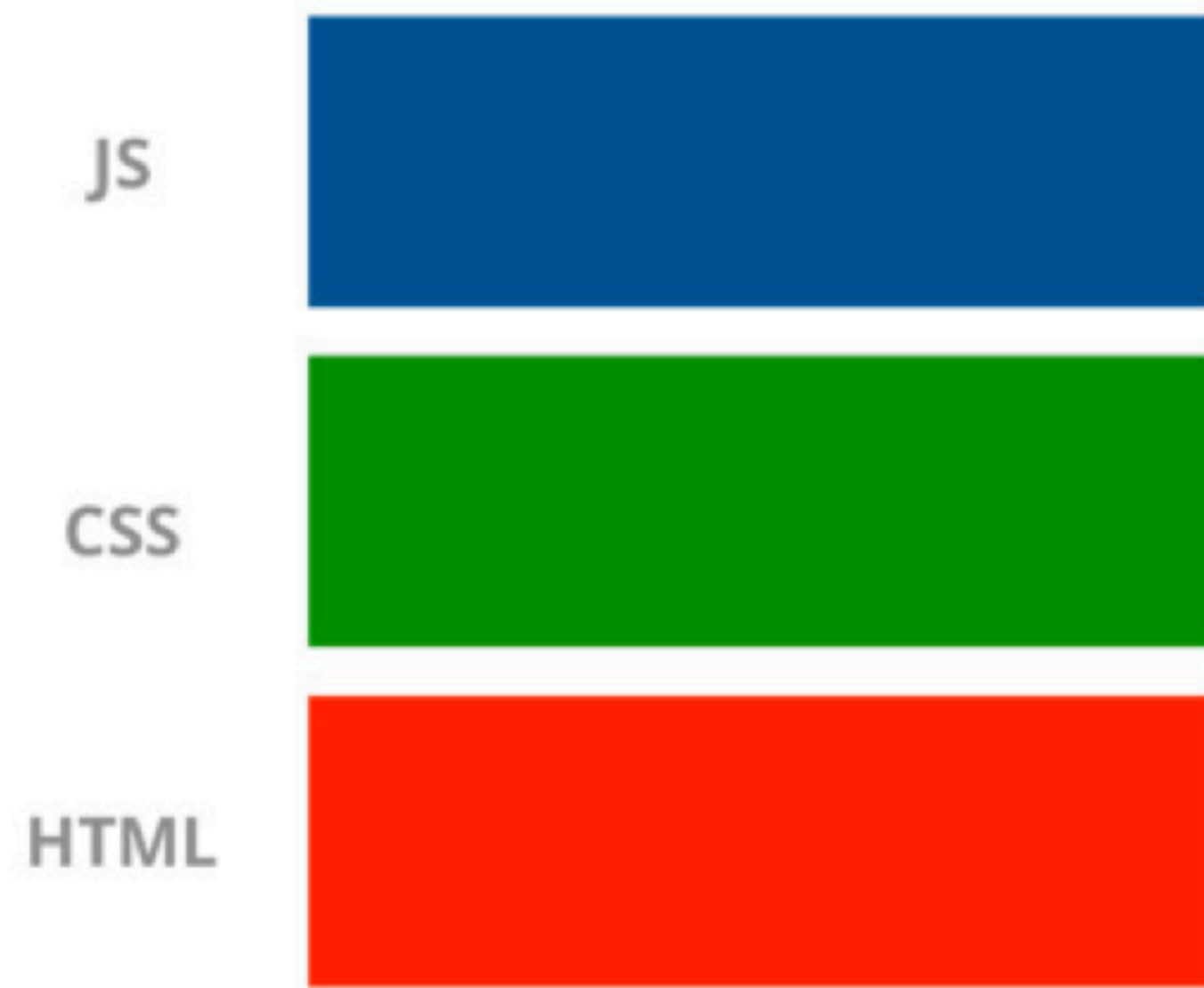


# CSS SPECIFICITY WARS



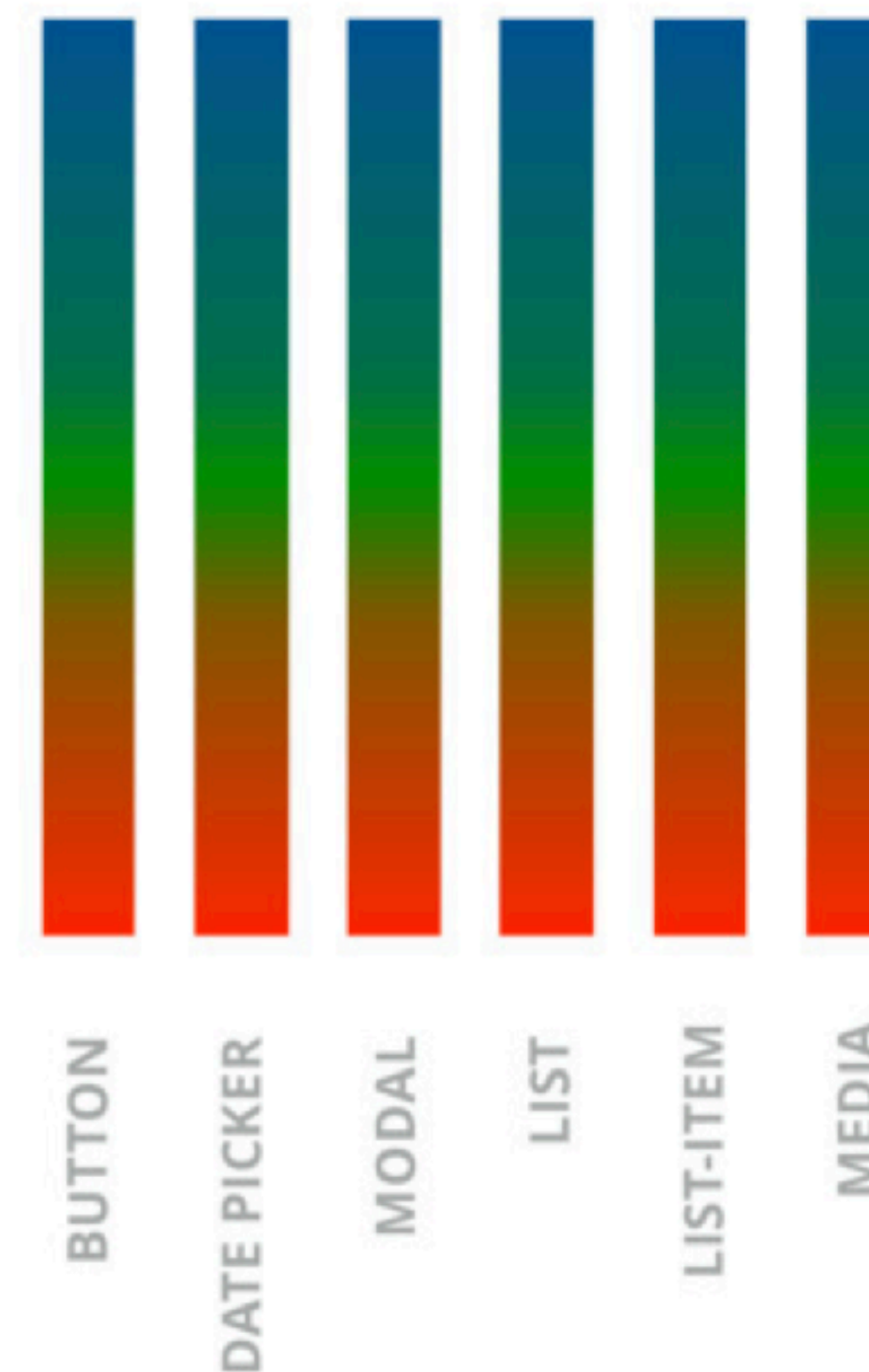
# First Lesson Learned

## Separation of Concerns



## Separation of Concerns

*(only, from a different point of view)*



**Kudos to Cristiano Rastelli**

<https://speakerdeck.com/didoo/let-there-be-peace-on-css?slide=58>



# More Component Examples

Optional 970 x 90 Ad

Sharing Unique Perspectives on Global Issues

Powered by PRI's The World

PRI<sup>®</sup> BETA

LOG IN LISTEN LIVE SHARE SEARCH MENU

Politics & Society

## How Leaks about NSA Surveillance Affect America's Role Around the Globe

PRI's The World | June 10, 2013

The hot topic for President Obama's summit this Friday with the Chinese President Xi Jinping was supposed to be over China's efforts at cyber espionage.

Now there's another hot cyber-security topic to add to the agenda. Revelations this week about the US government's ongoing surveillance ...

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World News

World News

# More Component Examples

The screenshot displays a news website layout. At the top, there is a large blue rectangular area labeled "Optional 970 x 90 Ad". Below this is a light blue header with the text "Sharing Unique Perspectives on Global Issues" on the left and "Powered by PRI's The World" on the right. A red navigation bar contains the PRI logo (with "PRI BETA" and social media icons), and utility links for "LOG IN", "LISTEN LIVE", "SHARE", "SEARCH", and "MENU".

The main content area features a featured article under the "Politics & Society" category. The article is titled "How Leaks about NSA Surveillance Affect America's Role Around the Globe" and is dated June 10, 2013. The article text reads: "The hot topic for President Obama's summit this Friday with the Chinese President Xi Jinping was supposed to be over China's efforts at cyber espionage. Now there's another hot cyber-security topic to add to the agenda. Revelations this week about the US government's ongoing surveillance ...". The article is accompanied by a photo of President Obama and Chinese President Xi Jinping, with a red circle containing the number "84" in the top right corner of the image.

Below the featured article, there are two "World News" sections. The first section is partially visible, showing an "ADVERTISEMENT" for "Artists you love. Music they love." with a "LEARN MORE" button. The second section shows a photo of a man with glasses, with a red circle containing the number "969" in the top right corner. The third section shows a photo of a clock tower, also with a red circle containing the number "969" in the top right corner.

Politics & Society



84

## How Leaks about NSA Surveillance Affect America's Role Around the Globe

 PRI's The World | June 10, 2013

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World News

969



### NSA whistleblower reveals himself and hopes for safety in Hong Kong

 The Takeaway | June 09, 2013

World News

969



### Lebanon's Hezbollah Militia Celebrates Its Role in Syria's Civil War

 PRI's The World | June 07, 2013



Politics & Society



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969

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 PRI's The World | June 07, 2013

# What is a component?

- ✓ Chunk of HTML, CSS, JS and images
- ✓ Unique, separate responsibility
- ✓ Repeatable
- ✓ Nestable
- ✓ Can have design variations



# 2nd generation of CSS-in-JS

button.css file:

```
.button {  
  background-color: #990101;  
  color: black;  
  border: 1px solid black;  
  border-radius: 5px;  
}
```

button.js file:

```
import styles from 'button.css';  
return <a className={styles.button}>Bye!</a>;
```



# 2nd Lesson: Organize your Theme by Components

## Old way:

- ▼ oida\_theme
  - ▼ css
    - styles.css
  - ▼ images
    - arrow.png
  - ▼ js
    - behavior.js
  - ▼ templates
    - field-link.html.twig
  - oida.info.yml
  - oida.libraries.yml
  - oida.theme.php



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## Old way:

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  - ▼ templates
    - field-link.html.twig
  - oida.info.yml
  - oida.libraries.yml
  - oida.theme.php

## "Components" way:

- ▼ oida\_theme
  - ▼ components
    - ▼ button
      - arrow.png
      - behavior.js
      - button.css
      - field-link.html.twig
    - ▶ media
    - ▶ modal
  - oida.info.yml
  - oida.libraries.yml
  - oida.theme.php



# 3rd generation of CSS-in-JS

```
const Button = styled.a`  
  background-color: #990101;  
  color: black;  
  border: 1px solid black;  
  border-radius: 5px;  
`;  
;
```

```
const Icon = styled.img`  
  padding-left: 10px;  
`;  
;
```

```
return (  
  <Button href="#">  
    Add  
    <Icon src="add.svg" />  
  </Button>  
)  
);
```

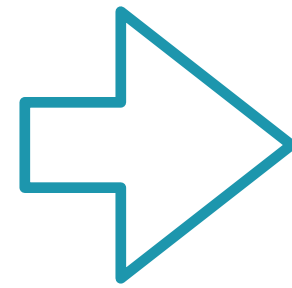


# 3rd generation of CSS-in-JS

```
const Button = styled.a`
  background-color: #990101;
  color: black;
  border: 1px solid black;
  border-radius: 5px;
`;

const Icon = styled.img`
  padding-left: 10px;
`;

return (
  <Button href="#">
    Add
    <Icon src="add.svg" />
  </Button>
);
```



```
<style>
  ._23_aKvs-b8bW2Vg3fwHoz0 {
    background-color: #990101;
    color: black;
    border: 1px solid black;
    border-radius: 5px;
  }
  ._56_jWru-g3f8bW2V0wHozb {
    padding-left: 10px;
  }
</style>

<a class="_23_aKvs-b8bW2Vg3fwHoz0" href="#">
  Add
  
</a>
```





## 3rd Lesson: **Scope locally, not globally**

`.title { }` ← Too generic. Applies globally.

`._23_aKvs-b8bW2 { }` ← Very specific. Applies locally.



## 4th Lesson: Prevent unused CSS

- When you add a component to a page, it adds the HTML, CSS, JS, etc. to the page.
- When you DO NOT add a component to a page, the HTML, CSS, JS, etc. is NOT added to the page.



## 4th Lesson: Prevent unused CSS

### Drupal 7:

- Make one giant CSS file.
- Make one giant JS file.

### Drupal 8:

- Add a component's CSS and JS to a “library” used only by component.
- Add library from the Twig file.
- Rikki Bochow found this *halved* the CSS

<https://www.previousnext.com.au/blog/performance-improvements-drupal-8-libraries>



# Let's build a Drupal 8 component



# Create a Theme using a .info.yml file

themes/oida/oida.info.yml:

```
name: Oida!  
type: theme  
description: 'A Drupalcon Vienna theme'  
core: 8.x  
libraries:  
  - oida/html-element-styles  
base theme: classy  
regions:  
  etc: Etc
```



# Create a component's library

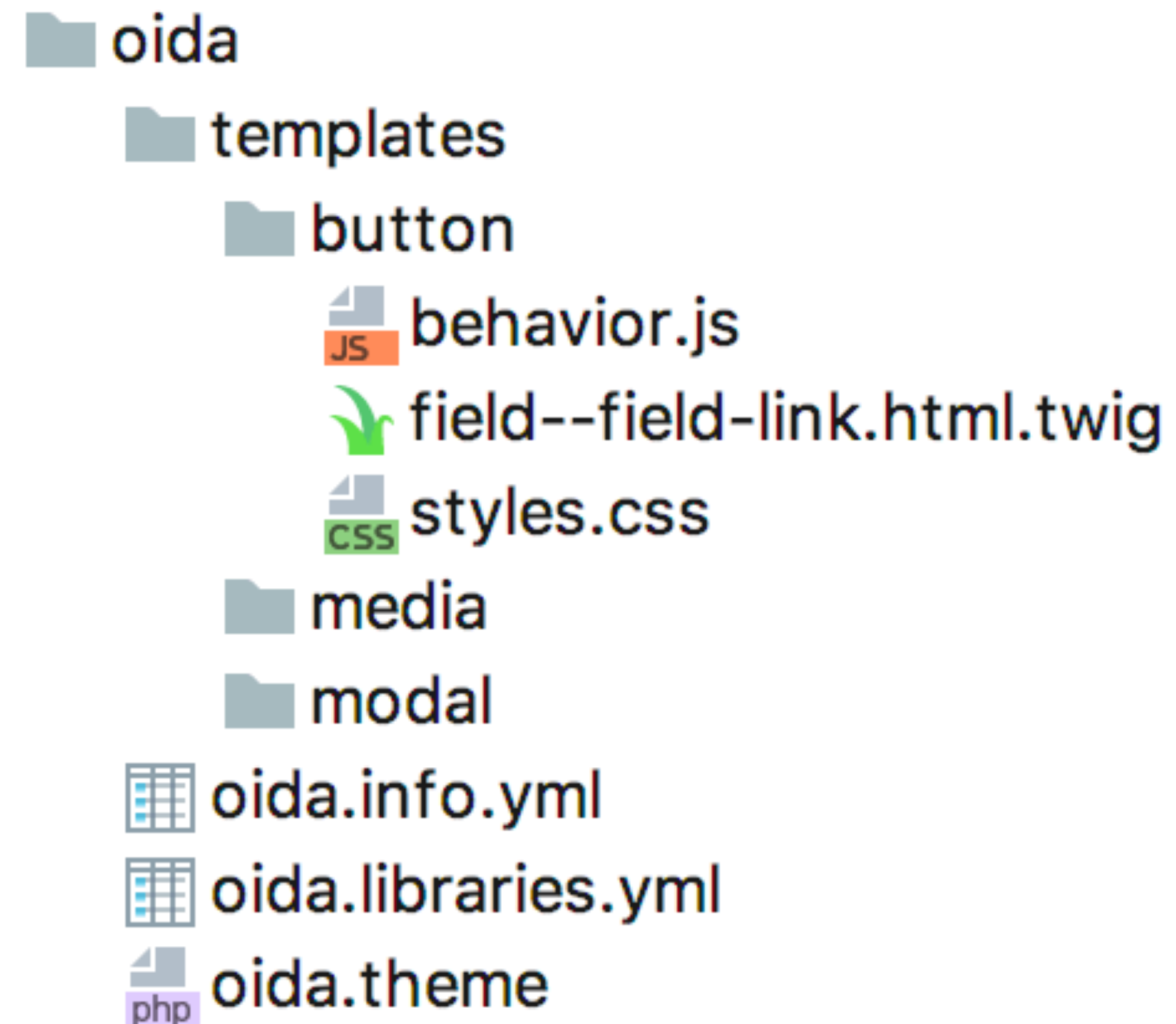
themes/oida/oida.libraries.yml:

```
button:  
  css:  
    component:  
      templates/button/styles.css: {}  
  js:  
    templates/button/behavior.js: {}
```

**This creates a "oida/button" library.**



# Create a component's directory



# Create a component's twig file

themes/oida/templates/button/field--field-link.html.twig:

```
{{ attach_library('oida/button') }}

{% for item in items %}
  <div{{ attributes }}>{{ item.content }}</div>
{% endfor %}
```

**This uses the "oida/button" library.**





# Intermediate-level component theming

When Drupal adds more CSS than you want...

learn about `libraries-override` in the `.info.yml` file:

<https://www.drupal.org/node/2216195#override-extend>



# Intermediate-level component theming

## UI Patterns

[View](#) [Version control](#) [View history](#) [Automated testing](#)

Posted by [ademarco](#) on *5 January 2017*, updated *15 April 2017*

Define and expose self-contained UI patterns as Drupal plugins and use them seamlessly as drop-in templates for [panels](#), [field groups](#), views, [Display Suite](#) field templates, [paragraphs](#), nodes or any other entity types.

The module generates a pattern library page to be used as documentation for content editors or as a showcase for business and clients.

The UI Patterns module also integrates with tools like [PatternLab](#) or modules like [Component Libraries](#) thanks to [definition overrides](#).

