

Week 2

CSS Introduction, Selectors, and Pseudo-Selectors

First, Quick Recap on HTML

Quick HTML Review

```
<!doctype html>
<html>
  <head></head>
  <body>
    <!-- this itself is a comment -->
    <!-- your webpage content goes inside the body -->
    <p>Welcome to WDD!</p>
    
  </body>
</html>
```

What is an html tag?

- Contains everything of a webpage
- There should only be one of this in the entire file

```
<html>    </html>
```

Don't forget about the `<!doctype html>` before `<html>`

What is a head tag?

- User does **not** see what is here
- Sets up the page
- Title (on tab) of page
- Links to important resources
 - CSS and JS files
 - Fonts
- Author(s) of webpage
- Other metadata
- Sits inside `<html></html>`

`<head>` `</head>`

What is a body tag?

- User **does** see what is here
- All the webpage content
 - Words and text
 - Images
- Also sits inside `<html></html>`

`<body>` `</body>`

Now that we've learned about HTML

How do we organize our project workspace?

(The following may/may not apply to industry standards)

The screenshot shows a code editor interface with a sidebar on the left and a main editing area on the right. The sidebar contains an 'EXPLORER' panel with a tree view of the project structure. The tree view shows a folder named 'WEEK1' containing subfolders 'assets' and 'otters'. The 'assets' folder contains 'images' and 'otter.jpg'. The 'otters' folder contains 'otter-1.html', 'otter-2.html', and 'index.html'. The 'index.html' file is selected and its content is displayed in the main editing area. The content of 'index.html' is as follows:

```
1 <!doctype html>
2 <html>
3   <head></head>
4   <body>
5     <h1>Monterey Bay Museum</h1>
6     <p>Come to see the otters!</p>
7     <ul>
8       <li><a href="otters/otter-1.html">Otter 1</a></li>
9       <li><a href="otters/otter-2.html">Otter 2</a></li>
10    </ul>
11    
12  </body>
13 </html>
14
```

The 'otter-1.html' file is also visible in the sidebar and its content is displayed in the main editing area. The content of 'otter-1.html' is as follows:

```
1 <!doctype html>
2 <html>
3   <head></head>
4   <body>
5     <a href=" ../index.html">Back to Home</a>
6     <h1>Monterey Bay Museum</h1>
7     <h2>Otter 1</h2>
8     <p>Otter 1 looks just like otter 2.</p>
9     
10  </body>
11 </html>
12
```

The status bar at the bottom of the editor shows 'Ln 14, Col 1', 'Spaces: 4', 'UTF-8', 'LF', 'HTML', and a smiley face icon.

[Example project](#) (follow link to view/download)

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Relative path

- Path to another file relative to the current file
- It may point to different files depending on the current location

Absolute path

- Complete path to another file
- Since it's not relative, the absolute path always points to the same exact file

Begins with a slash

Examples:

- `assets/images/otter.jpg`
- `./assets/images/otter.jpg`
- `../assets/images/otter.jpg`

dot-dot-slash (`../`) to go up to parent directory

dot-slash (`./`) stays in the same directory

Examples:

- `/assets/images/otter.jpg`
- `https://wdd.io/assets/images/otter.jpg`
- `file:///Users/slu/Pictures/otter.jpg`

How about a lightning quiz ⚡

Relative or Absolute? 🤔

where/is/my/image.png

Relative or Absolute? 🤔

./this/leading/dot/is/optional

Relative or Absolute? 🤔

`/what/does/that/first-slash.do?`

Relative or Absolute? 🤔


<https://wdd.io/is-CaSe-SeNsItIvE>

Relative or Absolute? 🤔

is-this-a-trick-question.com

Relative or Absolute? 🤔

`../../../../../../i-do-not-count`

- ▲ assets
 - ▲ images
 -  otter.jpg
 - ▲ scripts
 - ▲ styles
- ▲ others
 - <> otter-1.html
 - <> otter-2.html
 - <> index.html

assets - Where all static resources go

images - For PNG, JPEG & most importantly GIF

otter.jpg

scripts - Where JavaScript files are

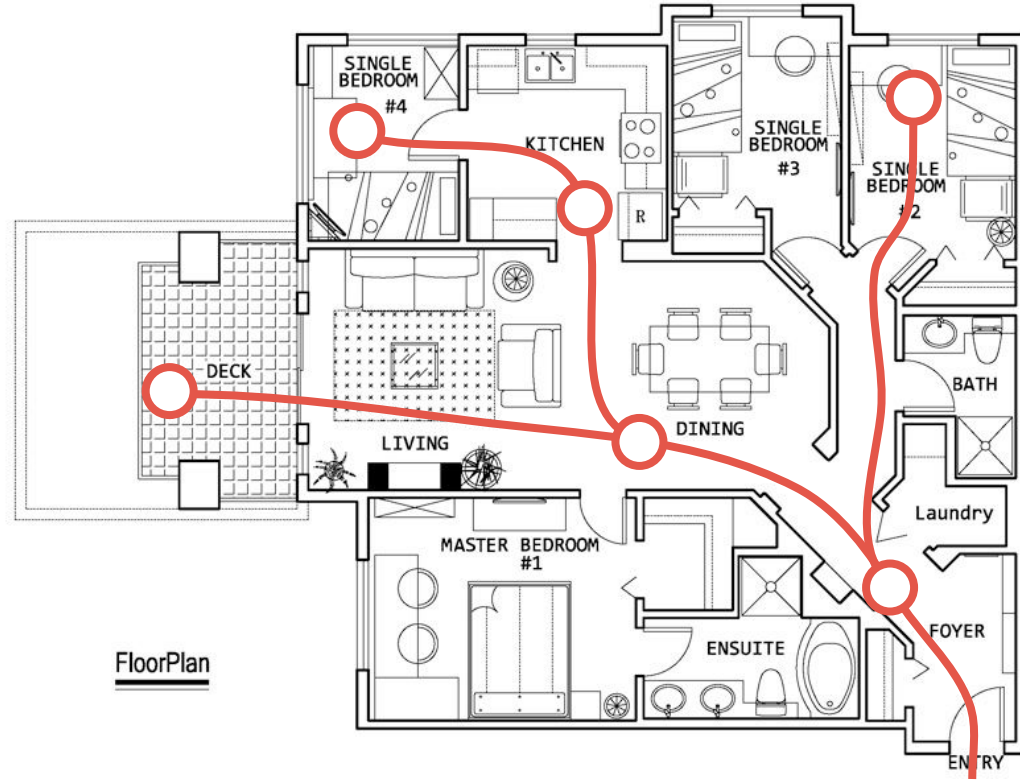
styles - Where CSS files are

others - Sub-directory here for better structure

otter-1.html

otter-2.html

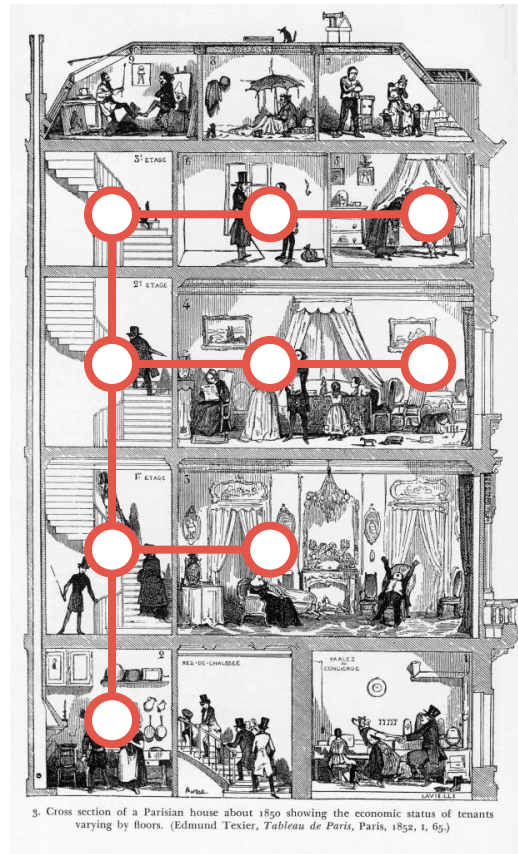
index.html - The entry HTML file



FloorPlan

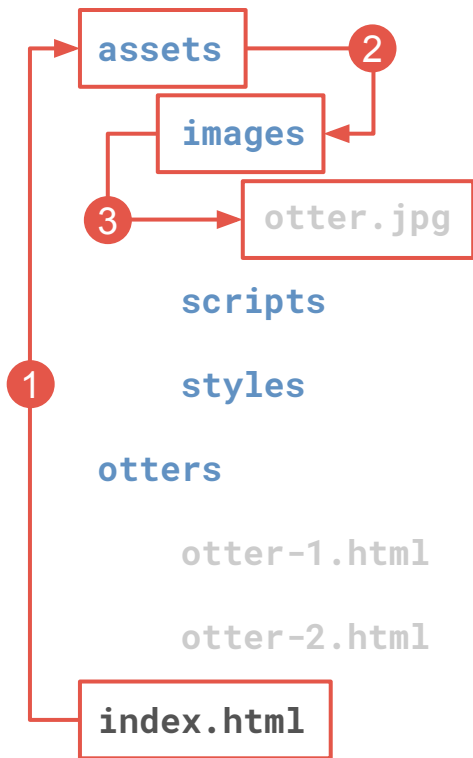
Pop quiz on how to read a floor plan

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Pop quiz on how to read a floor plan

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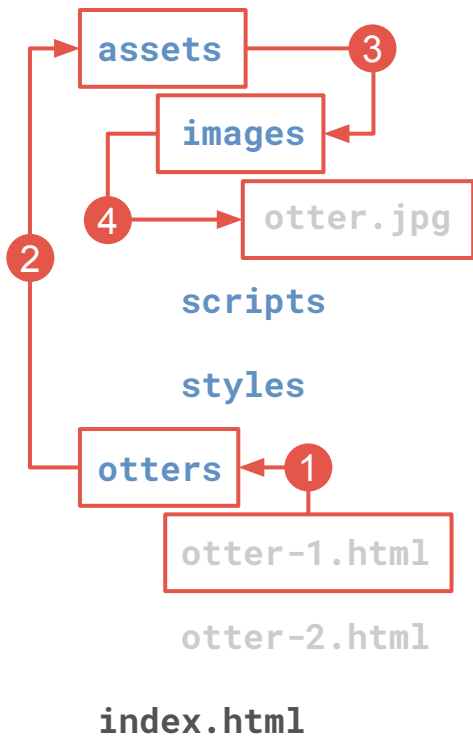


```
<!doctype html>
<html>
  <head></head>
  <body>
    <h1>Monterey Bay Museum</h1>
    <p>Come to see the otters!</p>
    <ul>
      <li><a href="otters/otter-1.html">Otter 1</a></li>
      <li><a href="otters/otter-2.html">Otter 2</a></li>
    </ul>
    
  </body>
</html>
```

index.html

Relative path from `index.html` to `assets/images/otter.jpg`

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```
<!doctype html>
<html>
  <head></head>
  <body>
    <a href="../index.html">Back to Home</a>
    <h1>Monterey Bay Museum</h1>
    <h2>Otter 1</h2>
    <p>Otter 1 1 of 2 just 3 e ot 4 2.</p>
    
  </body>
</html>
```

otters/otter-1.html

Relative path from **otters/otter-1.html** to **assets/images/otter.jpg**

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We usually prefer **relative paths** to **absolute paths**;
sometimes we prefer **absolute** to **relative paths**



Questions?

Nice we're at the halfway point

HTML



Structure

CSS



Design

JavaScript



Function

Files and Linking CSS

CSS Syntax

CSS Selectors

Pseudo-Selectors

Files and Linking CSS

CSS Syntax

CSS Selectors

Pseudo-Selectors

Linking CSS in HTML

How will the HTML file know where to find its stylin' ?!

Inside the `<head>` tag, add this line:

```
<link rel="stylesheet" type="text/css"
      href="assets/styles/style.css">
```

*No need to memorize this – I'd just copy and paste or something like that

Where our CSS file will live (for this class): `assets/styles/style.css`

```
└─ assets
   └─ images
   └─ scripts
   └─ styles
      # style.css
<> index.html
```



Questions?

Files and Linking CSS

CSS Syntax

CSS Selectors

Pseudo-Selectors

HTML and CSS: At a Glance

```
<!doctype html>
<html>
  <head>...</head>
  <body>
    <p>Welcome to WDD!</p>
    
  </body>
</html>
```

HTML

```
body {
  width: 200px;
  text-align: center;
}

p {
  font-size: 32px;
  color: green;
  font-family: Karla;
}
```

CSS

Selectors

Tells us what elements in the HTML to “select”, or apply these properties to.

- In this case, we are selecting all the `div` elements.
- Lots of ways to specify what to select!
Very powerful

```
div {  
    font-size: 32px;  
    color: green;  
}
```

CSS

Property and Value

Property

Defines **what** we are changing about the selected element

Value

Specifies **how** we are changing it, or what it should be changed to

Together: Declaration (or rule)

```
div {  
    font-size: 32px;  
    color: green;  
}
```

CSS

Miscellaneous, Very Small Things

- Rules (property and attribute pairs) for a selector fall between curly braces
- Rules with curly braces are separated by a semicolon
- Comments surrounded by `/*` and `*/`

```
div {  
    font-size: 32px;  
    color: green;  
}  
  
img {  
    /* This is a comment */  
    width: 50%;  
}
```

CSS



Questions?

Files and Linking CSS

CSS Syntax

CSS Selectors

Pseudo-Selectors

Disaster, what??

```
<p>Green text</p>  
<p>Blue text</p>  
<p>And more green text!</p>
```

HTML

```
/* ;DOES NOT WORK! */  
p {  
    color: green;  
    color: blue;  
}
```

CSS

An Attempt

```
<p>Green text</p>  
<div>Blue text</div>  
<p>And more green text!</p>
```

HTML

```
p {  
    color: green;  
}  
  
div {  
    color: blue;  
}
```

CSS

Yes Good

```
<p class="green">Green text</p>  
<p id="blue">Blue text</p>  
<p class="green">More green text!</p>
```

HTML

```
.green {  
    color: green;  
}  
  
#blue {  
    color: blue;  
}
```

CSS

Classes

- Apply a set of rules to **multiple** elements on the page
- HTML: add the **class** attribute to opening tag
- CSS: put a period in front of the class name as a selector

```
<p class="green">Green text</p>  
<p class="green">Green text 2</p>  
<div class="green">Also green</div>
```

HTML

```
.green {  
    color: green;  
}
```

CSS

ID's

Apply a set of rules to only
one distinct element on the page

- HTML: add **id** attribute to opening tag
- CSS: put a hashtag in front of the class name as a selector

```
<p id="blue">Blue text</p>
```

HTML

```
#blue {  
    color: blue;  
}
```

CSS

Tip for Remembering

A (student) **id** is **unique** per student.

An id is a **number** (#)

Many students take a **class**

Classes are in **periods** (.) in high school



Q Try "Barcelona"

Become a host

Saved

Trips

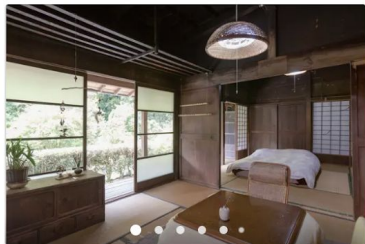
Messages

Credit

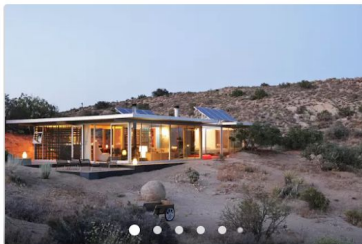
Help



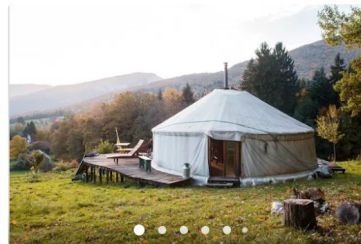
Homes around the world



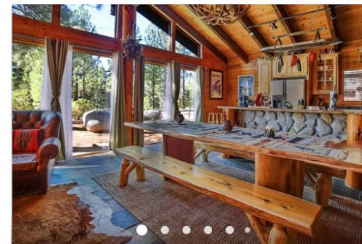
ENTIRE HOUSE · FUJIEDA
Yui Valley-Traditional house (easy to Tokyo/Kyoto)
\$99 per night · Free cancellation
★★★★★ 266 · Superhost



ENTIRE HOUSE · PIONEERTOWN
Off-grid itHouse
\$400 per night · Free cancellation
★★★★★ 212



YURT · BELLECOMBE-EN-BAUGES
A quiet yurt in Savoie - Bauges
\$81 per night · Free cancellation
★★★★★ 283



ENTIRE CHALET · SOUTH LAKE TAHOE
The Lake Tahoe Chalet
\$125 per night · Free cancellation
★★★★★ 177 · Superhost



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What elements might use classes? What elements might use ids?

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Rules of Thumb 👍

--% *classes* + --% *ids*

A

`:active`

`additive-symbols (@counter-style)`

`::after (:after)`

`align-content`

`align-items`

`align-self`

`all`

`<an-plus-b>`

`<angle>`

`animation`

`animation-delay`

`animation-direction`

`animation-duration`

`animation-fill-mode`

`animation-iteration-count`

`animation-name`

`animation-play-state`

`animation-timing-function`

`font-kerning`

`font-language-override`

`font-optical-sizing`

`font-size`

`font-size-adjust`

`font-stretch`

`font-stretch (@font-face)`

`font-style`

`font-style (@font-face)`

`font-synthesis`

`font-variant`

`font-variant (@font-face)`

`font-variant-alternates`

`font-variant-caps`

`font-variant-east-asian`

`font-variant-ligatures`

`font-variant-numeric`

`font-variant-position`

`font-variation-settings (@font-`

`page-break-after`

`page-break-before`

`page-break-inside`

`pc`

`<percentage>`

`perspective`

`perspective()`

`perspective-origin`

`place-content`

`place-items`

`place-self`

`::placeholder`

`pointer-events`

`polygon()`

`<position>`

`position`

`prefix (@counter-style)`

`pt`

`px`



Questions?

CSS Practice

tinyurl.com/wdd-cssbasics

Files and Linking CSS

CSS Syntax

CSS Selectors

Pseudo-Selectors

Pseudo-Selectors

Selects elements that are under a certain **state**

Great for **user interaction**

Pseudo-Selectors

General Pseudo-selector structure:

normal-selector:pseudo-class

Rules will be applied to the div
only when the cursor is hovering over

```
div:hover {  
    font-size: 32px;  
    color: green;  
}
```

CSS

Some Pseudo-Classes

:hover

- when mouse “hovers” over an element

:visited

- when a link has been visited before (default is purple hyperlink)

:active

- when the mouse is currently clicked on an element

... and many, many more!

Pseudo-Selector Practice

tinyurl.com/wdd-pseudo



Questions?



Putting it All Together

Let's revisit Homework 1 and make it nicer!

jsfiddle.net/r37q64Lz/

The End!

CSS Selector Game (with Sushi!)

flukeout.github.io/

Helpful Links

CSS Selectors

- https://www.w3schools.com/cssref/css_selectors.asp
- <https://flukeout.github.io/>

CSS Properties

- <https://www.w3schools.com/cssref/default.asp>

Deep Think

- Someone is bored and decides to create a new selector called family, such that the precedence between selectors is `id > family > class`. Why is this a bad/useless new selector? How can we use class & id to replace family?
- The tie between CSS and HTML is extremely deep. So deep that we can almost construct the website using just CSS. How might we alter CSS so that using only a `style.css` file, we could get an accurate picture of the entire website? Why is this not a good idea in reality?
- (CS) Last week we talked about how HTML was closely tied to trees, what data structure would CSS be most associated with?



Attendance