



Going Live

Web Development Boot Camp
Lesson 1.4



Objectives

In today's class, we will:

01

Work with CSS properties used for adjusting a website's typography.

02

Utilize custom fonts provided from Google Fonts.

03

Work with CSS pseudo classes to style elements based on special states.

04

Utilize the Bootstrap CSS framework for website development.

Checking In

How's it going?



Instructor Feedback

Seriously? Mind. Blown.



Instructor Feedback

Things I've noticed people doing incredibly well:



All of you are handling an enormous volume of information.



All of you are asking the right questions.



You notice the right details.

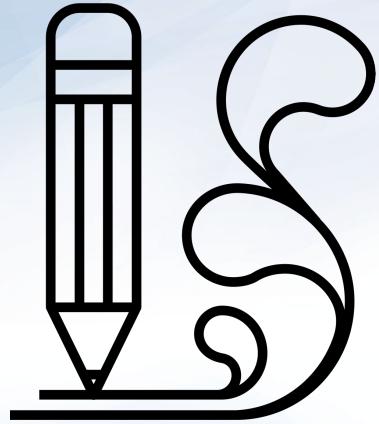


You all help each other out.



And, most importantly, you are figuring out things on your own.

A Few Admin Things



Homework is due!

Don't forget to submit both the GitHub
and GitHub Pages links.

Due Date:



Office Hours and Additional Help:

Office hours are held 45 minutes before class and 30 minutes after class.



Feedback #1: The Pace Is Fast!

Feedback #1: Pace Is Fast

Here's the reality: the pace of this program is fast.



We could slow down and make it easier, but that wouldn't prepare you to be developers right out of the program.



Take up the challenge. Try to retain as much as you can during the course.



After the program is over, go back and review the concepts you need a refresher on.



Don't try to master every little detail.



Focus on the big picture and how to find what you need, when you need it.

Feedback #1: Pace Is Fast

That said, as instructors and TAs, we are here to help!



Share your GitHub code as you run into issues. We can let you know if you're going in the right (or wrong) direction.



Come to office hours! We can review your code with you, offer tips on homework, or just give you a pep talk if that's what you need.



Reach out to Student Success if want to schedule a 1-on-1 meeting.

Feedback #2: **Books, Please!**

Feedback #2: Books, Please!



During the program, concentrate all your efforts on what we're covering in class.



Books can be helpful when you're learning on your own, but in a boot camp like this, they can be distracting—especially when class is moving so quickly.



When you're at home, focus your efforts on completing your homework, re-completing in-class exercises, and going over slides.



Invest in books and outside tutorials after you finish the program.

That said, if you truly feel the need for outside resources...



[PluralSight.com](#) offers some of the best online courses for HTML, CSS, JavaScript, Node, Express, and Angular.

Feedback #2: Books, Please!

Jon Duckett's books *HTML & CSS* and *JavaScript & jQuery* are two excellent primers. If you're a book person, these can be very helpful!



HTML & CSS: Design and Build Websites
by Jon Duckett
(Wiley, 2011)

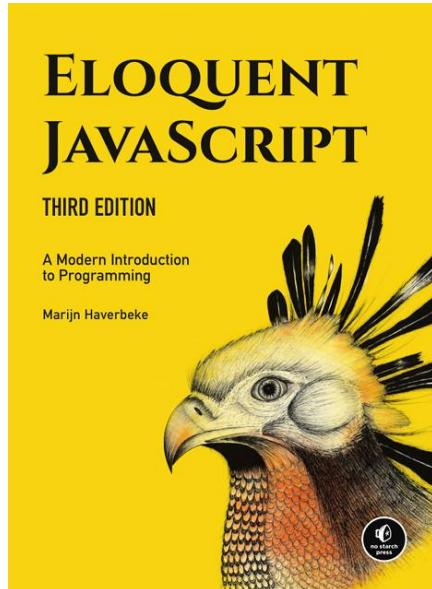


JavaScript & JQuery: Interactive Front-End Web Development
by Jon Duckett
(Wiley, 2014)

Feedback #2: Books, Please!

Eloquent JavaScript is a terrific, free book that reviews the fundamentals of JavaScript.

You can find it here: eloquentjavascript.net



Eloquent JavaScript, 3rd Edition
by Marijn Haverbeke
(No Starch Press, 2018)

Feedback #3: **The Homework Is Hard**

Feedback #3: Homework Is Hard



Check your homework due dates in Boot Camp Spot.



Generally speaking, expect homework to be semi-challenging.



Make sure you're setting aside a solid block of time for each assignment.



If you find yourself working on an assignment for more than two hours without even a small amount of progress, let us know!



You don't win points in life for staring at a blank screen.

Recap

Recap

In just one whirlwind week we've covered:

- Basics of full-stack development
- Terminal and Git Bash
- HTML syntax
- Git concepts and commands
- CSS purpose, syntax, and styles
- Floating
- Positioning
- Box model
- Chrome DevTools
- **How to learn on your own!**

What Is Full-Stack Development?



> Intro to Console

```
OSXDaily@hyrule:/$ ls -l
total 16053
drwxrwxr-x+ 112 root admin 3.7K Jan 29 16:49 Applications/
drwxrwxr-x  15 root admin 510B Jul 21 2011 Developer/
drwxrwxr-x   7 root admin 238B Aug  9 15:28 Incompatible Software/
drwxr-xr-x+  62 root wheel 2.1K Jan 29 13:47 Library/
drwxr-xr-x@  2 root wheel 68B Jun 20 2012 Network/
drwxr-xr-x+  4 root wheel 136B Jul 26 2012 System/
lrwxr-xr-x   1 root admin 60B Mar 10 2011 User Guides And Information@ ->
/Library/Documentation/User Guides and Information.localized
drwxr-xr-x   9 root admin 306B Jan 25 14:00 Users/
drwxrwxrwt@  4 root admin 136B Jan 29 13:56 Volumes/
drwxr-xr-x@  39 root wheel 1.3K Jan 29 13:47 bin/
drwxrwxr-t@  2 root admin 68B Jun 20 2012 cores/
dr-xr-xr-x   3 root wheel 4.3K Jan 29 13:56 dev/
lrwxr-xr-x@  1 root wheel 11B Jul 26 2012 etc@ -> private/etc
dr-xr-xr-x   2 root wheel 1B Jan 29 14:08 home/
-rw-r--r--@  1 root wheel 7.8M Aug 25 00:49 mach_kernel
dr-xr-xr-x   2 root wheel 1B Jan 29 14:08 net/
drwxr-xr-x@  4 root admin 136B Dec  2 14:44 opt/
drwxr-xr-x@  6 root wheel 204B Jul 26 2012 private/
drwxr-xr-x@  62 root wheel 2.1K Jan 29 13:47 sbin/
lrwxr-xr-x@  1 root wheel 11B Jul 26 2012 tmp@ -> private/tmp
drwxr-xr-x@  11 root wheel 374B Dec  2 14:45 usr/
lrwxr-xr-x@  1 root wheel 11B Jul 26 2012 var@ -> private/var
OSXDaily@hyrule:/$
```

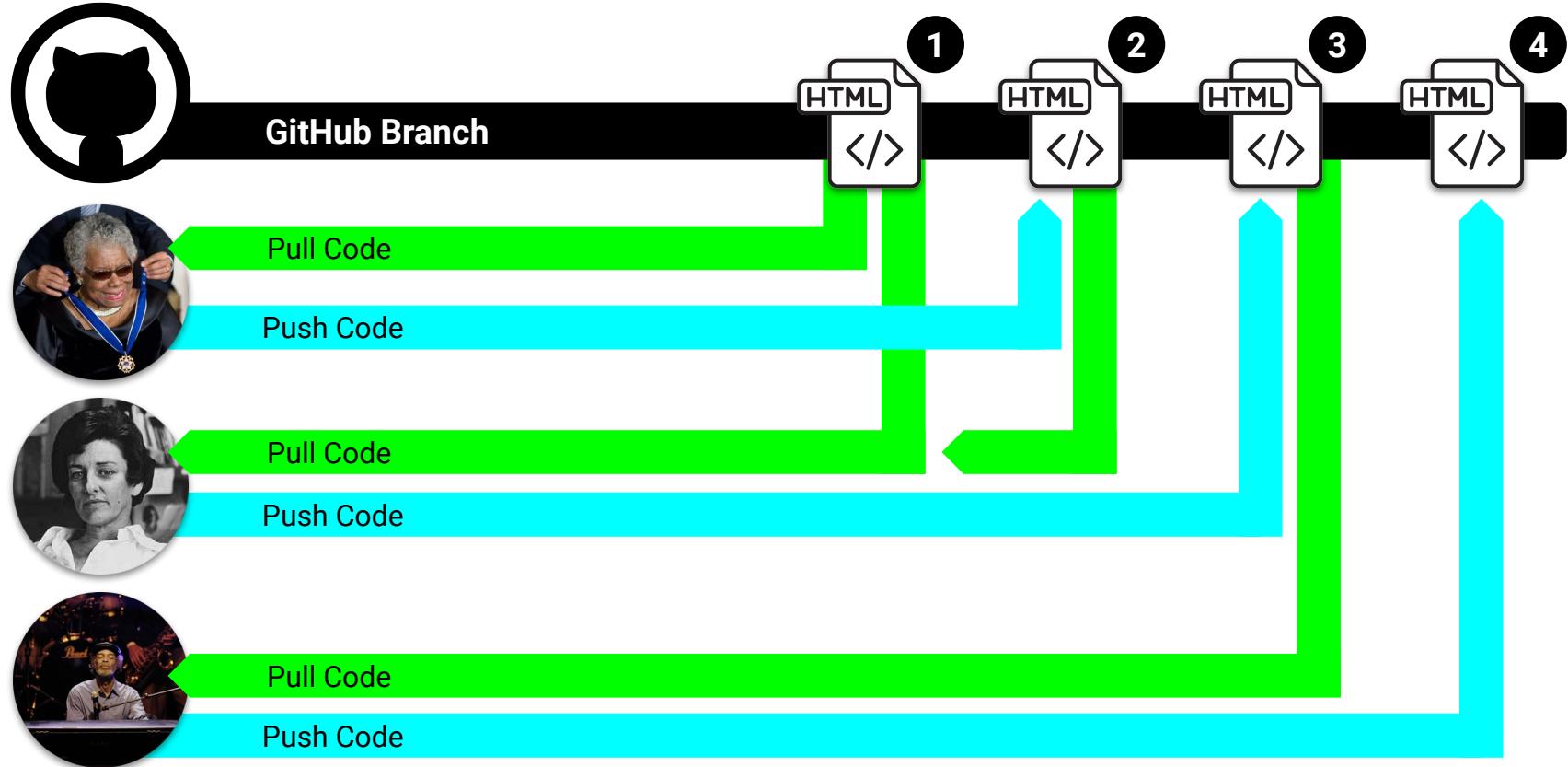
<title> Intro to HTML </title>

HTML is one of the three base languages behind every website.

It defines all of the basic content as well as a bit of formatting.



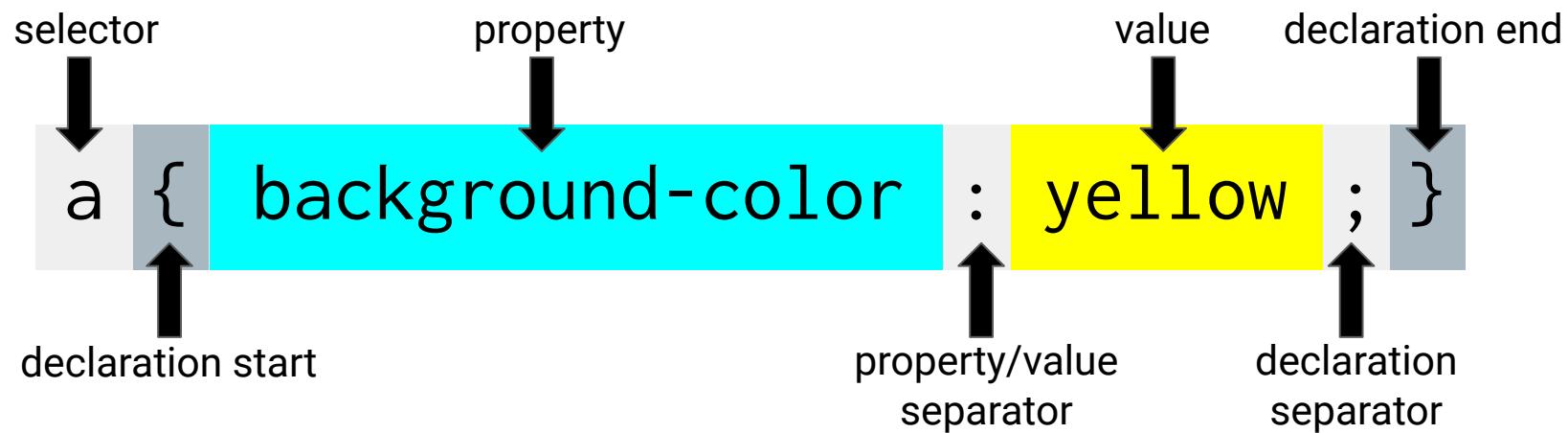
Pushing and Pulling to GitHub



CSS Syntax

CSS works by hooking onto **selectors** added into HTML using **classes** and **identifiers**.

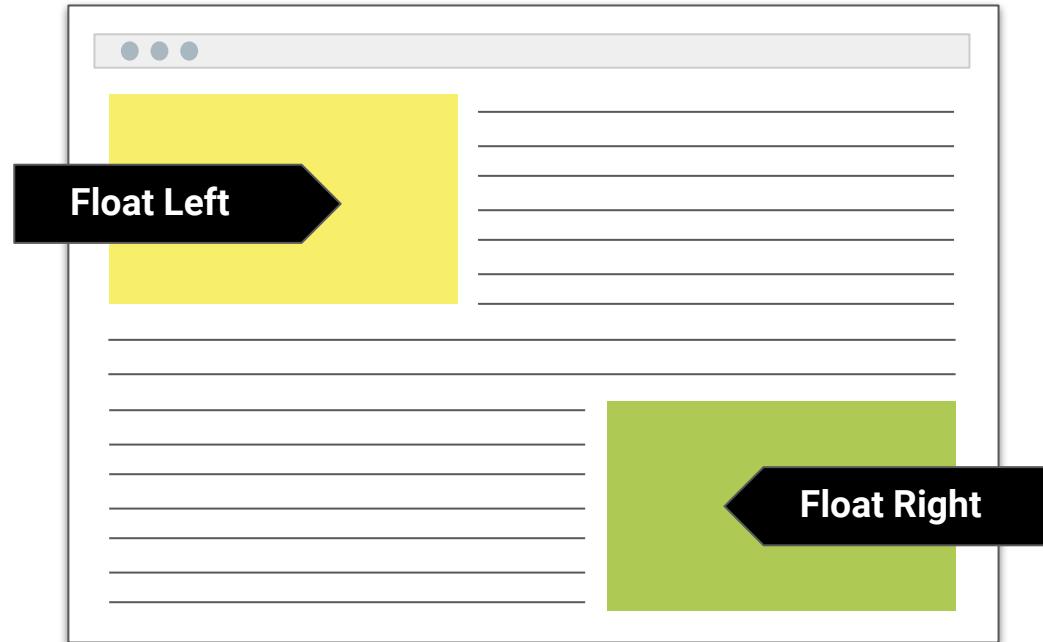
Once hooked, we apply **styles** to those HTML elements using CSS.



The Concept of Flow

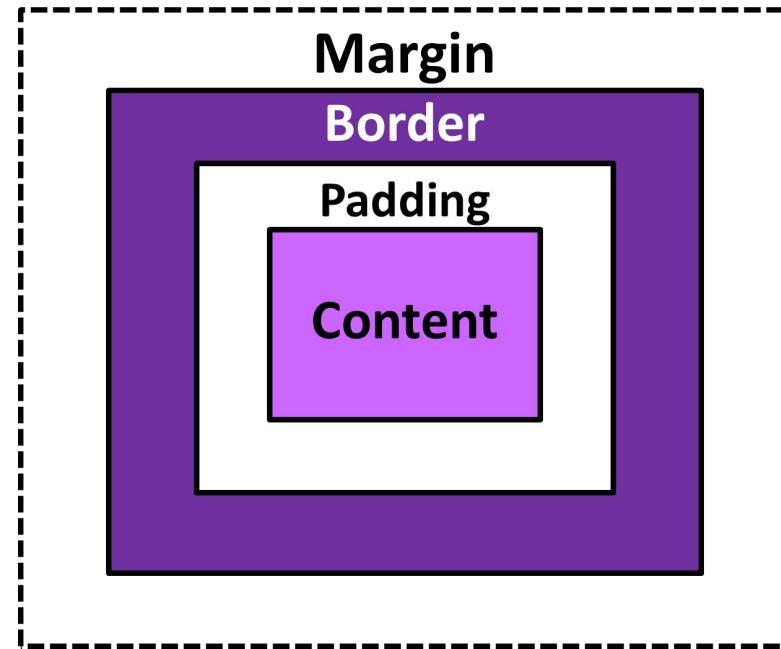
By default, every HTML element displayed in the browser is governed by a concept called **flow**.

This means that HTML elements force their adjacent elements to flow around them.



The Box Model

The CSS **box model** wraps every HTML element in a box. This box consists of padding, border, margin, and content, and allows developers to modify spacing styles.



CSS Positioning

We can orient our HTML elements in relation to space with CSS positioning (static, relative, fixed, absolute).

```
<div>  
position: fixed
```

ading

ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse a
erit ex, at blandit sapien. Lorem ipsum dolor sit amet, consectetur
adipiscing elit. Quisque finibus felis sem, non pulvinar odio fermentum vel.
Nunc varius tempus scelerisque. Curabitur congue magna vitae velit dictum,
eu finibus neque bibendum. In hac habitasse platea dictumst. Aliquam
fermentum lobortis felis, in feugiat diam congue ac.

```
<div>  
position: relative
```

```
<div>  
position: absolute
```

Nulla tempor ornare diam, vitae volutpat erat bibendum eget. Nunc sagittis
placerat velit sit amet interdum. Nam in iaculis purus, quis tristique velit.
Cras ut nisl vitae orci malesuada placerat non sed magna. Nulla ultrices,
dolor at aliquam volutpat, lorem magna pharetra arcu, eget feugiat nisi libero
at nunc. Phasellus finibus elit at sapien vehicula varius. Maecenas in dapibus
leo. Aliquam molestie vulputate metus. Morbi sed posuere quam, et sodales
felis. Proin augue nulla, pellentesque at venenatis vel, sagittis eget nibh.
Maecenas libero velit, luctus eu velit vitae, eleifend convallis felis.

Resources



stackoverflow.com



w3schools.com



designshack.net



css-tricks.com



smashingmagazine.com



sitepoint.com/community



developer.mozilla.org/en-US



cssnewbie.com

General Questions/Issues?

Double-Take

Divs and Sections

stackoverflow.com



What is the difference between `<section>` and `<div>`?



What is the purpose of new HTML5 elements like `<section>` and `<article>`?



Why would you use an HTML5 semantic tag instead of `<div>`?



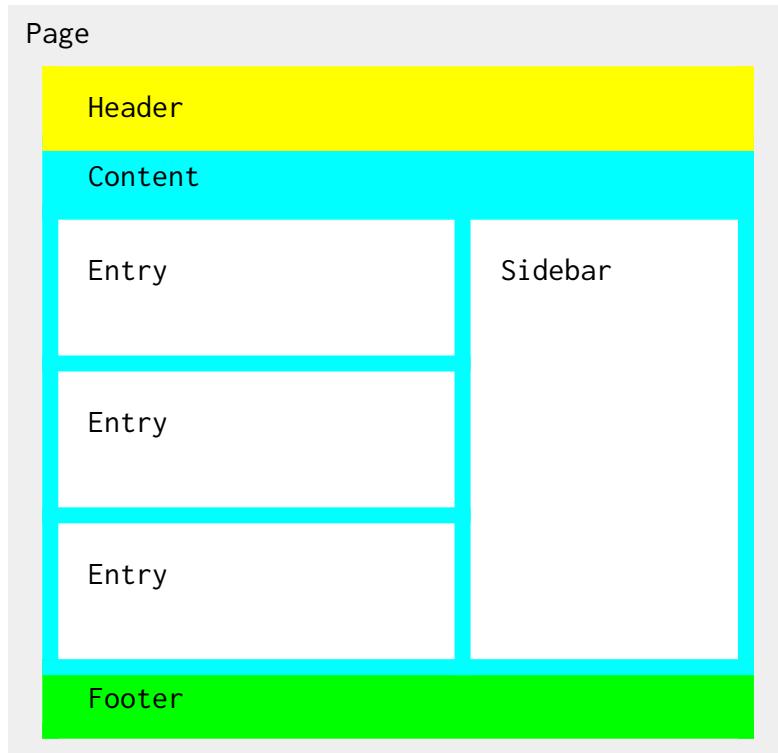
When do you use a `<div>` element, and when do you use a `<section>` element?



Which should you use for semantic markup and page layout: `<section>` or `<div>`?

Divs and Sections

All web layouts are made up of containers, traditionally called **divs**.



Divs and Sections

HTML5 introduced the concept of **semantic layouts**, meaning divs could be given more meaningful names. In theory, this helps with organization and search engine optimization.

Website Layout Using HTML5:

HTML5 offers new semantic elements that define different parts of a webpage:

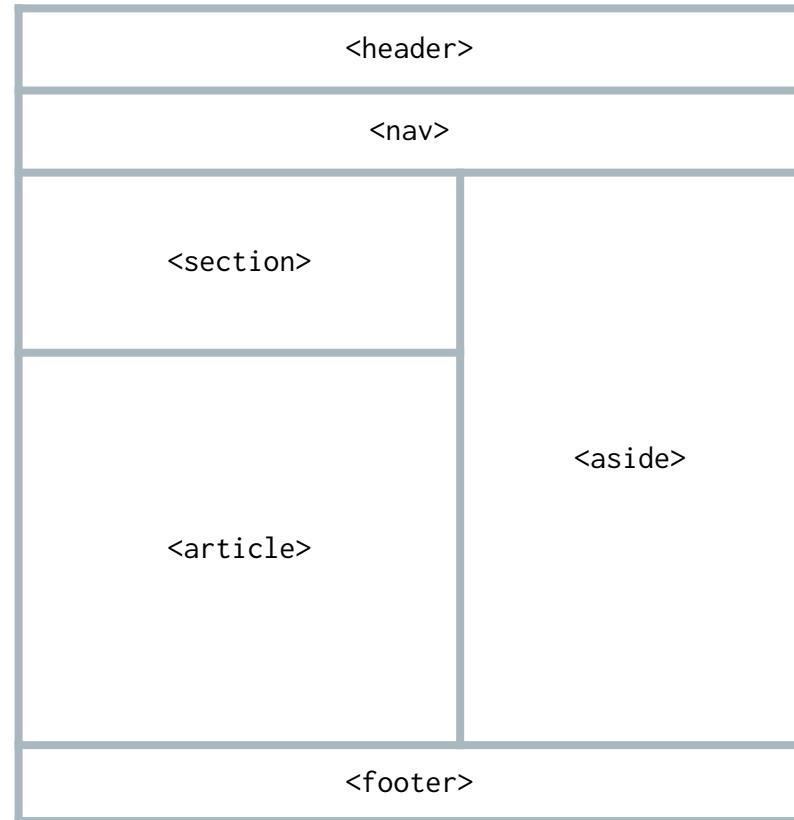
<header>	Defines a header for a document or a section
<nav>	Defines a container for navigation links
<section>	Defines a section in a document
<article>	Defines an independent self-contained article
<aside>	
<footer>	Defines a footer for a document or a section
	Defines additional details
	Defines a heading for the <details> element

Divs and Sections

That said, it seems many, if not most, websites still use basic divs.

There are reasons for this that we'll showcase in later lessons.

Additionally, it's possible to include semantics by using ID names and classes.

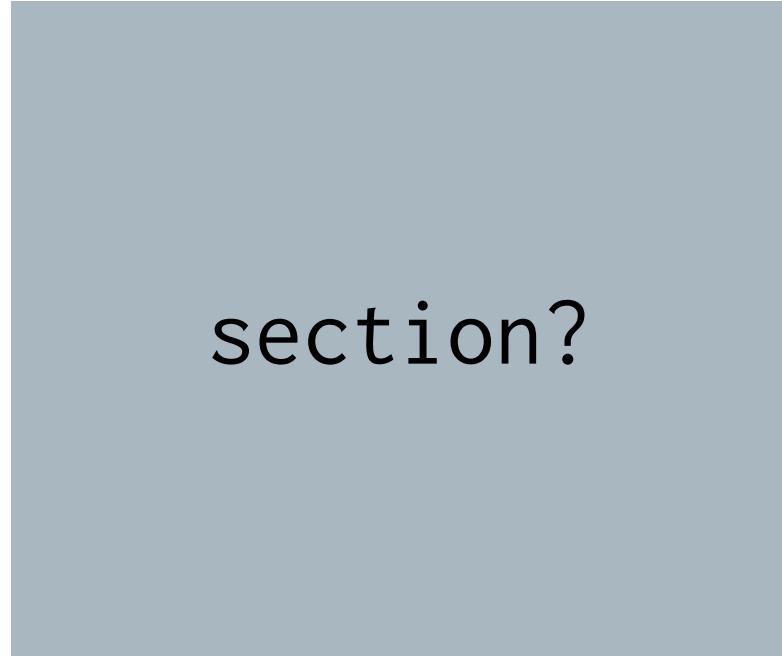


Divs and Sections

Bottom line: Follow the homework instructions. And when you're out in the real world, follow the conventions of where you work!



div?



section?

Classes vs. IDs

When choosing between a CSS ID and a CSS class, follow the convention:

Classes (.classname) are used if the same style will be used on multiple HTML elements.

IDs (#idname) are used if a style is unique to a certain HTML element.



Modifying Sites

You can edit any page's HTML and CSS with Chrome DevTools.
And you'll see your results instantly.



Practice Through Frustration

Keep practicing. It gets better!



CSS Typography

Typography Is Huge

Typography can play a huge role in the visual aesthetic and emotional identity of a webpage.



Typographic Properties

Typographic properties describe attributes of the type on the page.



Line Height: Distance between lines of text on a page (Golden Ratio of 1.5x font).



Font Size: Actual size of lettering. Should be at least 16 px on modern pages.

smashingmagazine.com



Line Length: Not a CSS property but rather a standard. Should be about 50–75 characters per line on a desktop. baymard.com

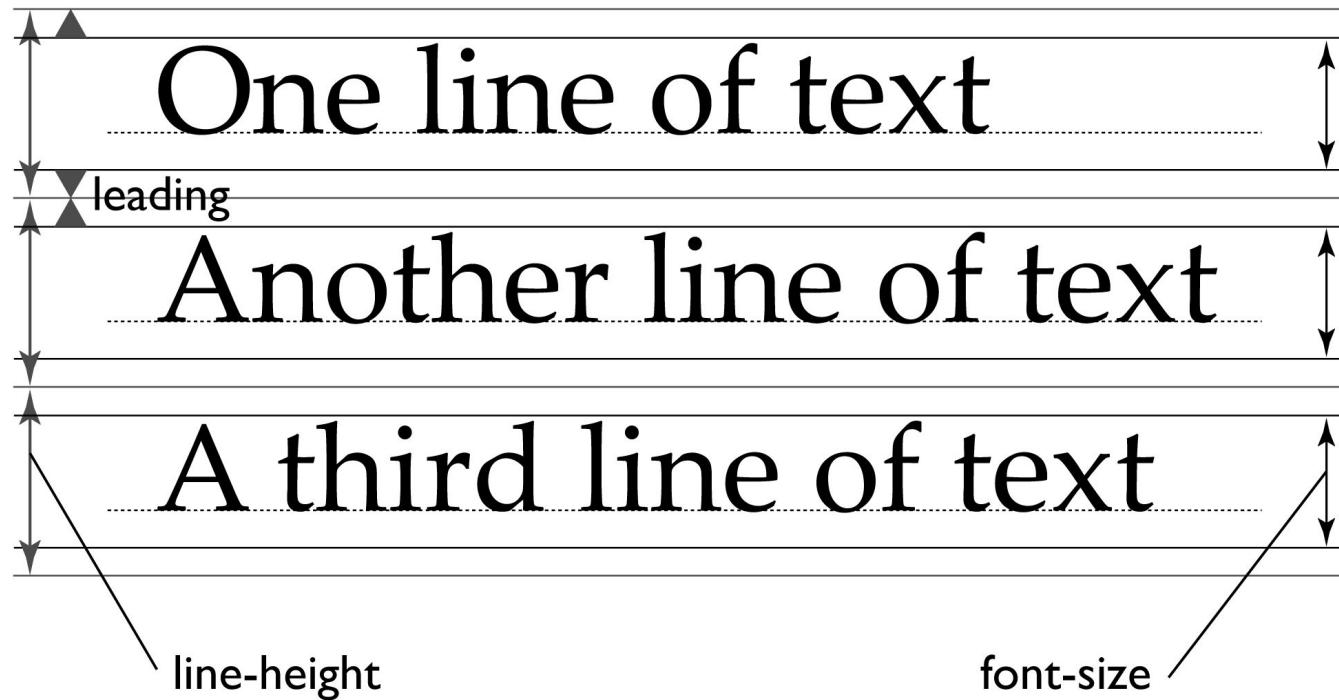


Letter Spacing: Spacing between individual letters. Try to avoid cramming letters together too closely.



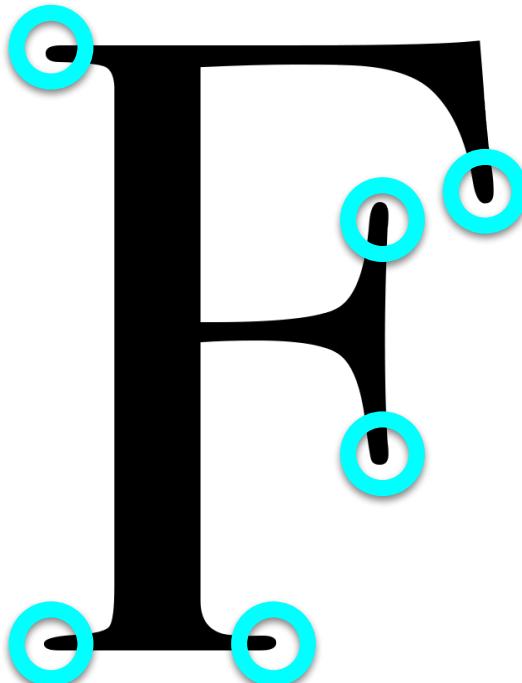
Sans-Serif vs. Serif: Sans-serif are fonts *sans their serifs*—no tails. They're easier to read online.

Line Height vs. Fonts

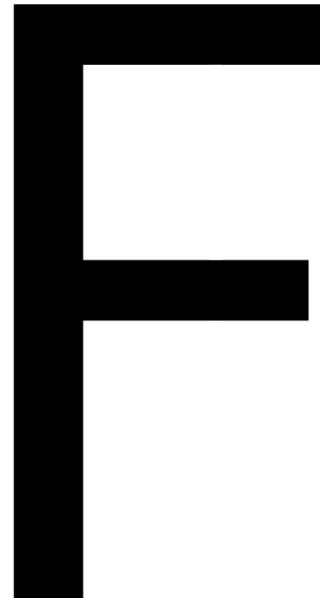


Serif vs. Sans-Serif

Serif fonts include small lines attached to the end strokes of letters.



Sans-Serif ("without serif") do not include such strokes.



Activity: CSS Typography

Using the `html-template` file provided to you, create an external CSS stylesheet to modify the typography of each of the body paragraphs.

Use CSS styling to modify the following properties:

- Font-family
- Font-size
- Font-weight
- Line-height
- Letter-spacing

Bonus:

If you finish early, read about TypePlate and see if you can figure out how to incorporate it into your site (typeplate.com).

Suggested Time: 10 minutes



Google Fonts

It's easy to incorporate [Google's custom fonts](#) into your site!

Roboto

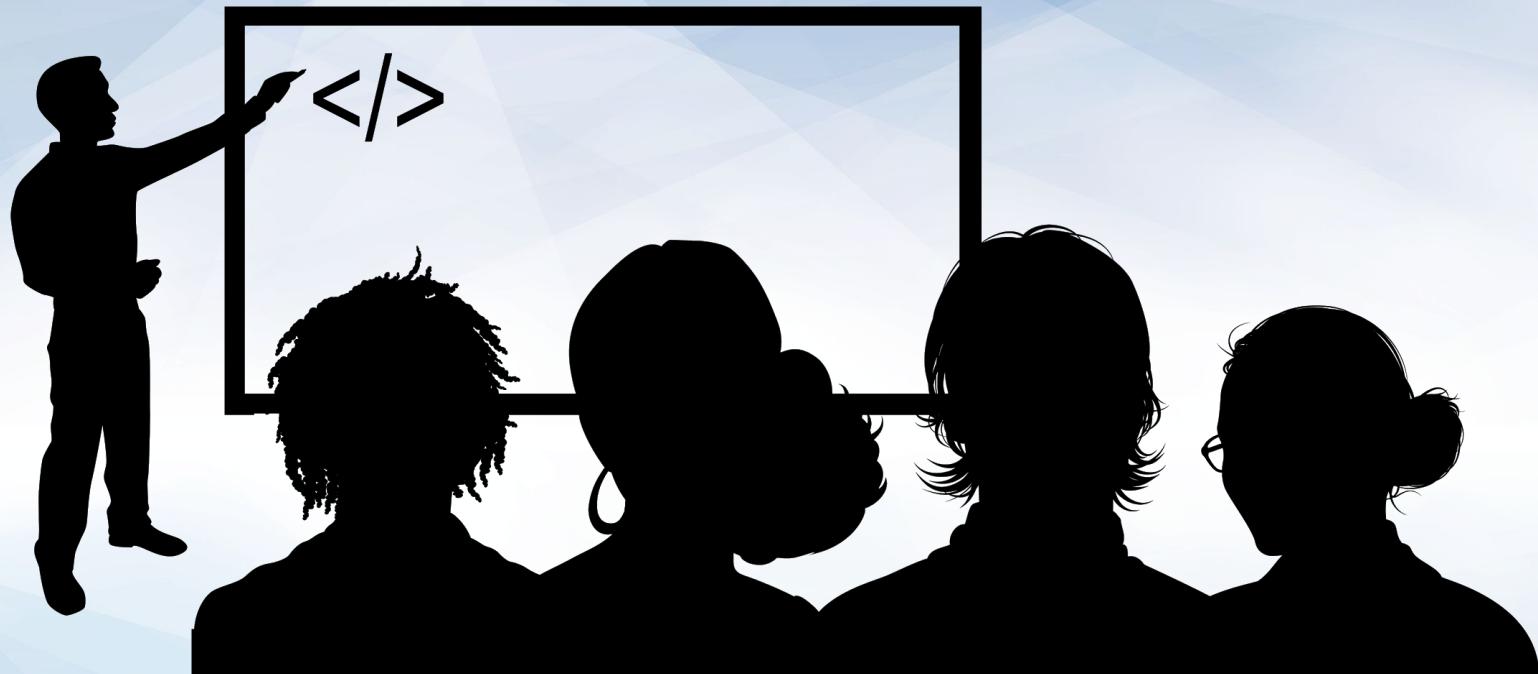
Christian Robertson

All their equipment
and instruments
are alive.

coiny

Marcelo Magalhães

**A red flare silhouetted
the jagged edge of a
wing.**



Instructor Demonstration
Custom Fonts

Activity: Custom Google Fonts

Assignment:

Create (or reuse) an HTML document and then incorporate 2–3 custom Google fonts (fonts.google.com) into the page.

Bonus:

If you finish early, read about Font Awesome icons (fontawesome.com) and see if you can figure out how to incorporate one onto your page.

Suggested Time: 10 minutes



Take a Break!



Pseudo Styles

Pseudo-Classes

CSS provides keywords that can be added to selectors. These keywords can highlight the special states of the selected element.

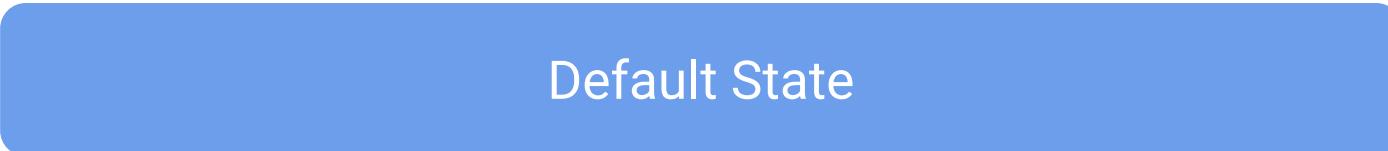
Great example: CSS can hook onto the specific moment when a link is hovered over using the `:hover` pseudo-class.

Complete list of pseudo-classes: developer.mozilla.org/en-US/docs/Web/CSS/Pseudo-classes

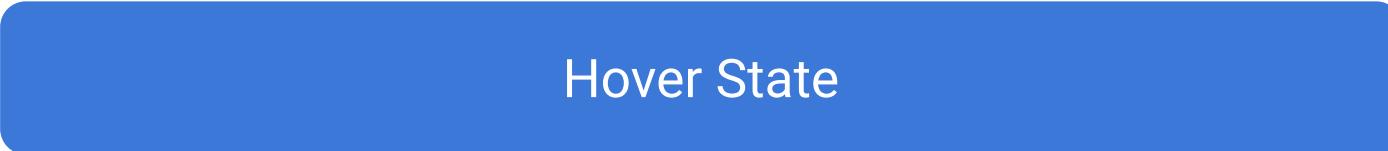
Index of standard pseudo-classes				
<code>:active</code>	<code>:first-child</code>	<code>:last-child</code>	<code>:only-child</code>	<code>:root</code>
<code>:any</code>	<code>:first-of-type</code>	<code>:last-of-type</code>	<code>:only-of-type</code>	<code>:scope</code>
<code>:checked</code>	<code>:fullscreen</code>	<code>:left</code>	<code>:optional</code>	<code>:target</code>
<code>:default</code>	<code>:focus</code>	<code>:link</code>	<code>:out-of-range</code>	<code>:valid</code>
<code>:dir()</code>	<code>:hover</code>	<code>:not()</code>	<code>:placeholder-shown</code>	<code>:visited</code>
<code>:disabled</code>	<code>:indeterminate</code>	<code>:nth-child()</code>	<code>:read-only</code>	
<code>:empty</code>	<code>:in-range</code>	<code>:nth-last-child()</code>	<code>:read-write</code>	
<code>:enabled</code>	<code>:invalid</code>	<code>:nth-last-of-type()</code>	<code>:required</code>	
<code>:first</code>	<code>:lang()</code>	<code>:nth-of-type()</code>	<code>:right</code>	

Button with Various States

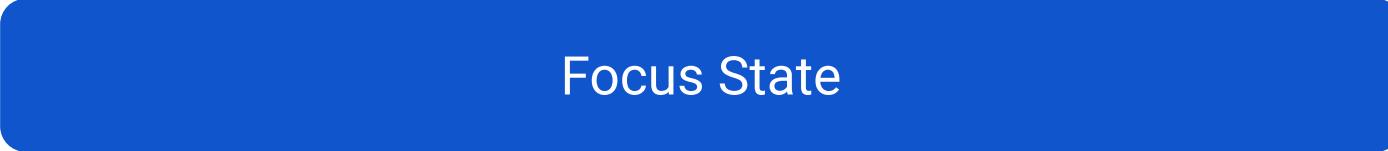
You can use pseudo-classes to define how a button appears in various states.



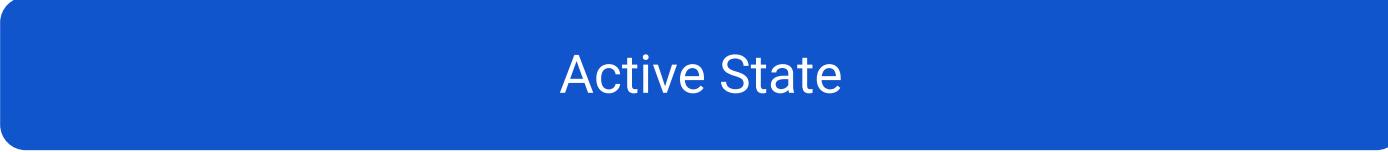
Default State



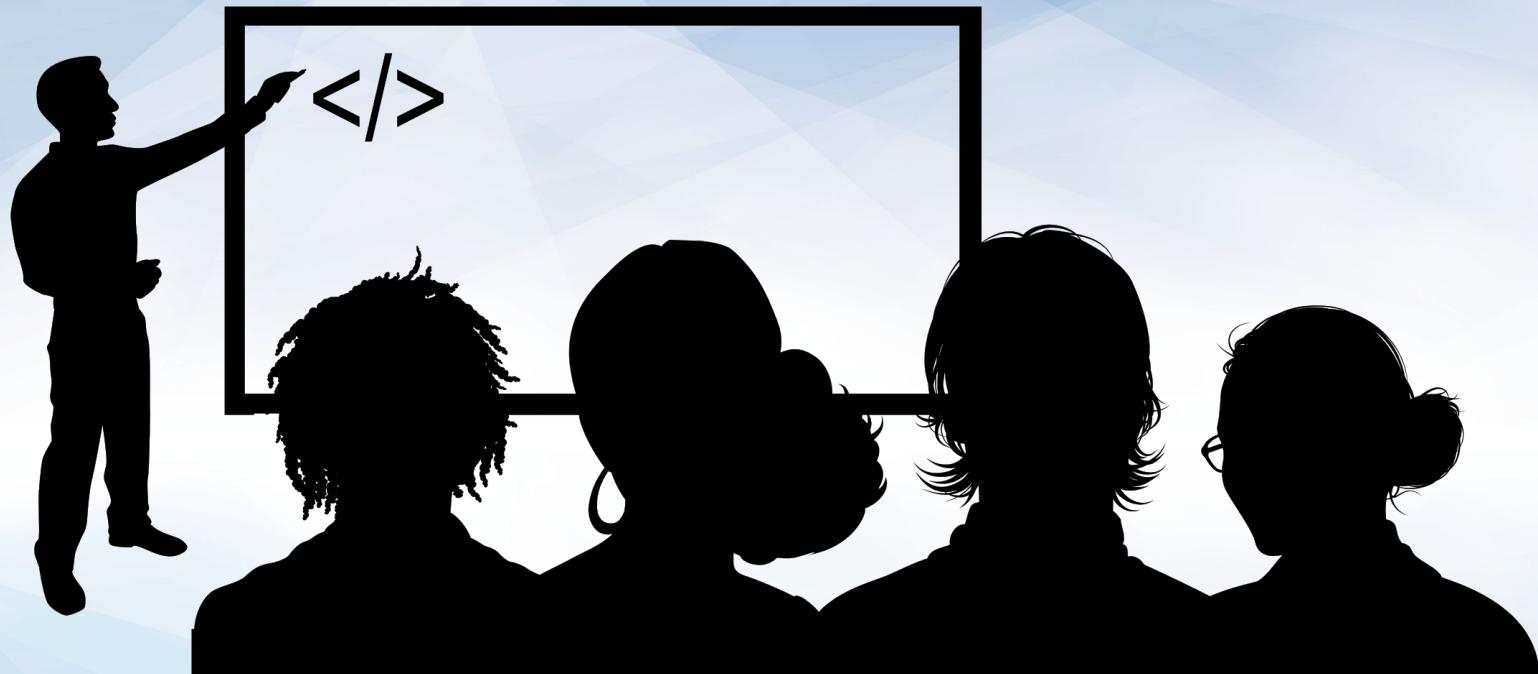
Hover State



Focus State



Active State



Instructor Demonstration Pseudo Styles

Activity: Pseudo Styles

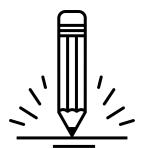
Assignment:

Create a series of links and modify the pseudo-classes associated with their default, active, hover, and focus states.

Bonus:

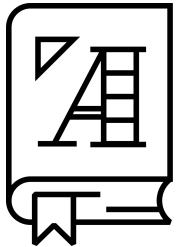
If you finish early, incorporate a pseudo-class we haven't yet covered.
Then Google pseudo-elements and try to incorporate one as well.

Suggested Time: 5 minutes



Beyond CSS Hacking

Quick Refresher on HTML/CSS



HTML: Hypertext Markup Language (Content)

CSS: Cascading Style Sheets (Appearance)

HTML and CSS are the “languages of the web.” Together, they define both the content and the aesthetics of a webpage, including colors, fonts, and content placement. (JavaScript is the third language of the web: it handles logic, animation, etc.)

HTML vs. HTML/CSS

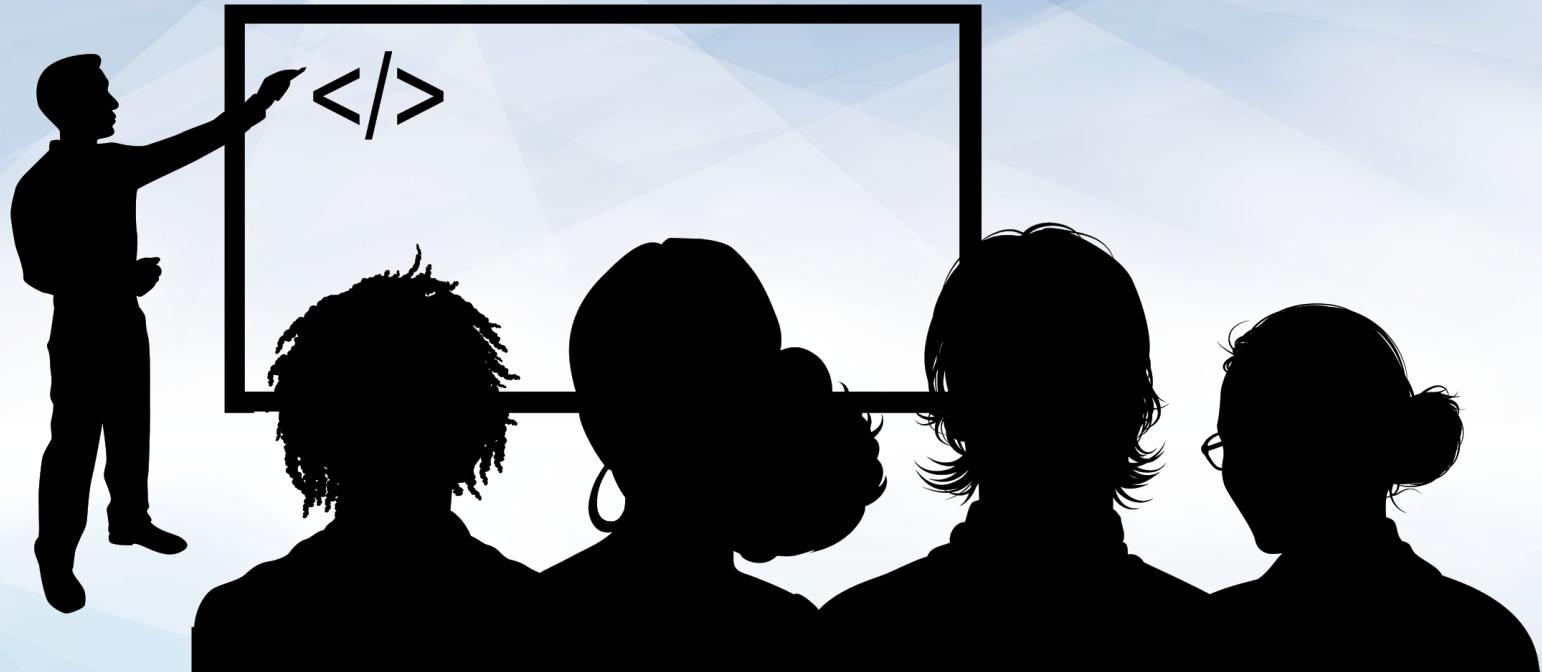
HTML Alone	HTML and CSS
Like writing papers in Notepad.	Like writing papers in Microsoft Word.
Used to write unformatted text (i.e, content only).	Used both to write the content <i>and</i> format it (color, font, alignment, layout, etc.).
	

How You (Probably) Feel About CSS



A revelation. There is a better way!





Instructor Demonstration
Where's the CSS?

Partner Activity: Where's the CSS?

With those sitting nearest to you, take a close look at the Bootstrap-powered HTML document I just sent you.

Be prepared to answer the following two questions:

01

Where does this HTML document draw its styles from?

02

How does our browser know which HTML element to style, and in which way?
(e.g., button face or background banner)

HINT: Think about how Google Fonts work.

Suggested Time: 5 minutes



Powered by Bootstrap

External CSS Link:

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <title>My First Website</title>
5      <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/
       bootstrap/3.3.6/css/bootstrap.min.css">
6  </head>
7  <body>
```

Predefined CSS Class (e.g., jumbotron):

```
<div class="jumbotron">
    <h1 class="text-center"><strong>Awesome Header</strong></h1>
    <h2 class="text-center">Smaller Awesome Header</h2>
    <h3 class="text-center">Even Smaller Header</h3>
    <p class="text-center"><a class="btn btn-danger btn-lg" href="#" role="button">
        <span class="glyphicon glyphicon-envelope"></span> Learn more</a></p>
</div>
```

Powered by Bootstrap

The Coding Bootcamp

Home

About

Contact

Dropdown ▾

Default

Static top

Fixed top

Awesome Header

Smaller Awesome Header

Even Smaller Header

 Learn more

class="jumbotron"



Placeholder text for the first column.

Placeholder text for the first column.

Placeholder text for the first column.



Placeholder text for the second column.

Placeholder text for the second column.

Placeholder text for the second column.



Using Bootstrap gives us
predefined CSS styles.

Partner Activity: Predefined CSS



Turn to the person next to you and celebrate!

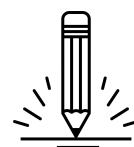


Then discuss the concept of Bootstrap to confirm that you both understand why you are celebrating.



HINT: You should be explaining why Bootstrap's predefined CSS a big deal.

Suggested Time: 5 minutes



What Is Bootstrap?

Bootstrap Definition



Bootstrap is a free collection of tools for creating websites and web applications.



It comes with a pre-built design template for typography, forms, buttons, navigation, UI elements, and JavaScript.



Bootstrap documentation: getbootstrap.com

Why Use Bootstrap?

Reason #1: UI Kit



Familiarize yourself with the UI features Bootstrap offers by reading the documentation.



Once Bootstrap is active, you can simply copy snippets from the documentation to save yourself the time it takes to create elements from scratch!



Why Use Bootstrap?

Reason #2: Mobile Responsiveness



One of the most compelling reasons to use Bootstrap is that it is mobile-responsive by default.



This means that your website will automatically look great when viewed on screens ranging from monitors to tablets to phones.



HTML/CSS/Bootstrap Analogy

HTML Alone	HTML and CSS	HTML/CSS and Bootstrap
Like writing papers in Notepad.	Like writing papers in Microsoft Word.	Like writing papers in Microsoft Word <i>using a template</i> .
Used to write unformatted text (i.e., content only).	Used both to write the content <i>and</i> format it (color, font, alignment, layout, etc.).	You can still customize it, but you're starting with a pre-built style and aesthetic.
		

Key Bootstrap Features

Bootstrap Components

Bootstrap offers a wide range of components that you should consider including in your future web projects. Flip through the documentation and incorporate elements as you see fit.

Bootstrap Components				
Alerts	Badges	Buttons	Cards	Carousel
Dropdowns	Forms	Jumbotron	List group	Modal
Navs	Popover	Progress Bar	Toast	Tooltips
Several more...				

Bootstrap Nav Bars

My First Website

Link 1

Link 2

Link 3

Example:

```
<nav class="navbar navbar-default navbar-fixed-top" role="navigation">
  <div class="container">
    <div class="navbar-header">
      <button type="button" class="navbar-toggle collapsed"
              data-toggle="collapse" data-target="#navbar" aria-expanded="false" aria-controls="navbar">
        <span class="sr-only">Toggle navigation</span>
        <span class="icon-bar"></span>
        <span class="icon-bar"></span>
        <span class="icon-bar"></span>
      </button>
      <a class="page-scroll navbar-brand" href="#page-top">My First Website</a>
    </div> <!-- /.navbar-header -->
    <div id="navbar" class="navbar-collapse collapse">
      <ul class="nav navbar-nav">
        <li class="hidden">
          <a href="#page-top"></a>
        </li>
        <li><a href="http://www.google.com" class="nav-btn">Link 1</a></li>
        <li><a href="http://www.facebook.com" class="nav-btn">Link 2</a></li>
        <li><a href="http://www.twitter.com" class="nav-btn">Link 3</a></li>
      </ul>
    </div><!--/.navbar-collapse -->
  </div> <!-- /.container -->
</nav>
```

Bootstrap Jumbotron

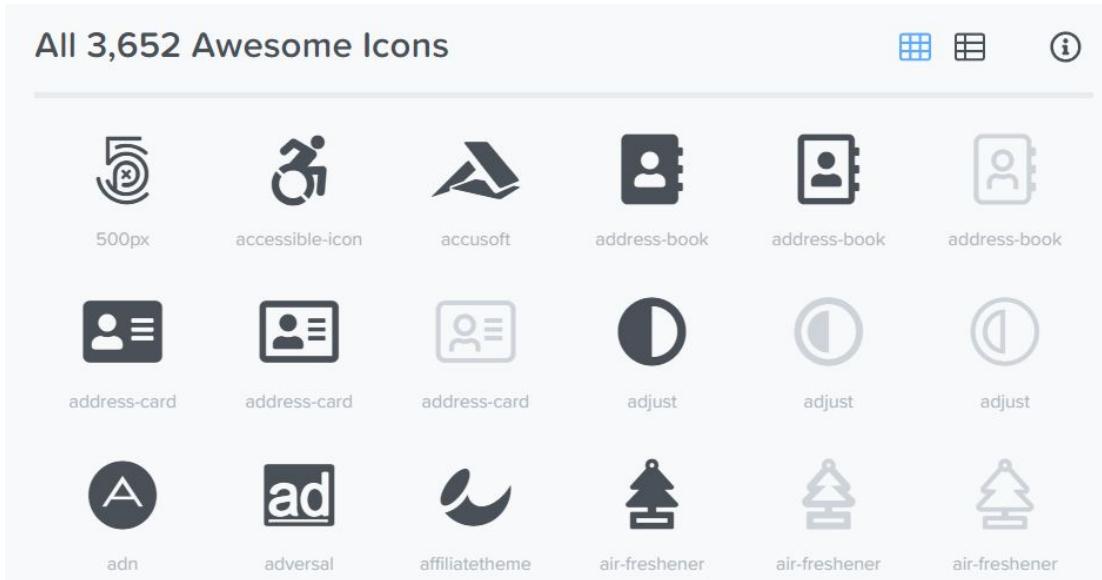
Hello, World!

This is a simple hero unit, a simple jumbotron-style component for calling extra attention to featured content or information.

[Learn More](#)

```
<div class="jumbotron">
  <h1>Hello, world!</h1>
  <p>...</p>
  <p><a href="#" class="btn btn-primary btn-lg" role="button">Learn more</a></p>
</div>
```

Bootstrap and Font Awesome



Example: ` Learn more`

Bootstrap Table

#	First Name	Last Name	Username
1	Mark	Otto	@mdo
2	Jacob	Thornton	@fat
3	Larry	the Bird	@twitter

Example:

```
<table class="table table-striped">
  <tr>
    <th>First Name</th>
    <th>Last Name</th>
    <th>Username</th>
  </tr>
  <tr>
    <td>Mark</td>
    <td>Otto</td>
    <td>@mdo</td>
  </tr>
  ...
</table>
```

Bootstrap Form

Email address

Password

File input

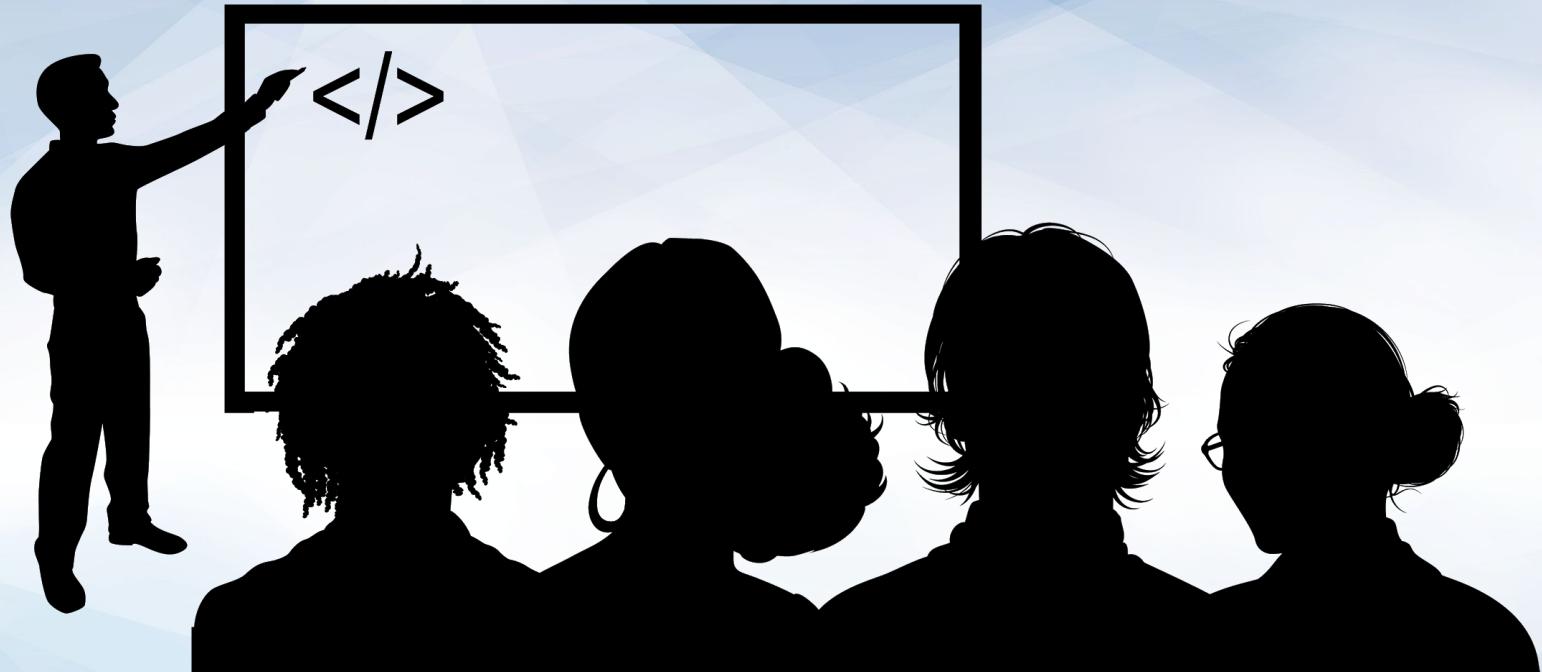
No file chosen

Example block-level help text here.

Check me out

Example:

```
<form>
  <div class="form-group">
    <label for="exampleInputEmail1">Email address</label>
    <input type="email" class="form-control" id="exampleInputEmail1" placeholder="Enter email">
  </div>
  <div class="form-group">
    <label for="exampleInputPassword1">Password</label>
    <input type="password" class="form-control" id="exampleInputPassword1" placeholder="Password">
  </div>
  <div class="form-group">
    <label for="exampleInputFile">File input</label>
    <input type="file" id="exampleInputFile">
    <p class="help-block">Example block-level help text here.</p>
  </div>
  <div class="checkbox">
    <label>
      <input type="checkbox"> Check me out
    </label>
  </div>
  <button type="submit" class="btn btn-default">Submit</button>
</form>
```



Instructor Demonstration Bootstrap Components

Partner Activity: Bootstrap Components

Working with someone sitting near you, do the following:

01

Navigate to the Bootstrap website.

02

Copy the link to the Bootstrap CSS file into one of your old HTML files.

03

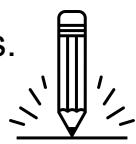
Look through the Bootstrap CSS or Components list and incorporate at least three Bootstrap elements into your page.

04

Slack a screenshot of your page to your section's channel when you finish.

HINT: First include a link to Bootstrap's CSS. Then visit the Bootstrap page on CSS or Components.

Suggested Time: 15 minutes



Takeaways

Takeaways

It's the end of class! By now, you should be able to:

01

Provide a loose definition of *typography* and list a few CSS properties that can be used to style it.

02

Offer a practical example of using pseudo-classes.

03

Understand generally what Twitter Bootstrap is and why predefined CSS frameworks are so powerful.

04

Know how to incorporate the Twitter Bootstrap style library into your website.

Next Class: Layout Building!

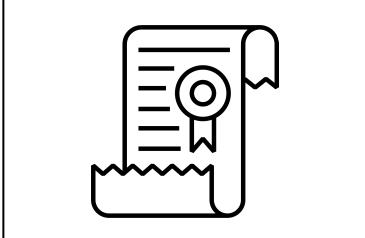
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Questions?