

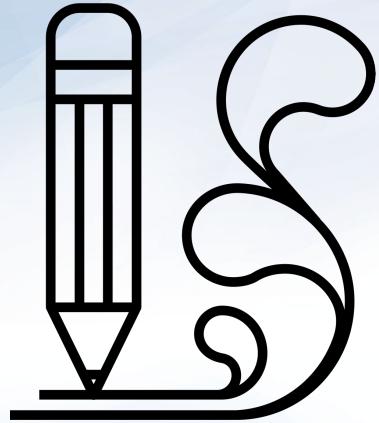


Down and Dirty CSS

Web Development Boot Camp
Lesson 2.2



A Few Admin Items



Homework is due!

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



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)

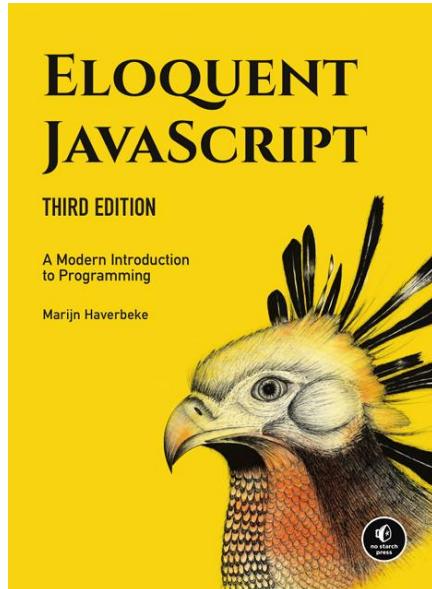


JavaScript & JQuery: Interactive Front-End Web Development
by Jon Duckett
(Wiley, 2014)

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 over 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.

Today's Class

Objectives

In today's class, we'll introduce:



CSS Typography and Google Fonts



Pseudo-Classes



The Basics of Twitter Bootstrap

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

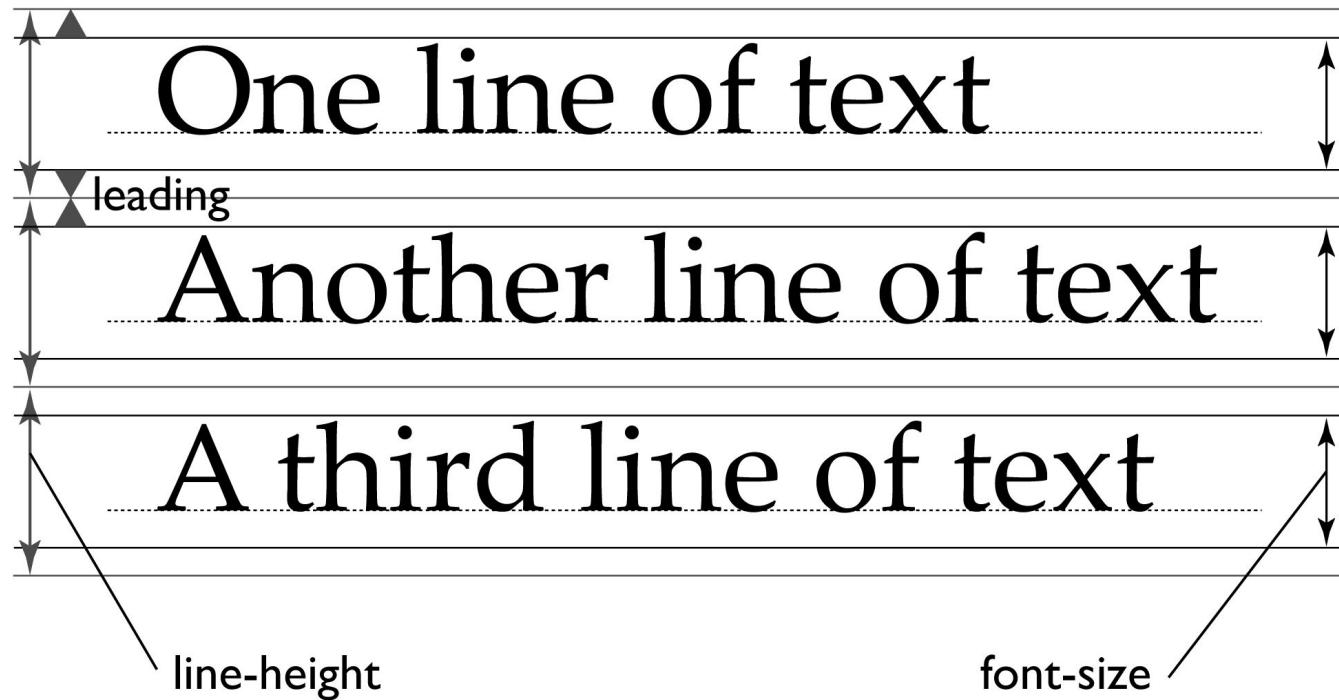


Letter Spacing: Spacing between individual letters. Try to avoid cramming letters together too closely.



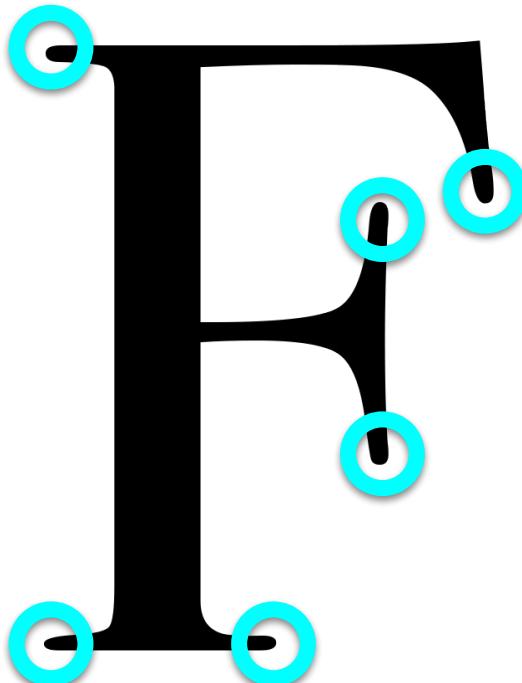
Sans-Serif vs. Serif: Sans-serif are fonts *sans their serifs*—no tails. They're easier to read online.

Line Height vs. Fonts

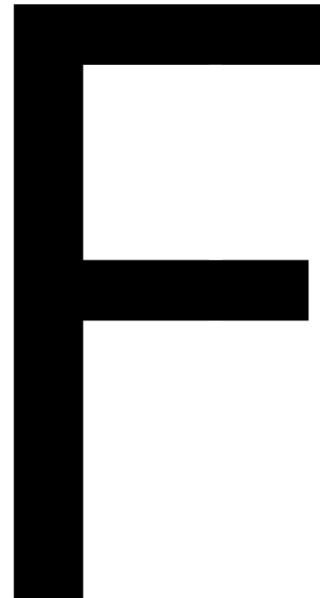


Serif vs. Sans-Serif

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



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



Activity: CSS Typography

Create a block of text using a *LomIpsum* generator. Incorporate it into an HTML document.

Then 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 (<http://typeplate.com/>).

Suggested Time: 10 minutes



Google Fonts

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

Roboto

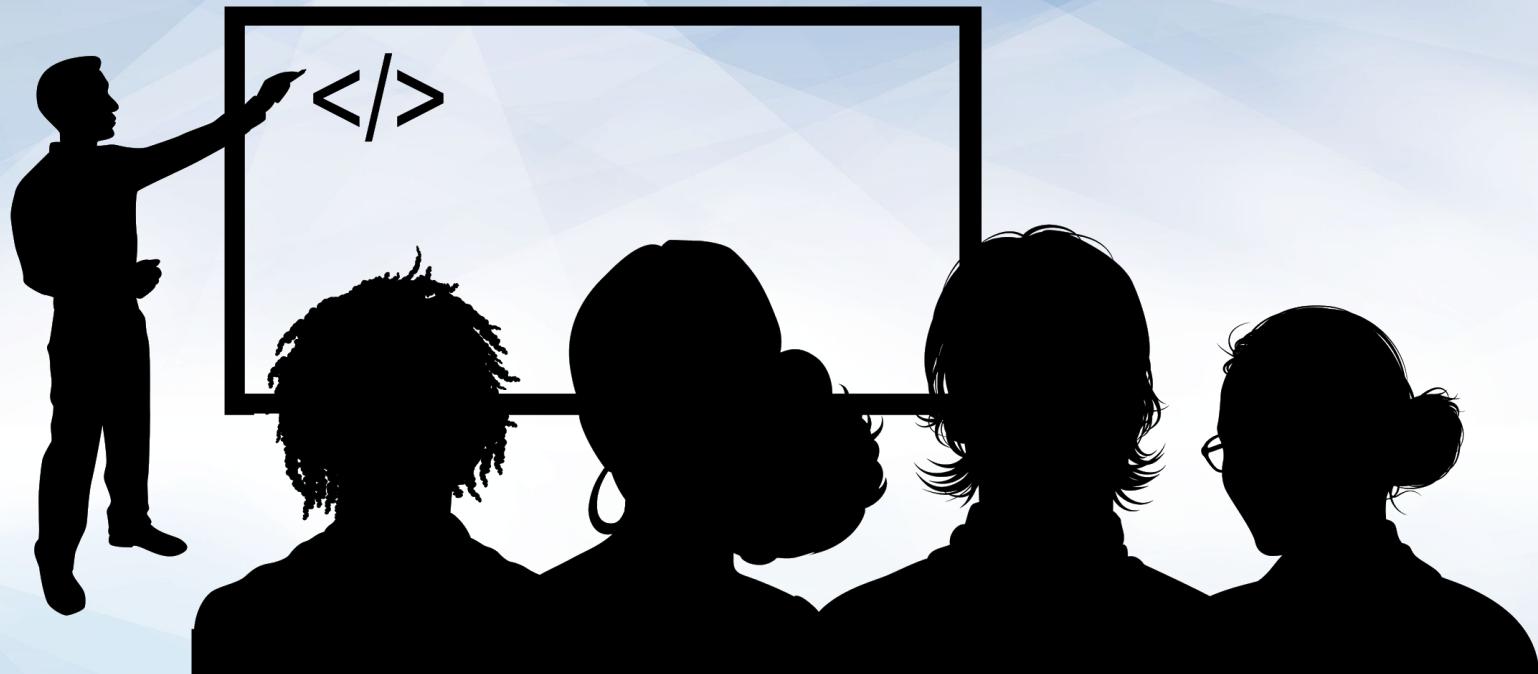
Christian Robertson

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 re-use) 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 (www.fontawesome.com) and see if you can figure out how to incorporate one onto your page.

Suggested Time: 11 minutes



Pseudo Styles

Pseudo-Classes

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

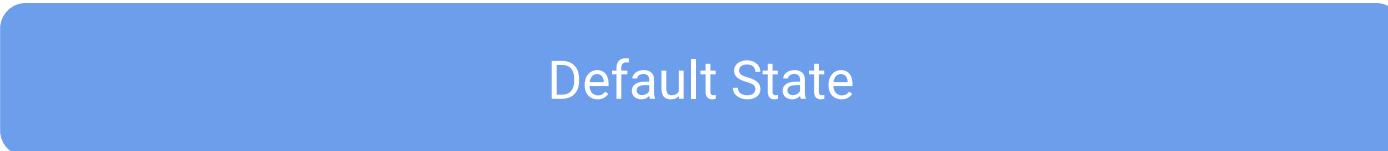
Great example: CSS can hook onto the specific moment when a link is hovered over using the `:hover` pseudo-class.

Complete list of pseudo-classes: developer.mozilla.org

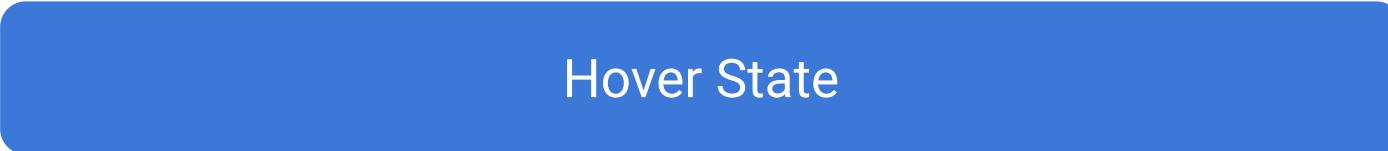
Index of standard pseudo-classes				
<code>:active</code>	<code>:first-child</code>	<code>:last-child</code>	<code>:only-child</code>	<code>:root</code>
<code>:any</code>	<code>:first-of-type</code>	<code>:last-of-type</code>	<code>:only-of-type</code>	<code>:scope</code>
<code>:checked</code>	<code>:fullscreen</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

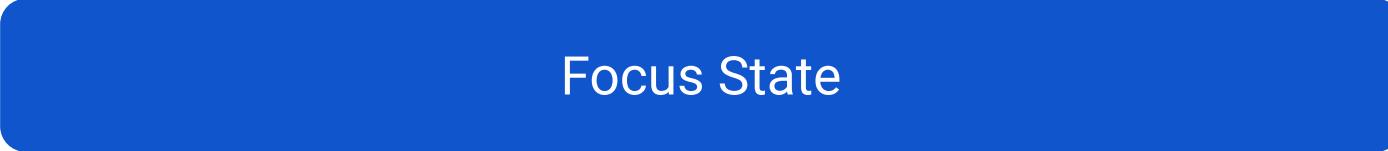
You can use pseudo-classes to define how a button appears in various states.



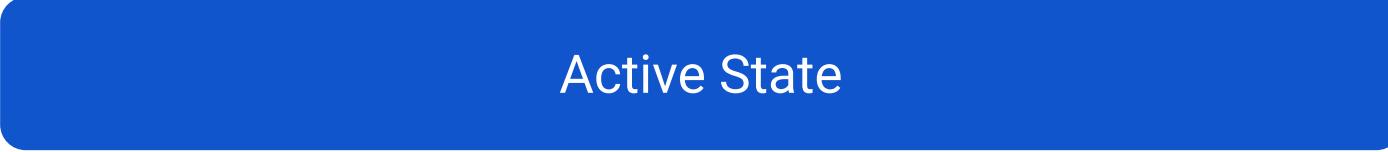
Default State



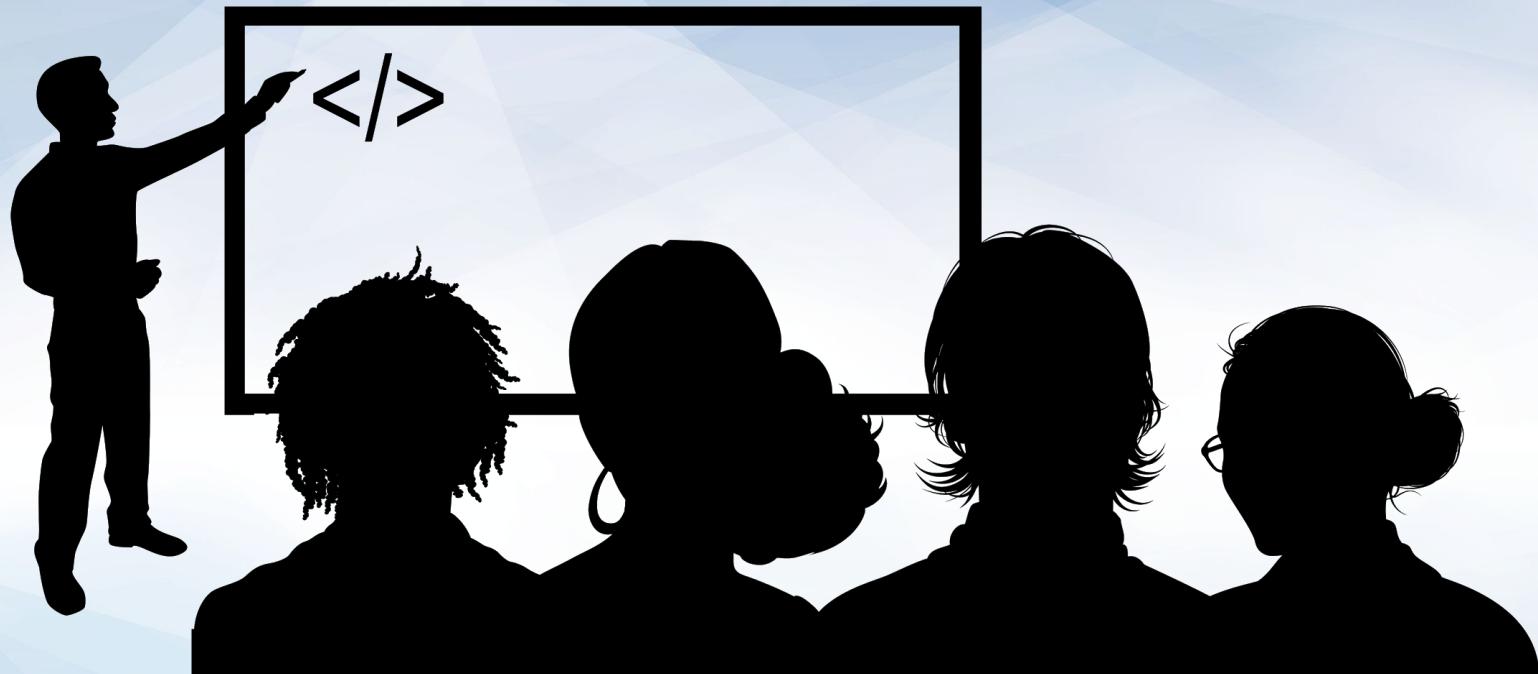
Hover State



Focus State



Active State



Instructor Demonstration Pseudo Styles

Activity: Pseudo Styles

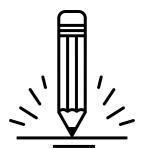
Assignment:

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

Bonus:

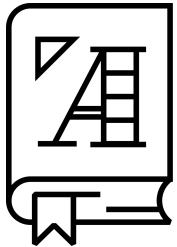
If you finish early, incorporate a pseudo-class we haven't yet covered.
Then Google pseudo-elements and try to incorporate one as well.

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

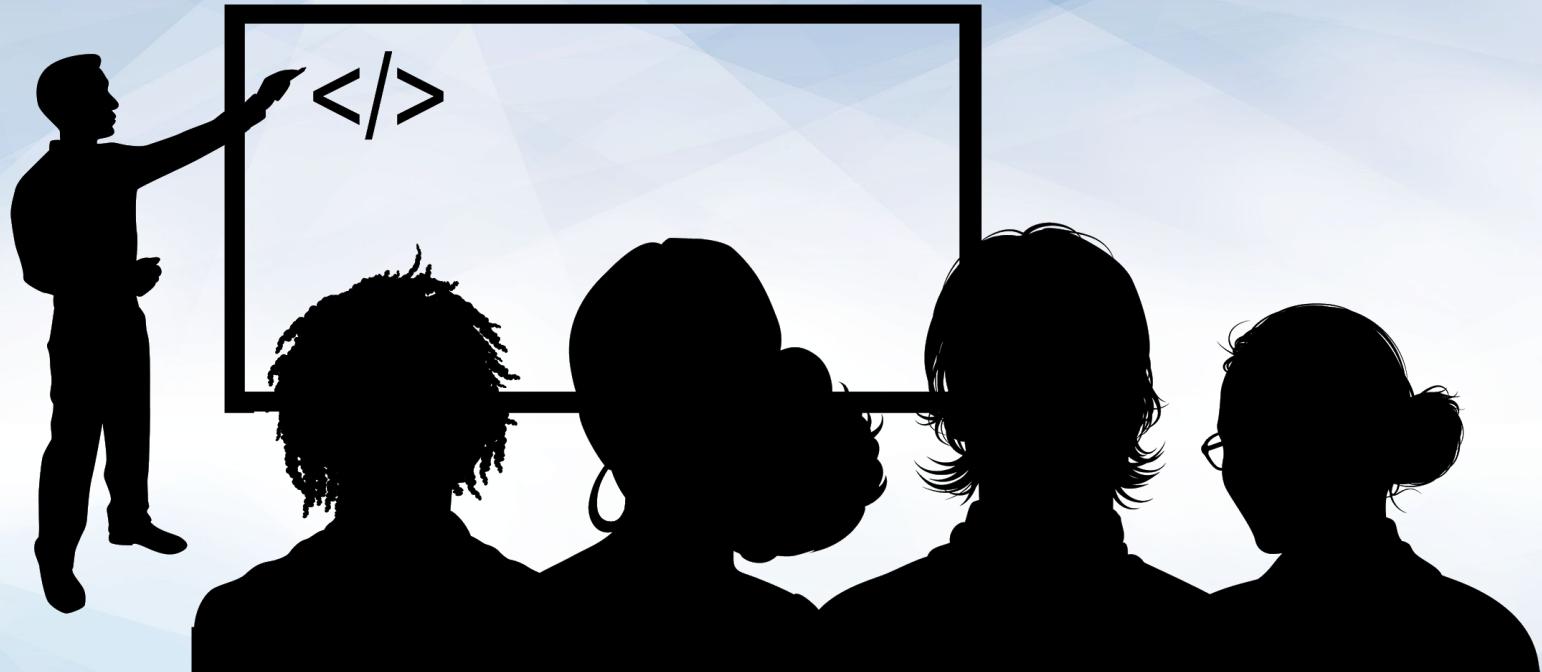
HTML Alone	HTML and CSS
Like writing papers in Notepad.	Like writing papers in Microsoft Word.
Used to write unformatted text (i.e, content only).	Used both to write the content <i>and</i> format it (color, font, alignment, layout, etc.).
 A purple icon of the Microsoft Notepad application, featuring a white 'N' inside a rounded square.	 A blue icon of the Microsoft Word application, featuring a white 'W' inside a rounded square.

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.



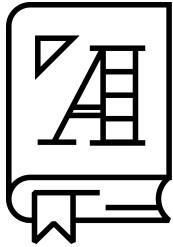
HINT: You should be explaining why Bootstrap's predefined CSS a big deal.

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



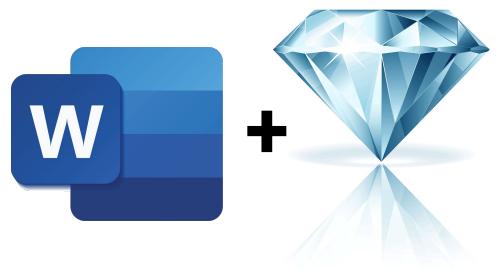
One of the most compelling reasons to use Bootstrap is that it is mobile-responsive by default.



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.
 A purple Notepad icon with a white 'N' on it.	 A blue Microsoft Word document icon with a white 'W' on it.	 A blue Microsoft Word document icon with a white 'W' on it, followed by a plus sign and a large blue diamond.

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				
Glyphicons	Navs	Badges	Progress bars	Wells
Dropdowns	Navbar	Jumbotron	Media object	
Button groups	Breadcrumbs	Page header	List group	
Button dropdown	Pagination	Thumbnails	Panels	
Input groups	Labels	Alerts	Responsive embed	

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 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

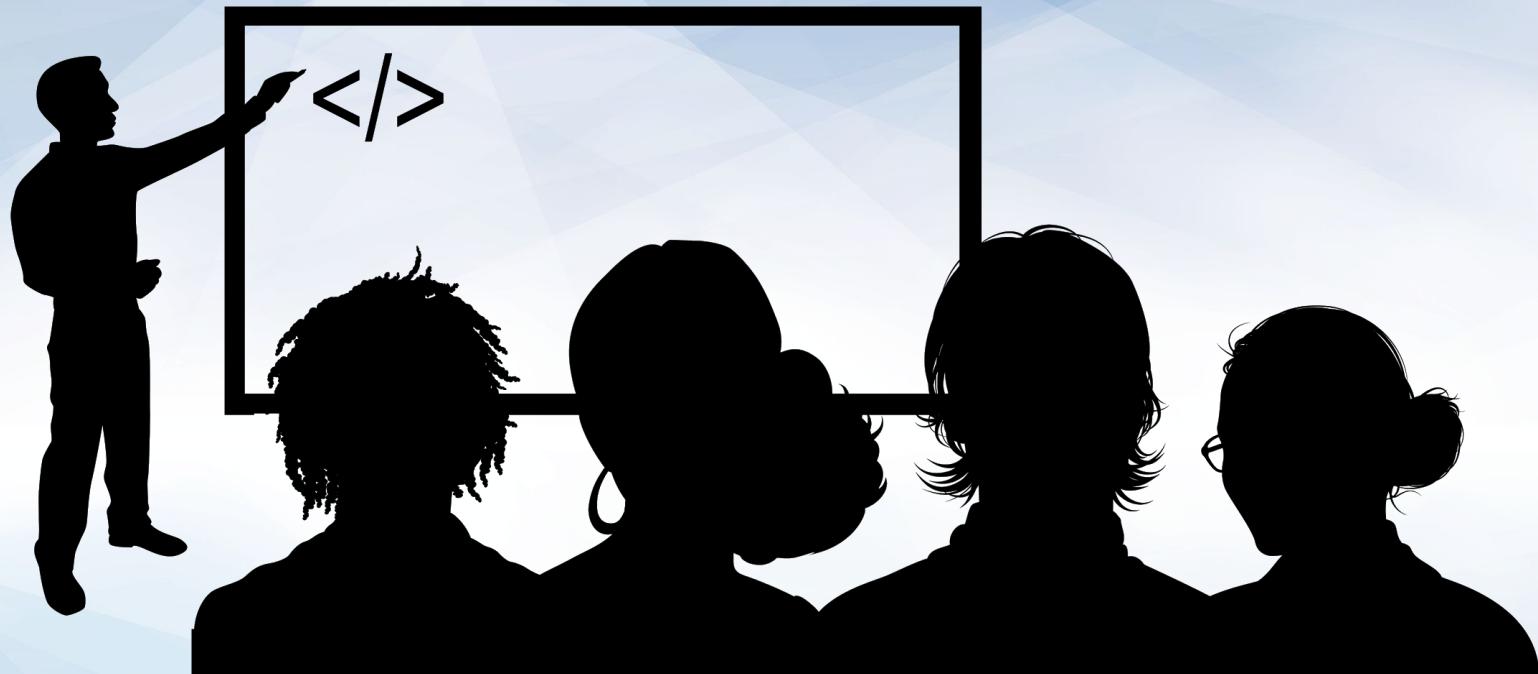
No file chosen

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 Twitter Bootstrap website.

02

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

03

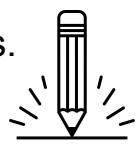
Look through the Bootstrap CSS or Components list and incorporate at least three Bootstrap elements into your page.

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!

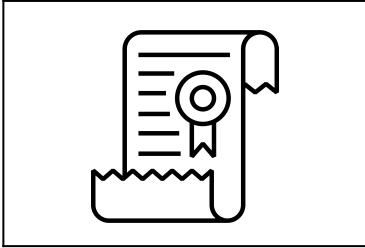
News Home About Contact

Awesome Stories



The Greatest Website Ever Made

Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt. Neque porro quisquam est, qui dolorem ipsum quia dolor sit amet, consectetur, adipisci velit, sed quia non numquam eius modi tempora incidunt ut labore et dolore magnam aliquam quaerat voluptatem. Ut enim ad minima veniam, quis nostrum exercitationem ullam corporis suscipit laboriosam, nisi ut aliquid ex ea commodi consequatur? Quis autem vel eum iure reprehenderit qui in ea voluptate velit esse quam nihil molestiae consequatur, vel illum qui dolorem eum fugiat quo voluptas nulla.



The Greatest Website Ever Made

Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt. Neque porro quisquam est, qui dolorem ipsum quia dolor sit amet, consectetur, adipisci velit, sed quia non numquam eius modi tempora incidunt ut labore et dolore magnam aliquam quaerat voluptatem. Ut enim ad minima veniam, quis nostrum exercitationem ullam corporis suscipit laboriosam, nisi ut aliquid ex ea commodi consequatur? Quis autem vel eum iure reprehenderit qui in ea voluptate velit esse quam nihil molestiae consequatur, vel illum qui dolorem eum fugiat quo voluptas nulla.



Questions?

Sketching / Grid Layouts





FOCUS!

Because in our opinion, these next two sections are some of the **MOST IMPORTANT ONES** in the **ENTIRE** program.



The Importance of Sketches

Every good web design begins with a sketch.

01

Because every aspect of a site's "look" is defined by HTML/CSS, it is crucial to have a detailed sketch going in.

02

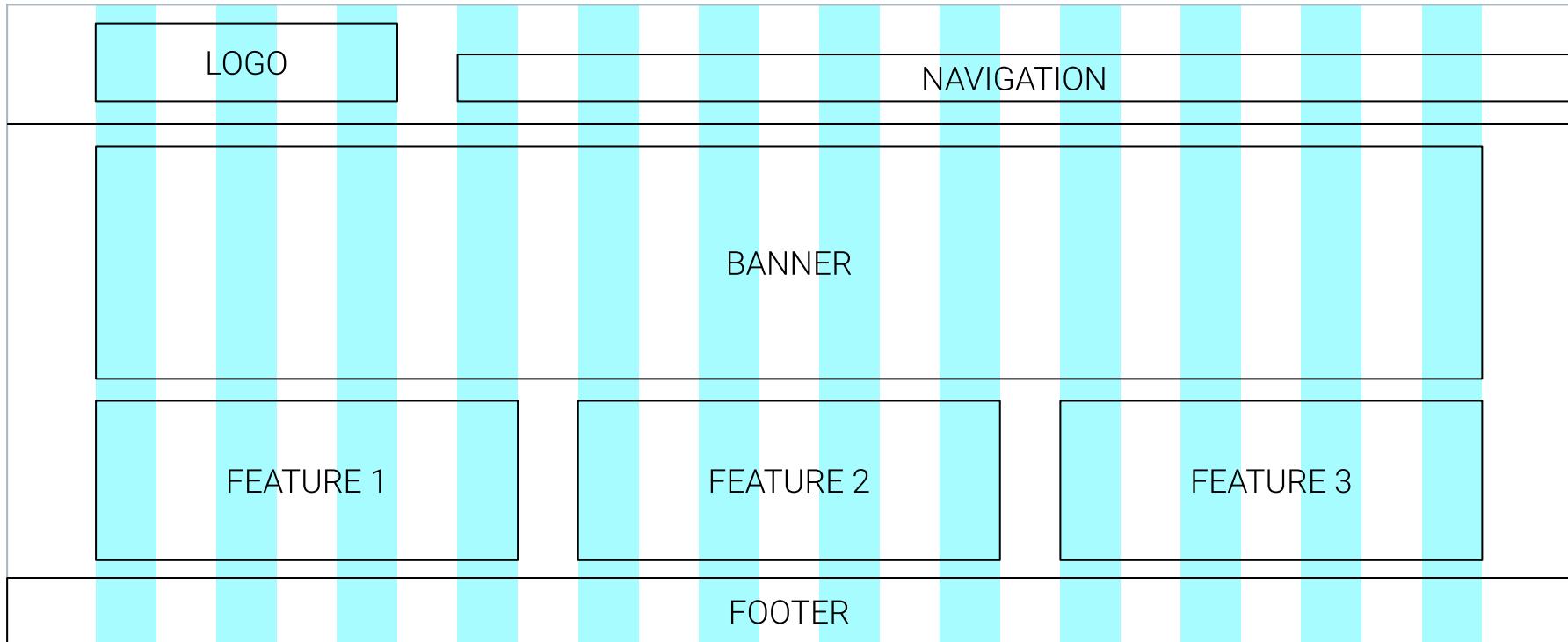
Pay particular attention to the location of navigation bars, titles, headers, content, images, footers, etc.

03

When imagining alignments in particular, be mindful of the ***grid***.

Designing with a Grid in Mind

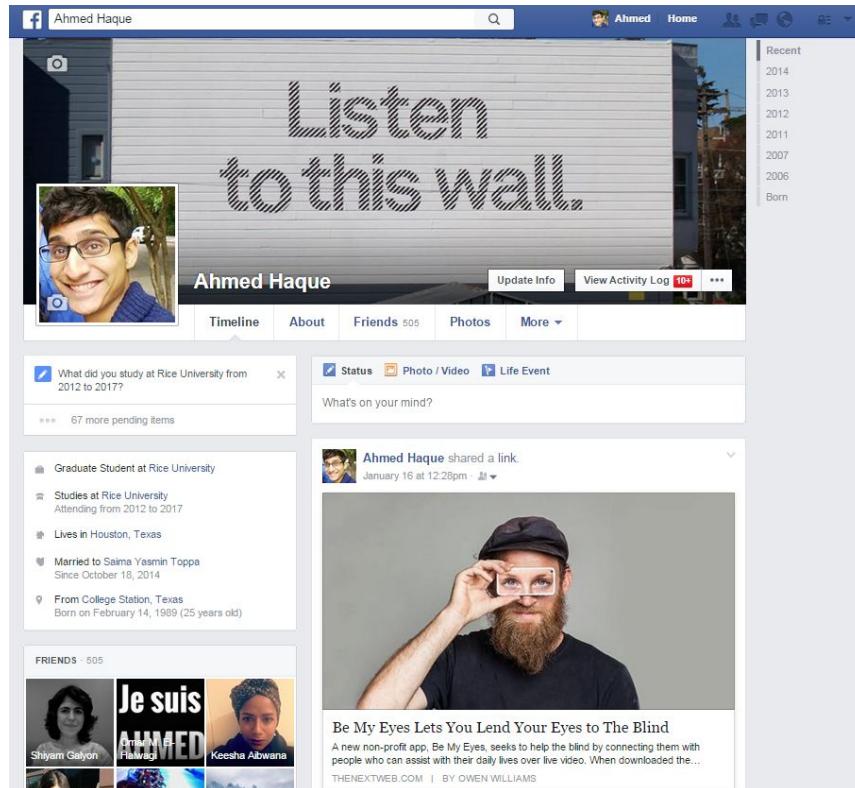
Grids serve to align elements aesthetically.



Facebook's Grid

Facebook is a perfect example of a website where the grid layout is obvious.

Grids make it easy to have content (text, images, and regions) align in an aesthetically pleasing way.



A More Complex Grid

Home > Perspectives

PERSPECTIVES

The Top 10 Cities for Coding Job Growth in the U.S.

Perspectives Trilogy Editors · January 3, 2019

It's no secret that tech jobs are multiplying and spreading across America away from the major tech hubs. But 2018 job growth data signals that the trend is accelerating at a staggering speed. From 2017 to 2018, the country...

[Read more](#)

0

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In the Classroom June 22, 2018

Failing Forward: Jesse Forte's Journey to Coding

Inspiration May 15, 2018

A More Complex Grid

News	Home	About	Contact
<p>News</p> <p>Lore ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.</p>	<p>Home</p>  <p>Lore ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.</p>    <p>Lore ipsum dolor sit amet, consectetur adipiscing elit. A laboris nisi ut aliquip ex ea commodo cons</p>     <p>Lore ipsum dolor sit amet, consectetur adipiscing elit. A laboris nisi ut aliquip ex ea commodo cons</p>	<p>About</p>     <p>Lore ipsum dolor sit amet, consectetur adipiscing elit. A laboris nisi ut aliquip ex ea commodo cons</p>	<p>Contact</p>     <p>Lore ipsum dolor sit amet, consectetur adipiscing elit. A laboris nisi ut aliquip ex ea commodo cons</p>
<p>Lore ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.</p>	<p>Lore ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.</p>	<p>Lore ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.</p>	<p>Lore ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.</p>
<p>Lore ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.</p>			

Tools for Sketches / Grid Creation

Wireframing Tools:

- Balsamiq***: <https://balsamiq.com/>
- Framebox: <http://framebox.org/>
- Pen and paper: your notebook

Grids for Photoshop / Illustrator:

- 960 GS: <http://960.gs/>
- GuideGuide: <https://guideguide.me/>

Designing with Grids Guides:

- 960 Grid System Made Easy: <http://bit.ly/1sjYaFC>
- Design by Grid: <http://www.designbygrid.com/>
- Designing with Grid-Based Approach: <http://bit.ly/1CM4Hzo>

Rows and Columns Workshop

Fundamentally, Web Design = Wireframes

The Greatest Website Ever Made

Wireframes Home About Contact

Headphones icon

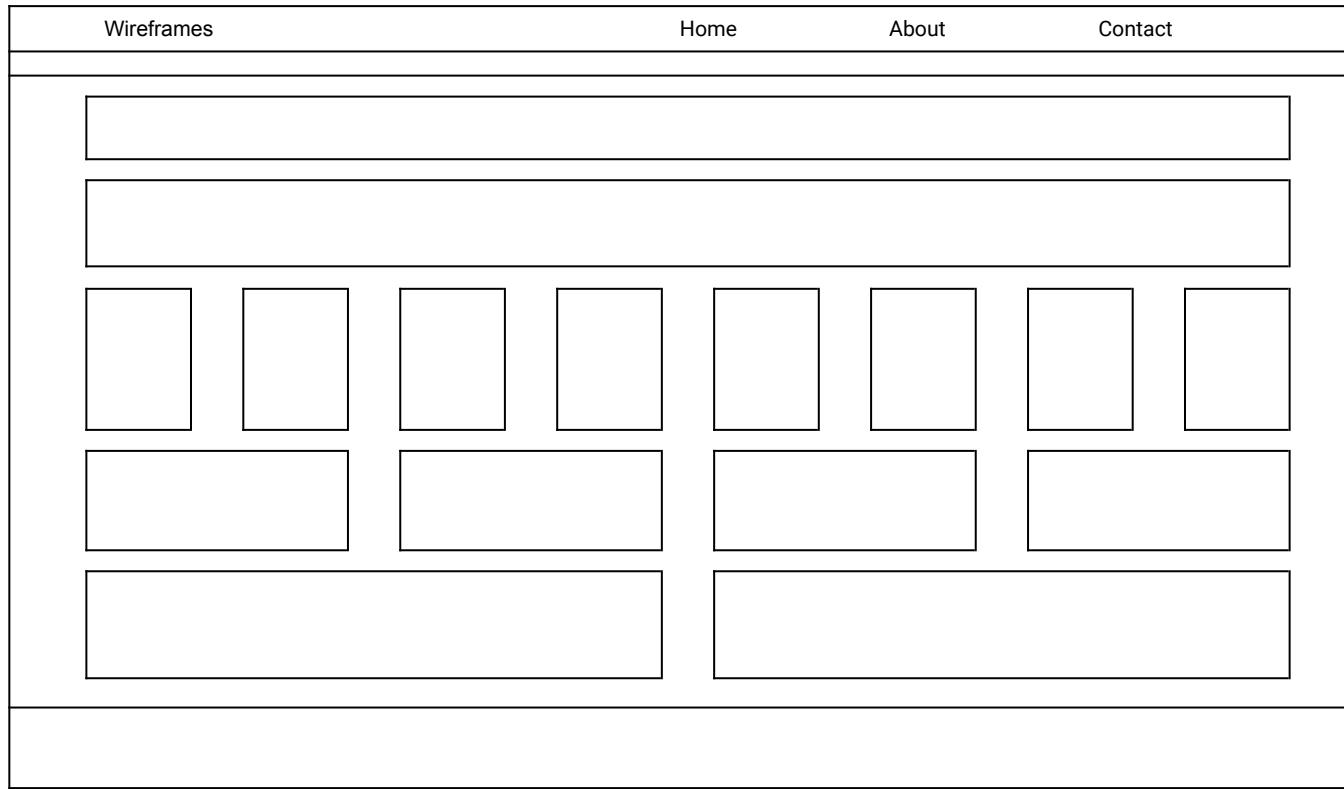
Person at laptop icon

Profile face icon

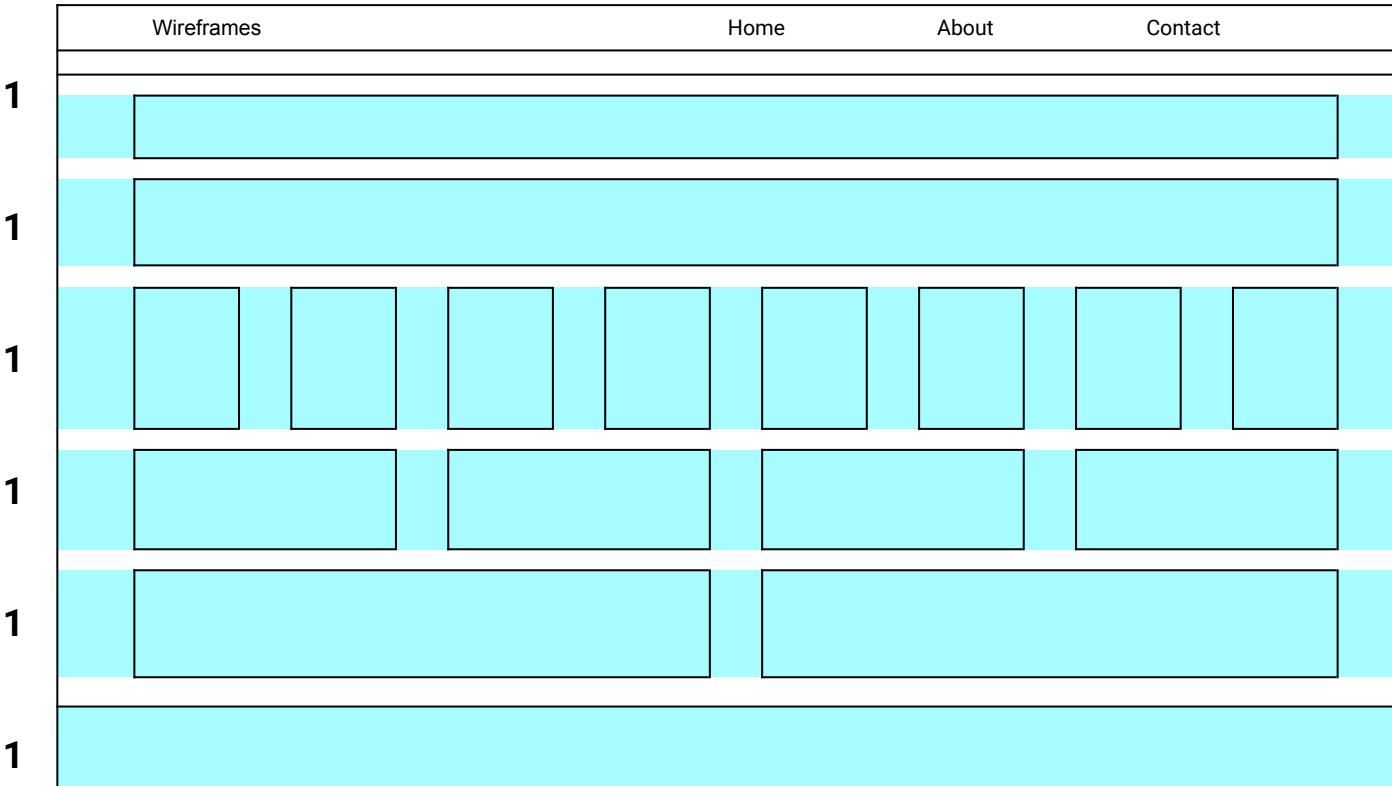
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GitHub logo

How Many Rows and Columns Do You See?



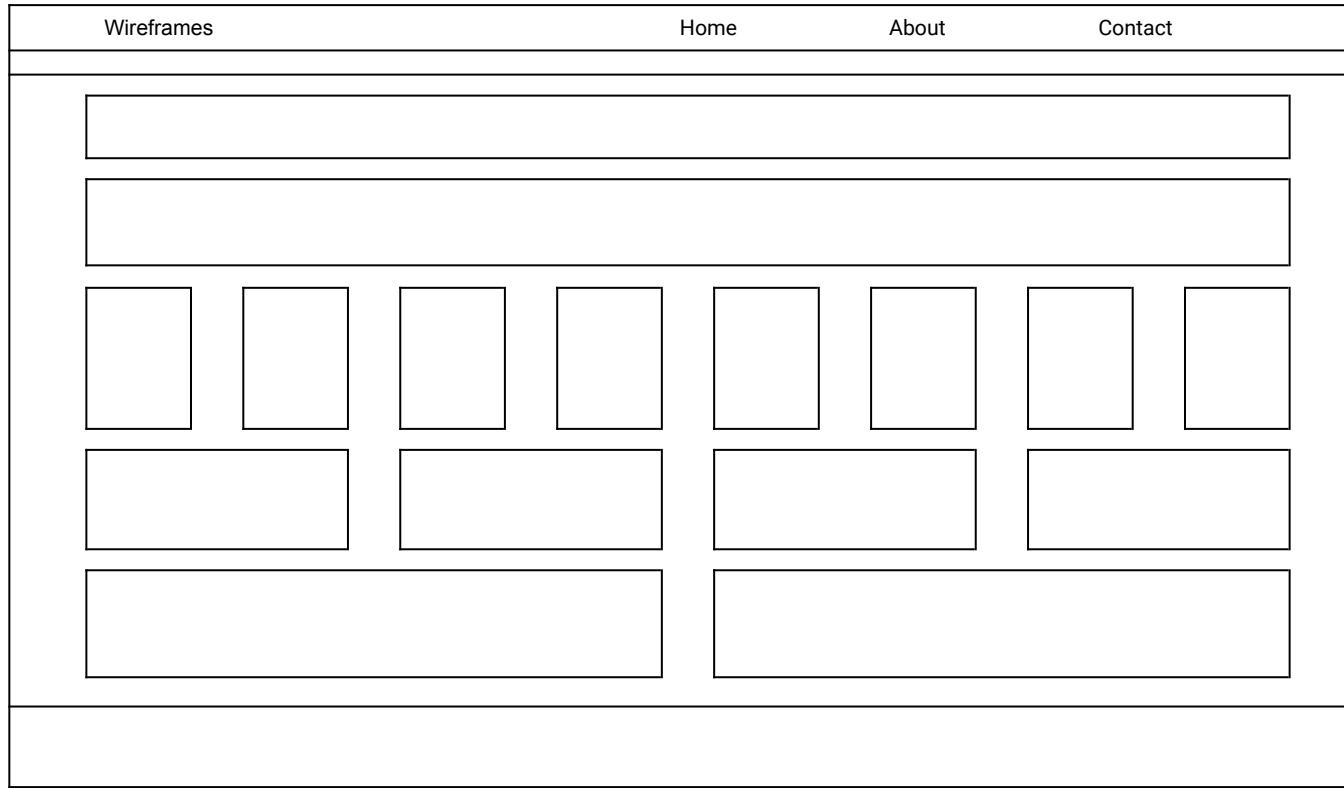
Total # of Rows: Six



Total # of Columns: Different for each row

	Wireframes	Home	About	Contact
1				
1				
8				
4				
2				
1				

You Try!



Level Up!

Let's make it more challenging.



How Many Rows and Columns?

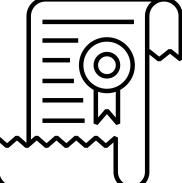
News Home About Contact

Awesome Stories



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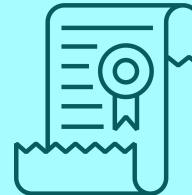


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Total # of Rows: Four

	News	Home	About	Contact
1	<h2>Awesome Stories</h2>			
1		<h3>The Greatest Website Ever Made</h3> <p>Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt. Neque porro quisquam est, qui dolorem ipsum quia dolor sit amet, consecetur, adipisci velit, sed quia non numquam eius modi tempora incidunt ut labore et dolore magnam aliquam quaerat voluptatem. Ut enim ad minima veniam, quis nostrum exercitationem ullam corporis suscipit laboriosam, nisi ut aliquid ex ea commodi consequatur? Quis autem vel eum iure reprehenderit qui in ea voluptate velit esse quam nihil molestiae consequatur, vel illum qui dolorem eum fugiat quo voluptas nulla.</p>		
1		<h3>The Greatest Website Ever Made</h3> <p>Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt. Neque porro quisquam est, qui dolorem ipsum quia dolor sit amet, consecetur, adipisci velit, sed quia non numquam eius modi tempora incidunt ut labore et dolore magnam aliquam quaerat voluptatem. Ut enim ad minima veniam, quis nostrum exercitationem ullam corporis suscipit laboriosam, nisi ut aliquid ex ea commodi consequatur? Quis autem vel eum iure reprehenderit qui in ea voluptate velit esse quam nihil molestiae consequatur, vel illum qui dolorem eum fugiat quo voluptas nulla.</p>		
1				

Total # of Columns: Different for each row

	News	Home	About	Contact
1	Awesome Stories			
2		The Greatest Website Ever Made <p>Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt. Neque porro quisquam est, qui dolorem ipsum quia dolor sit amet, consecetur, adipisci velit, sed quia non numquam eius modi tempora incidunt ut labore et dolore magnam aliquam quaerat voluptatem. Ut enim ad minima veniam, quis nostrum exercitationem ullam corporis suscipit laboriosam, nisi ut aliquid ex ea commodi consequatur? Quis autem vel eum iure reprehenderit qui in ea voluptate velit esse quam nihil molestiae consequatur, vel illum qui dolorem eum fugiat quo voluptas nulla.</p>		
2		The Greatest Website Ever Made <p>Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt. Neque porro quisquam est, qui dolorem ipsum quia dolor sit amet, consecetur, adipisci velit, sed quia non numquam eius modi tempora incidunt ut labore et dolore magnam aliquam quaerat voluptatem. Ut enim ad minima veniam, quis nostrum exercitationem ullam corporis suscipit laboriosam, nisi ut aliquid ex ea commodi consequatur? Quis autem vel eum iure reprehenderit qui in ea voluptate velit esse quam nihil molestiae consequatur, vel illum qui dolorem eum fugiat quo voluptas nulla.</p>		
1				

Level Up!

Now for another...



How Many Rows and Columns?

The Greatest Website Ever Made

Wireframes Home About Contact

Headphones icon

Person at laptop icon

Profile face icon

Text placeholder: Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.

Text placeholder: Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.

Text placeholder: Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.

The Greatest Website Ever Made

GitHub logo

Total # of Rows: Four

	Wireframes	Home	About	Contact
1		The Greatest Website Ever Made		
1***				
	<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.</p>	<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.</p>	<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.</p>	
1		The Greatest Website Ever Made		
1		<p>Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.</p>		
1				

Total # of Columns: Different for each row

	Wireframes	Home	About	Contact		
1	The Greatest Website Ever Made					
3						
	<p> Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.</p>		<p> Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.</p>			
	The Greatest Website Ever Made					
1	<p> Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.</p>					
1						

You Try!

Wireframes

Home

About

Contact

The Greatest Website Ever Made



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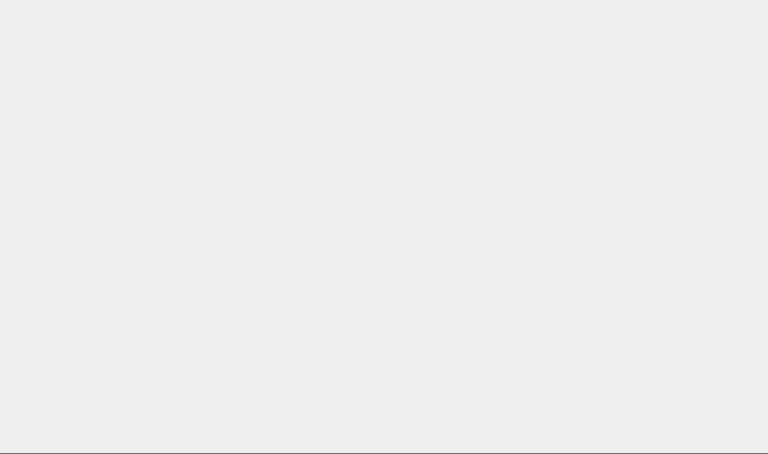
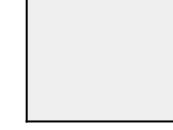
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.

Level Up!

This final one is tricky.



How Many Rows and Columns?

Wireframes	Home	About	Contact
Awesome Photos			
			
			
			
	<p>Click to view photo</p>		
			

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor
incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud
exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Click to view photo

Level Up!

Didn't quite work, right? For this one, we need **sub-rows** and **sub-columns**.



Total # of Rows: Four

	Wireframes	Home	About	Contact
1	Awesome Photos			
1***				
1***				
1				

The wireframe diagram illustrates a layout with four rows. Row 1 contains a header bar with links for Wireframes, Home, About, and Contact. Row 2 features a large "Awesome Photos" section with a placeholder image and six smaller photo thumbnails arranged in two columns of three. Row 3 contains a text block with placeholder text (Lorem ipsum) and a "Click to view photo" button. Row 4 is a solid blue footer bar.

Total # of Column: Different for each row

	Wireframes	Home	About	Contact
1	Awesome Photos			
2				
1	<p>Click to view photo</p> <p> Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.</p>			



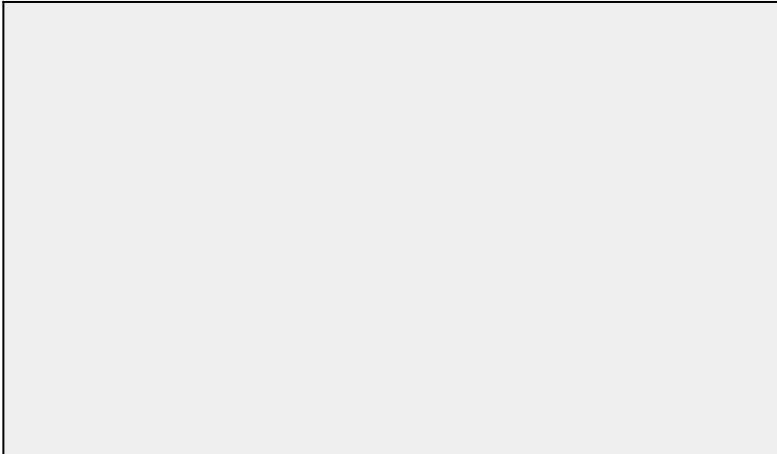
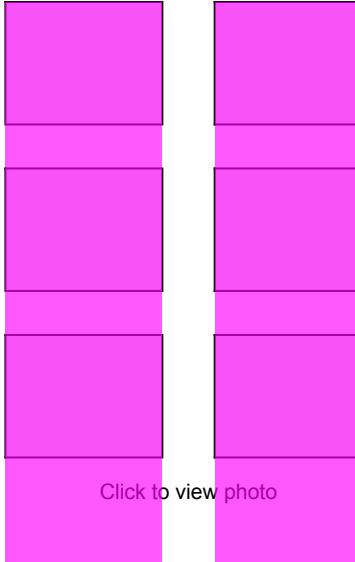
Total # of Sub-Rows: Four

Wireframes	Home	About	Contact	
Awesome Photos				1
				1
				1
				1
<p>Click to view photo</p> <p> </p>				1

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor
incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud
exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Click to view photo

Total # of Sub-Columns: Two

Wireframes	Home	About	Contact
Awesome Photos			
	 <p>Click to view photo</p>		
			

Ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Click to view photo

You Try!

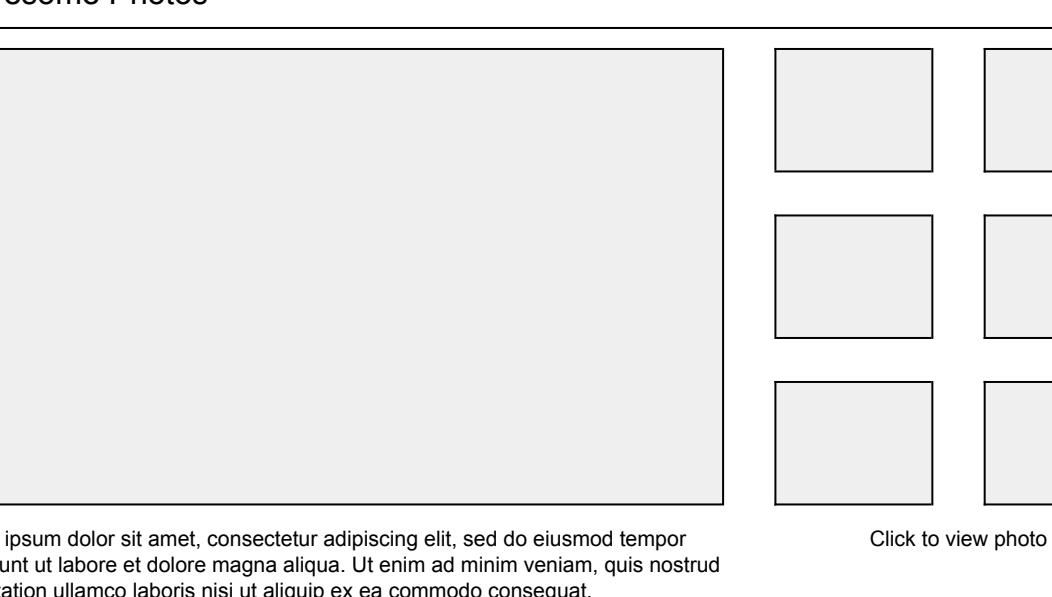
Wireframes

Home

About

Contact

Awesome Photos



Click to view photo

You Made It!



Grid Design with Bootstrap



Warning

This is a fairly tricky but
VERY IMPORTANT topic.

In Bootstrap, all content is organized in rows and columns

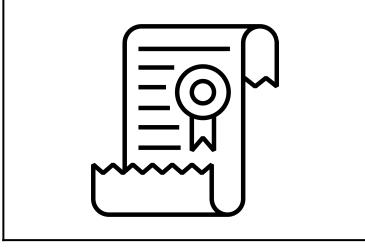
News Home About Contact

Awesome Stories



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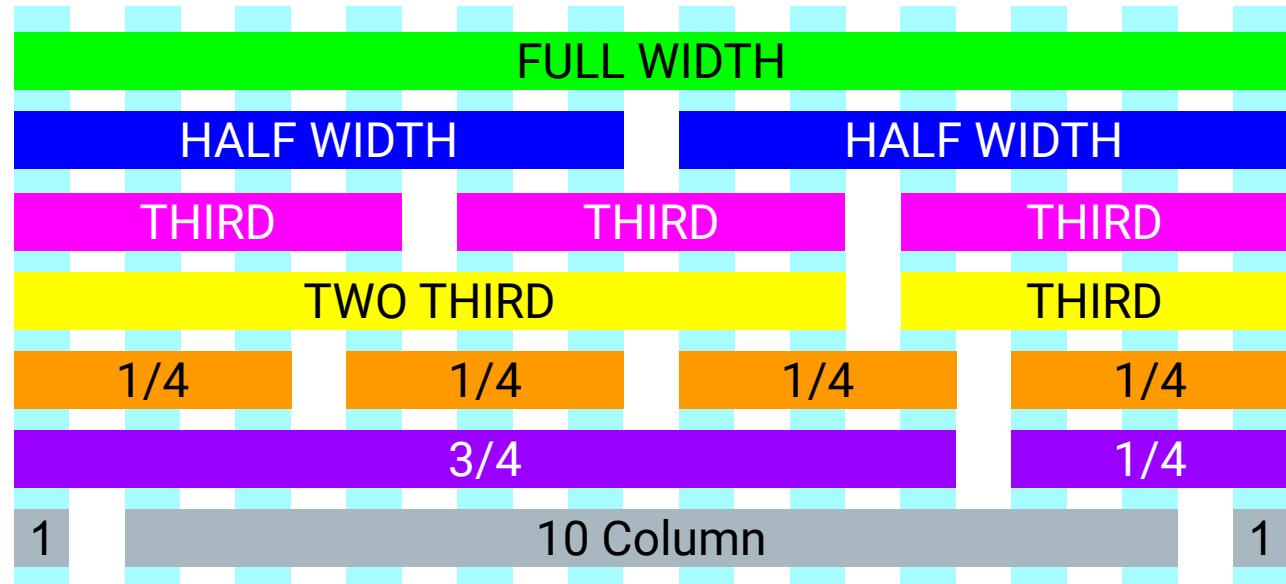
Bootstrap Grids

Bootstrap lets you organize content based on the number of columns out of 12 that a div spans.

Example:

```
<div class="col-md-12">  
(Spans full width)
```

```
<div class="col-md-4">  
(Spans 1/3 of full width)
```



Bootstrap Grids

Every Bootstrap grid is made up of:



Containers—wrap around the entire grid



Rows—defined first and are just rows



Columns—defined within rows and specify the columns. The sum total of all columns within a row **must** add up to 12.

Each of these elements is implemented by creating a `div` with a specific class name.

Defining Columns

Container

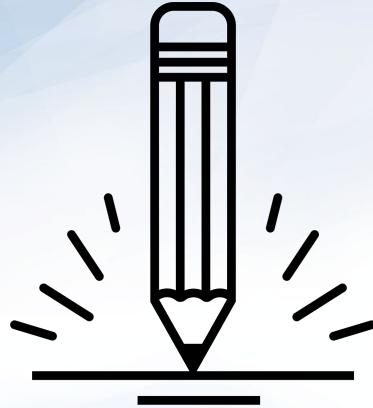
Row #1

Column#1

Column#2

Column#3

Column#4



Group Activity (2 people):

Containers, Rows, Columns
Discussion

Suggested Time:



Group Activity: Discuss Containers, Rows, and Columns

Turn to your neighbor and explain to one another:

01

The relationship between **containers**, **rows**, and **columns**.
(Draw it out on a piece of paper for them.)

02

The syntax for each.

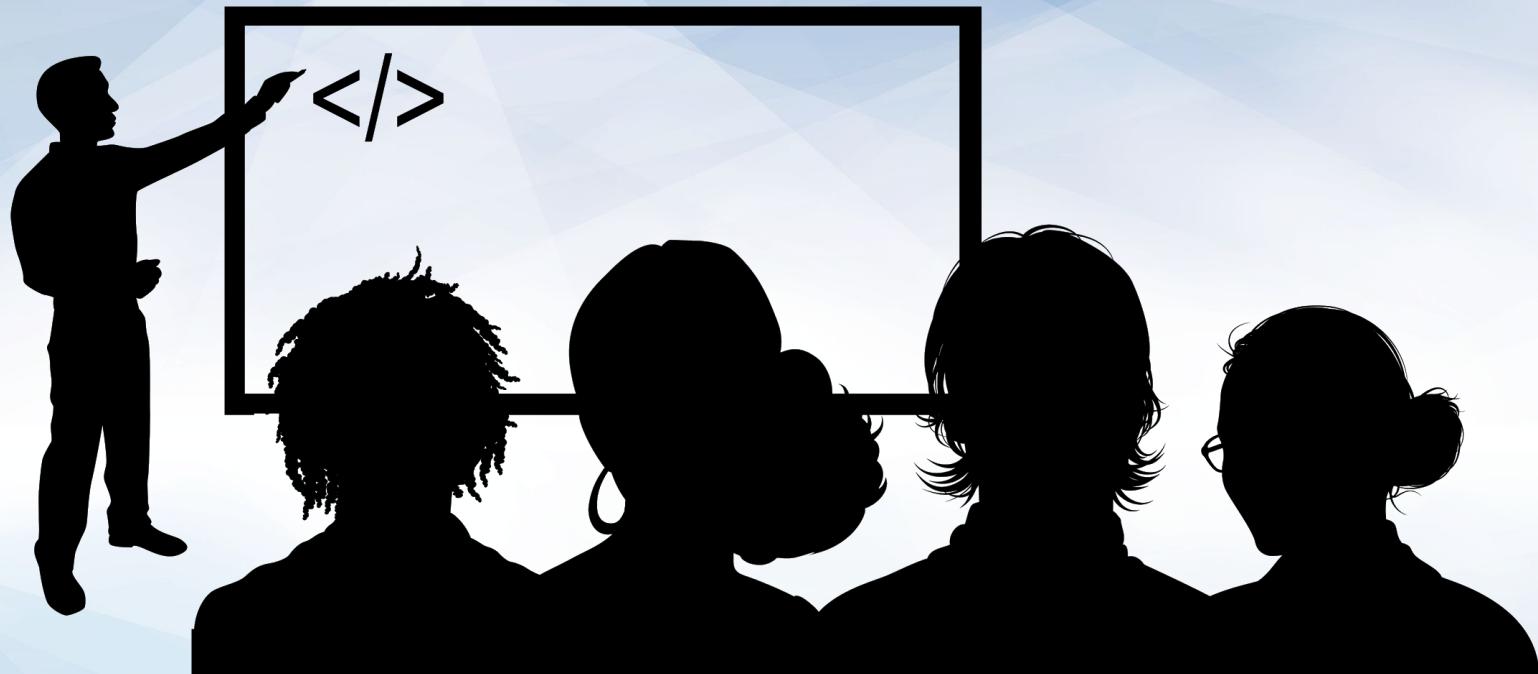
03

The specific syntax details for columns.

Suggested Time: 5 minutes



Coding Grids



Instructor Demonstration
Coding Grids

Bootstrap Grid

Note the rows, columns (e.g., col-lg-6), and containers.

```
<!-- Creates the Overall Grid -->
<div class="container">

    <!-- First Row -->
    <div class="row">
        <!-- First (and only column) -->
        <div class="col-lg-12">
            <h1>I'm in Column 1 of 1. I stretch the entire width. And keep going.</h1>
        </div>
    </div>

    <!-- Second Row -->
    <div class="row">
        <!-- First of two columns -->
        <div class="col-lg-6">
            <h1>I'm in Column 1 of 2</h1>
        </div>
        <!-- Second of two columns -->
        <div class="col-lg-6">
            <h1>I'm in Column 2 of 2</h1>
        </div>
    </div>

</div>
```

Bootstrap Grid

Note the rows, columns (e.g., col-lg-6), and containers.



I'm in Column 1 of 1. I stretch the entire width. And keep going.

I'm in Column 1 of 2

I'm in Column 2 of 2

```
<!-- Creates the Overall Grid -->
<div class="container">

    <!-- First Row -->
    <div class="row">
        <!-- First (and only column) -->
        <div class="col-lg-12">
            <h1>I'm in Column 1 of 1. I stretch the entire width. And keep going.</h1>
        </div>
    </div>

    <!-- Second Row -->
    <div class="row">
        <!-- First of two columns -->
        <div class="col-lg-6">
            <h1>I'm in Column 1 of 2</h1>
        </div>
        <!-- Second of two columns -->
        <div class="col-lg-6">
            <h1>I'm in Column 2 of 2</h1>
        </div>
    </div>

</div>
```

Defining Containers

A *container* is the box the entire grid sits inside.

```
<!-- Creates the Container -->
<div class="container">
    <!-- Inside we fill it up with rows and columns -->
</div>
```

Defining Rows

Rows are the rows we talked about earlier.

```
<div class="container">  
    <!-- Defines the row -->  
    <div class="row">  
        <!-- Columns fit inside -->  
        </div>  
    |  
    </div>
```

Defining Columns

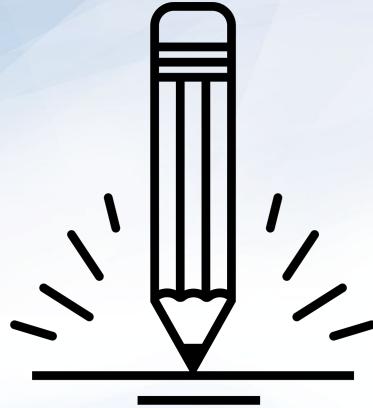
Columns fit inside of rows. Syntax: col-sz-#

- **Col**: column
- **sz**: viewing size (in this case, medium)
- #: number of “columns taken” out of 12 (in this case, 4 out of 12)

```
<div class="row">

    <div class="col-md-4">
        <!-- This is column 1 of 3 -->
    </div>
    <div class="col-md-4">
        <!-- This is column 2 of 3 -->
    </div>
    <div class="col-md-4">
        <!-- This is column 3 of 3 -->
    </div>

</div>
```



Activity:

Text Layout

Suggested Time:
20 minutes



Activity: Text Layout

Using Bootstrap, create a layout that looks like the one shown on the next screen.

01

Before you start coding, spend some time drawing the grid layout.

02

Count the number of rows and columns.

03

Use the Bootstrap grid syntax to code it out.

04

Share a screenshot of your page with the class when you are done.

05

You can use the Ipsum Generator (www.lipsum.com/) to generate content for your page.

Suggested Time: 20 minutes



Your Turn

Header

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Suggested Time: 20 minutes

