

INTRODUCTION TO WEB DEVELOPMENT

Coding Course Curriculum

Week 5 - Bootstrap

WHAT WE'LL COVER THIS WEEK

1. Recap of what we learnt last week (GitHub)
2. What's hard in CSS and why do we need to fix it?
3. Bootstrap - what it is, what problems it fixes, how to use it
4. Modifying Bootstrap
5. Even more awesome stuff!
6. Homework

WHAT WE COVERED IN WEEK 4 - GITHUB AND VERSION CONTROL

What did we learn last week?

1. Version Control & Using GitHub
2. Create your group repository
3. Publishing on GitHub Pages
4. How Github Pages Works
5. Conflict scenario!
6. How to avoid and reduce merge conflicts

Task: Find a partner and together take a quick look through the notes from last week's session. If you're unclear on any of the concepts, work through them with your partner and an instructor



BOOTSTRAP

BOOTSTRAP

- What is hard about CSS?
- What is Bootstrap?
- How do you use Bootstrap in a website project?

WHAT IS HARD ABOUT CSS?

**Different browsers will render CSS
with subtle differences**

BROWSER FALLBACKS

```
<div class="img-polaroid">
  
</div>
```



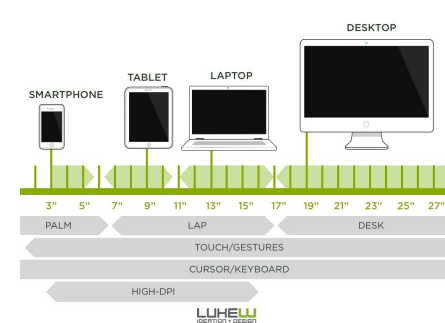
```
.img-polaroid {
  /* Creating a polaroid border */
  padding: 4px;
  border: 1px solid rgba(0, 0, 0,
0.2);
  box-shadow: 0 1px 3px rgba(0, 0, 0,
0.1);

  /* Browser fallbacks */
  background-color: #fff;
  border: 1px solid #ccc;
  border: 1px solid rgba(0, 0, 0,
0.2);
  -webkit-box-shadow: 0 1px 3px
rgba(0, 0, 0, 0.1);
  -moz-box-shadow: 0 1px 3px rgba(0,
0, 0, 0.1);
  box-shadow: 0 1px 3px rgba(0, 0, 0,
0.1);
}
```

WHAT ELSE IS HARD ABOUT CSS?

RESPONSIVE WEB DESIGN

Making websites look good on all the different screen sizes we now have.

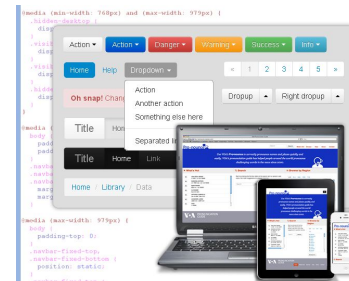


WHAT ARE THE PROBLEMS WE NEED TO SOLVE?

- We need CSS fallbacks for differences in browser rendering
- We need to make sure our websites work on any device shown, regardless of screen size
- We need to become more efficient at writing code

THE SOLUTION: A FRAMEWORK

- What is a framework? A skeleton of code providing generic functionality
- You can use it to extend your own code
- You can override the framework code with your own



BOOTSTRAP

BOOTSTRAP

- It's a framework
- Made and originally maintained by the team behind Twitter
- A set of ready-made CSS & JavaScript files with style solutions and functions to common requirements
- It's cross browser
- And it's responsive!

USING BOOTSTRAP

1. Link the Bootstrap files in the head of your HTML pages
2. Attach the relevant Bootstrap classes to your HTML elements

<http://getbootstrap.com/getting-started/>

(please use version 3.3.7, not latest version, 4.0)

GETTING STARTED WITH BOOTSTRAP

There are two ways to include Bootstrap in your projects:

- Link to the Bootstrap CDN (Content Delivery Network)
- Download the Bootstrap files and add them to your website folder

CONTENT DELIVERY NETWORKS

- What is a Content Delivery Network?
- Why would you need one?
- CDNs speed the delivery of content to users when websites are facing high traffic across a global reach.



BOOTSTRAP CDN

PROs

- A CDN is server containing the Bootstrap files
- No need to download anything
- Add a link to the CDN and you're done

CONS

- Risky
- Your website layout will break if:
 - The files are no longer on the CDN
 - The connection with the CDN fails

DOWNLOADING BOOTSTRAP

- A safer way of using Bootstrap
- You download the files and add them to your website folder

PROCESS OF USING BOOTSTRAP

- Download the Bootstrap files
- Add the files to your website project
- Link to the files in your HTML
- Add the Bootstrap classes to our HTML
- Create overrides to the Bootstrap styling

DOWNLOAD BOOTSTRAP

<http://getbootstrap.com/getting-started/> - remember, v3.3.7!

Download

Bootstrap (currently v3.3.7) has a few easy ways to quickly get started, each one appealing to a different skill level and use case. Read through to see what suits your particular needs.

Bootstrap

Compiled and minified CSS, JavaScript, and fonts. No docs or original source files are included.

Download Bootstrap

Download
this one

Source code

Source Less, JavaScript, and font files, along with our docs. **Requires a Less compiler and some setup.**

Download source

If you want the code for the
Bootstrap examples you
need this one

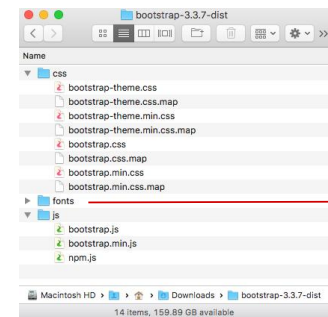
Sass

Bootstrap ported from Less to Sass for easy inclusion in Rails, Compass, or Sass-only projects.

Download Sass

Ignore this one

THE BOOTSTRAP FOLDER



Bootstrap CSS files

Bootstrap font files for icons

Bootstrap JavaScript files

Place the Bootstrap folder on your desktop
so you can find it back easily later

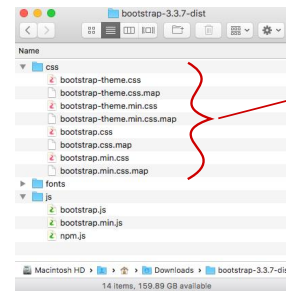
DOWNLOAD THE SAM'S SARNIES EXERCISE

https://github.com/code61/bootstrap_exercise

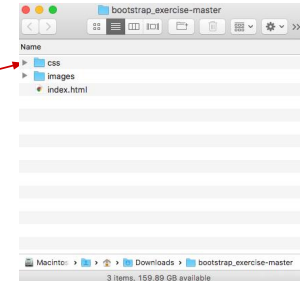
- Click **Clone or download**
- **Download ZIP**
- Go to your downloads folder
- Unzip the folder
- Place the folder in your **coding_course** folder

ADD THE BOOTSTRAP CSS TO YOUR PROJECT FOLDER

Bootstrap folder



Exercise folder



Copy the Bootstrap CSS folder into the **bootstrap_exercise-master** folder

LINK THE BOOTSTRAP CSS IN YOUR HTML

Add the link inside the `<head>` element of your index.html file

```
<!DOCTYPE html>
<html>
<head>
  <title>Sam's Sarnies</title>
  <link href='css/bootstrap.css' rel='stylesheet'>
</head>
...
```

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ADD THE VIEWPORT TAG

This will make your web page mobile friendly

```
<!DOCTYPE html>
<html>
<head>
  <title>Sam's Sarnies</title>
  <link href='css/bootstrap.css' rel='stylesheet'>
  <meta name="viewport" content="width=device-width,
initial-scale=1.0">
</head>
...
```

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THE ESSENCE OF BOOTSTRAP

A huge collection of classes

- In the Bootstrap documentation, find the style you want to add to your project
- Copy the Bootstrap class(es) exactly as they are listed
- Add the class(es) to your HTML element
- Save the file and have a look

EXAMPLE OF A BOOTSTRAP CLASS

```
<div class='jumbotron'>
  <h1>Healthy sandwiches for your team</h1>
  <img src='images/sandwich.png'>
  <form role='form'>
    <label for="email">Find out more</label>
    <input type="text" name="email" >
    <button type="submit">Send</button>
  </form>
</div>
```

BOOTSTRAP LAYOUT

In the sidebar menu on the right hand side go to
Grid system

<http://getbootstrap.com/css/>

THE .CONTAINER DIV

This class will centre the <div> inside the viewport

```
...  
<body>  
  <div class="container">  
    <!-- page content goes here -->  
  </div>  
</body>  
</html>
```

COLUMNS

- Bootstrap works on a grid layout with 12 columns
- Each set of columns sit inside a
`<div class="row"></div>`
- Each column `<div>` has a class to indicate the size of the column
`<div class="col-xs-4"></div>`

COLUMNS

```
<div class="col-xs-4"></div>
```

- xs- for extra small devices like phones
- sm- for tablet devices
- md- for medium sized desktops and laptops
- lg- for large desktop devices

COLUMNS

Example of two even-sized columns

```
<div class="container">
  <div class="row">
    <div class="col-xs-6">
      <!-- Column content goes here -->
    </div>
    <div class="col-xs-6">
      <!-- Column content goes here -->
    </div>
  </div>
</div>
```

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ADD A .CONTAINER DIV AROUND THE
PAGE CONTENT OF SAM'S SARNIES

```
...
<body>
  <div class="container">
    <div class="jumbotron">
      ...
    </div>
    <div id="buzz">
      ...
    </div>
    <div id="mission">
      ...
    </div>
  </div>
</body>
</html>
```

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ADDING COLUMNS TO .jumbotron

```
<div class="jumbotron">
  <div class="row">
    <div class="col-sm-8">
      <h1>Healthy sandwiches for your team</h1>
    </div>
    <div class="col-sm-4">
      
    </div>
    ...
  </div>
</div>
```

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ADDING COLUMNS TO #buzz

```
<div id="buzz">
  <h2>...</h2>
  <div class="row">
    <div class="col-sm-4">
      ...
    </div>
    <div class="col-sm-4">
      ...
    </div>
    <div class="col-sm-4">
      ...
    </div>
  </div>
</div>
```

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BOOTSTRAP TYPOGRAPHY

Headings

All HTML headings, `<h1>` through `<h6>`, are available. `.h1` through `.h6` classes are also available, for when you want to match the font styling of a heading but still want your text to be displayed inline.

EXAMPLE

h1. Bootstrap heading

Semibold 36px

h2. Bootstrap heading

Semibold 30px

h3. Bootstrap heading

Semibold 24px

h4. Bootstrap heading

Semibold 18px

h5. Bootstrap heading

Semibold 14px

h6. Bootstrap heading

Semibold 12px

```
<h1>h1. Bootstrap heading</h1>
<h2>h2. Bootstrap heading</h2>
<h3>h3. Bootstrap heading</h3>
<h4>h4. Bootstrap heading</h4>
<h5>h5. Bootstrap heading</h5>
<h6>h6. Bootstrap heading</h6>
```

- Overview
- Grid system
- Typography**
- Headings
- Body copy
- Inline text elements
- Alignment classes
- Transformation classes
- Abbreviations
- Addresses
- Blockquotes
- Lists
- Code
- Tables
- Forms
- Buttons
- Images
- Helper classes
- Responsive utilities
- Using Sass
- Back to top
- Preview theme

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ADDING BLOCKQUOTES

Bootstrap example

```
<blockquote>
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer
posuere erat a ante.</p>
</blockquote>
```

index.html

```
<div class="col-sm-4">
  <img "src='images/person.jpg'">
  <blockquote>
    <p>These sandwiches are the best I've ever tasted, for sure.
I now eat them every day - breakfast, lunch and dinner.</p>
    <small>Mr Smith, Professional sandwich taster</small>
  </blockquote>
</div>
```

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LEAD BODY COPY

Bootstrap example

```
<p class="lead"> ... </p>
```

index.html

```
<div id="mission">
  <h2>...</h2>
  <p class="lead">...</p>
  <p class="lead">...</p>
  <p class="lead">...</p>
  <div id="social-buttons">
    ...
  </div>
</div>
```

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BADGES AND BUTTONS

Options

Use any of the available button classes to quickly create a styled button.

EXAMPLE

Default Primary Success Info Warning Danger Link

```
<!-- Standard button -->
<button type="button" class="btn btn-default">Default</button>

<!-- Provides extra visual weight and identifies the primary action in a set of buttons -->
<button type="button" class="btn btn-primary">Primary</button>

<!-- Indicates a successful or positive action -->
<button type="button" class="btn btn-success">Success</button>

<!-- Contextual button for informational alert messages -->
<button type="button" class="btn btn-info">Info</button>

<!-- Indicates caution should be taken with this action -->
<button type="button" class="btn btn-warning">Warning</button>

<!-- Indicates a dangerous or potentially negative action -->
<button type="button" class="btn btn-danger">Danger</button>

<!-- Deemphasize a button by making it look like a link while maintaining button behavior -->
<button type="button" class="btn btn-link">Link</button>
```

Overview
Grid system
Typography
Code
Tables
Forms
Buttons
 Button tags
 Options
 Sizes
 Active state
 Disabled state
Images
Helper classes
Responsive utilities
Using Less
Using Sass
Back to top
Preview theme

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ADDING A SUCCESS BUTTON

Bootstrap example

```
<!-- Indicates a successful or positive action -->
<button type="button" class="btn btn-success">Success</button>
```

index.html

```
<div class="jumbotron">
  <div class="row">
    ...
  </div>
  <form role='form'>
    <label for="email">Find out more</label>
    <input type="text" name="email" >
    <button class="btn btn-success" type="submit">Send</button>
  </form>
</div>
```

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ADDING A SUCCESS BUTTON

Bootstrap example

```
<p>
  <button type="button" class="btn
  btn-primary btn-lg">Large
  button</button>
  <button type="button" class="btn
```

index.html

```
<div id="mission">
  ...
  <div id="social-buttons">
    <button class="btn btn-lg btn-twitter">Twitter</button>
    <button class="btn btn-lg btn-facebook">Facebook</button>
    <button class="btn btn-lg btn-pinterest">Pinterest</button>
  </div>
</div>
```

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IMAGES

Images

Responsive images

Images in Bootstrap 3 can be made responsive-friendly via the addition of the `.img-responsive` class. This applies `max-width: 100%; height: auto; and display: block;` to the image so that it scales nicely to the parent element.

To center images which use the `.img-responsive` class, use `.center-block` instead of `.text-center`. See the helper classes section for more details about `.center-block` usage.

SVG images and IE 8-10

In Internet Explorer 8-10, SVG images with `.img-responsive` are disproportionately sized. To fix this, add `width: 100%;` where necessary. Bootstrap doesn't apply this automatically as it causes complications to other image formats.

```

```


Image shapes

Add classes to an `` element to easily style images in any project.

Cross-browser compatibility

Keep in mind that Internet Explorer 8 lacks support for rounded corners.

EXAMPLE



```



```

MAKING IMAGES RESPONSIVE

```
<div class="jumbotron">
  <div class="row">
    ...
    <div class="col-sm-4">
      
    </div>
    ...
  </div>
</div>
```

MAKING CIRCULAR IMAGES

Bootstrap example

```

```

index.html

```
<div id="buzz">  
  ...  
  <div class="col-sm-4">  
    <img class="img-circle" src='images/person.jpg'>  
    ...  
  </div>  
  ...  
</div>
```

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CENTERING TEXT

Bootstrap example

```
<p class="text-center">Center  
aligned text.</p>
```

index.html

```
<div id="buzz" class="text-center">  
  ...  
</div>
```

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<https://codepen.io/dianaklee/pen/yYVbzv>

DEMO

WHAT IF YOU DON'T LIKE THE BOOTSTRAP STYLES?

- Override it!
- But it's best to stick with the Bootstrap layout - it's tried and tested in browsers
- Keep overrides to fonts, colours and other small things

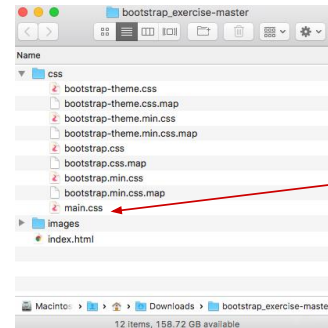
THE CORRECT WAY OF OVERRIDING BOOTSTRAP

- Create a custom CSS file
- Link to your file AFTER the Bootstrap files

```
<!DOCTYPE html>
<html>
<head>
  <title>Sam's Sarnies</title>
  <link href='css/bootstrap.css' rel='stylesheet'>
  <link href='css/your-custom-styles.css' rel='stylesheet'>
</head>
...
```

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CREATE A CSS FILE AND LINK IT IN YOUR HTML



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```
<!DOCTYPE html>
<html>
<head>
  <title>Sam's Sarnies</title>
  <link
href='css/bootstrap.css'
rel='stylesheet'>
  <link href='css/main.css'
rel='stylesheet'>
</head>
...
```

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SAM'S SARNIES SOLUTION

https://github.com/code61/bootstrap_exercise

code61 / bootstrap_exercise

Watch 2 Star 3 Fork 22

Code Issues Pull requests Projects Wiki Insights

First site with twitter bootstrap

6 commits 2 branches 0 releases 1 contributor

Branch: gh-pages New pull request Create new file Upload files Find file Clone or download

This branch is even with gh-pages.

tomclose Make "Send" button normal size Latest commit 3147216 on 5 Nov 2013

dist	Finished site	4 years ago
images	Improved edge on sandwich.png	4 years ago
index.html	Make "Send" button normal size	4 years ago
main.css	Tweak to heading	4 years ago

Change the
branch from
master to
gh-pages

WHAT FOLLOWS IS
EVEN MORE
AWESOME STUFF- HAVE
A GO YOURSELF!

CHANGING THE SOCIAL BUTTONS

We have classes in our HTML we can use in our CSS to add custom styles

```
<div id="mission">
  ...
  <div id="social-buttons">
    <button class="btn btn-lg btn-twitter">Twitter</button>
    <button class="btn btn-lg btn-facebook">Facebook</button>
    <button class="btn btn-lg btn-pinterest">Pinterest</button>
  </div>
</div>
```

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CHANGING THE SOCIAL BUTTONS

```
.btn-twitter {
  background: #00acee;
  border-color: #009ad5;
}
.btn-facebook {
  background: #4868ac;
  border-color: #314776;
}
.btn-pinterest {
  background: #b62f26;
  border-color: #b62f26;
}
```

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CHANGING THE SOCIAL BUTTONS

index.html

```
<div id="mission">
  ...
  <div id="social-buttons">
    <button class="btn btn-lg btn-twitter">Twitter</button>
    <button class="btn btn-lg btn-facebook">Facebook</button>
    <button class="btn btn-lg btn-pinterest">Pinterest</button>
  </div>
</div>
```

main.css

```
#social-buttons button {
  color: white
}
```

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CHANGING THE .JUMBOTRON BACKGROUND

```
.jumbotron {
  background-image: url('../images/fruit-and-veg.jpg');
  background-size: cover;
  background-attachment: fixed;
  min-height: 600px;
}
```

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MOVING THE .CONTAINER DIVS

```
...  
<body>  
  <div class="jumbotron">  
    <div class="container">  
    </div>  
  </div>  
  <div id="buzz">  
    <div class="container">  
    </div>  
  </div>  
  <div id="mission">  
    <div class="container">  
    </div>  
  </div>  
</body>  
</html>
```

CHANGING THE BACKGROUND COLOUR OF #MISSION

```
#mission {  
  background: rgba(32, 35, 41, 0.9);  
  color: #ddd;  
}
```


COPY THE NAVBAR CODE TO INDEX.HTML

```
...  
<body>  
<nav class="navbar navbar-inverse">  
  <div class="container-fluid">  
    <div class="navbar-header">  
      ...  
    </div>  
    <div class="collapse navbar-collapse" id="bs-example-navbar-collapse-9">  
      ...  
    </div>  
  </div>  
</nav>  
<div class="jumbotron">  
...
```

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FIX THE NAVBAR TO THE TOP OF THE PAGE

```
...  
<body>  
<nav class="navbar navbar-inverse navbar-fixed-top">  
  <div class="container">  
    <div class="navbar-header">  
      ...  
    </div>  
    <div class="collapse navbar-collapse" id="bs-example-navbar-collapse-9">  
      ...  
    </div>  
  </div>  
</nav>  
<div class="jumbotron">  
...
```

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ADJUST THE CSS FOR THE FIXED NAV BAR

```
body {  
  padding-top: 70px;  
}
```

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ADDING A SEARCH BOX

Bootstrap example

```
<form class="navbar-form navbar-left" role="search">  
  <div class="form-group">  
    <input type="text" class="form-control"  
placeholder="Search">  
  </div>  
  <button type="submit" class="btn  
btn-default">Submit</button>
```

index.html

```
<nav class="navbar navbar-inverse navbar-fixed-top">  
  ...  
  <div class="collapse navbar-collapse" id="bs-example-navbar-collapse-9">  
    ...  
    <form class="navbar-form navbar-left" role="search">  
      <div class="form-group">  
        <input type="text" class="form-control" placeholder="Search">  
      </div>  
      <button type="submit" class="btn btn-default">Submit</button>  
    </form>  
  </div>  
</div>  
</nav>
```

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ADDING A SEARCH BOX

```
<nav class="navbar navbar-inverse navbar-fixed-top">
  ...
  <div class="collapse navbar-collapse"
id="bs-example-navbar-collapse-9">
    ...
    <form class="navbar-form navbar-left pull-right" role="search">
      <div class="form-group">
        <input type="text" class="form-control" placeholder="Search">
      </div>
      <button type="submit" class="btn btn-default">Submit</button>
    </form>
  </div>
</div>
</nav>
```

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MORE RESOURCES

- <http://www.w3schools.com/bootstrap>
- <https://bootstrapbay.com/blog/learn-bootstrap/>
- <https://www.codeschool.com/courses/blastng-off-with-bootstrap>

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HOMEWORK

Task:

Finish off any unfinished bootstrap_exercise from class
Course competition website

Task:

Continue work on your personal site. Use Twitter Bootstrap
to make it **responsive!**

Preparation for next week

Task:

Try jQuery on Code School.