Building Websites with Bootstrap

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Let's Code Blacksburg!

Today

Why Bootstrap?

Learn Bootstrap Grid

Learn Some Bootstrap Components

Assisted Lab Time (<u>You</u> Decide What To Build)

Demos

What is Bootstrap?

Bootstrap is a framework that makes developing responsive layouts easy and intuitive.

http://getbootstrap.com/

What is Bootstrap?

Motivation: Don't need to be a designer to build a good-looking website

Bootstrap is open-source software, originally developed at Twitter

Today: learning Bootstrap 3

Link to Download Material

Course material with demos

http://static.davehking.com/bwwb.zip

These slides (and the HTML examples): http://static.davehking.com/bwwb-slides.pdf

HTML in 30 seconds

HTML is a document that your browser turns into a web page

CSS styles the document

(Most CSS here will be provided by Bootstrap)

Hacking HTML

"view source"

    Chrome: control-U

    Firefox: control-U

    Internet Explorer: control-U

    Safari: cmd+option+U

Dummy Elements To Fill Your Page

Text

- www.lipsum.com
- http://baconipsum.com/
- http://www.fillerati.com/

Images

- http://placehold.it/200x100
- http://placedog.com/200/100
- http://placekitten.com/200/150

Bootstrap 101: Containers

Everything should be in a "container"

```
<div class="container">...</div>
```

Without a container, everything stretches to the width of the page (this looks ugly)

Bootstrap 101: Containers

```html
<p>Lorem ipsum dolor sit amet, consectetur
adipiscing elit. Integer imperdiet tortor
turpis…</p>


<div class="container">
  <p>Lorem ipsum dolor sit amet, consectetur
adipiscing elit. Integer imperdiet tortor
turpis…</p>
</div>
```

First Exercise: Playing with HTML

`slides/exercises-getting-started.html`

Grid System

Bootstrap Grid System

- http://getbootstrap.com/css/#grid
- http://getbootstrap.com/examples/grid/

Containers contain Rows

Rows contain Columns

All Rows have 12 Columns

Grid System Philosophy

Responsive Web Design

Site "responds" to different viewing sizes
   alternative: building mobile-only site, build desktop-only site

Central concept is that of <u>viewport width</u>

Four Viewport Sizes

Category	Size	Abbreviation
Mobile	< 768 px	xs
Tablet	> 768px	sm
Desktop	> 992px	md
Large Desktop	> 1200px	lg

Specifying a Row

```
<div class="container">
  <div class="row">
    <div class="col-md-6">6 columns</div>
    <div class="col-md-6">6 columns</div>
  </div>
</div>
```

More Rows

```
<div class="container">
  <div class="row">
    <div class="col-md-2">2 columns</div>
    <div class="col-md-4">4 columns</div>
    <div class="col-md-4">4 columns</div>
    <div class="col-md-2">2 columns</div>
  </div>
</div>
```

Skipping Columns with Offset

```
<div class="container">
  <div class="row">
    <div class="col-md-4">4 columns</div>
    <div class="col-md-4 col-md-offset-4">4 columns</div>
  </div>
</div>
```

Nesting Rows Works

```
<div class="container">
  <div class="row">
    <div class="col-md-10">10 columns</div>
      <div class="col-md-2">
        2 columns
        <div class="row">
          <div class="col-md-10">10 columns</div>
          <div class="col-md-2">
            2 columns
          </div>
        </div>
      </div>
    </div>
  </div>
</div>
```

Varying Columns with Width

```
<div class="container">
  <div class="row">
    <div class="col-md-6">A</div>
    <div class="col-md-6">B</div>
  </div>
  <div class="row">
    <div class="col-md-10 col-sm-6">A</div>
    <div class="col-md-2 col-sm-6">B</div>
  </div>
</div>
```

Images that Fill Their Container

```
<div class="container">
  <div class="row">
    <div class="col-md-6">
      <img src="..." class="img-responsive">
    </div>
    <div class="col-md-6">
      <img src="..." class="img-responsive">
    </div>
  </div>
</div>
```

Grid Exercises

`slides/exercises-grid.html`

Visible and Hidden Attributes

Some site elements make sense on a desktop but not on mobile

e.g. my blog has a sidebar with "last N posts"

on mobile this just gets in the way

Visible Attributes

```
<div class="container">
  <div class="visible-xs">You are xs!</div>
  <div class="visible-sm">You are sm!</div>
  <div class="visible-md">You are md!</div>
  <div class="visible-lg">You are lg!</div>
</div>
```

Hidden Attributes

```
<div class="container">
  <div class="hidden-xs">You are not xs!</div>
  <div class="hidden-sm">You are not sm!</div>
  <div class="hidden-md">You are not md!</div>
  <div class="hidden-lg">You are not lg!</div>
</div>
```

Visible/Hidden Exercises

`slides/exercises-visible-hidden.html`

Now What?

We've seen what features Bootstrap has that let us do responsive design

Now, let's dive into what components Bootstrap gives us to build great-looking websites

Bootstrap Components

Bootstrap provides many components for common website features

Basic idea: give a class to an HTML element, everything looks good

Buttons and Button Groups

http://getbootstrap.com/css/#buttons

http://getbootstrap.com/components/#btn-groups

Buttons

```
<button type="button" class="btn btn-default">Default</button>
<button type="button" class="btn btn-primary">Primary</button>
<button type="button" class="btn btn-success">Success</button>
<button type="button" class="btn btn-info">Info</button>
<button type="button" class="btn btn-warning">Warning</button>
<button type="button" class="btn btn-danger">Danger</button>

<button type="button" class="btn btn-link">Link</button>
<a href="https://www.vt.edu" class="btn btn-primary">Link</a>
```

Groups of Buttons

```html
<div class="btn-group">
  <button type="button" class="btn btn-primary">Abort</button>
  <button type="button" class="btn btn-warning">Retry</button>
  <button type="button" class="btn btn-danger">Fail</button>
</div>
```

Jumbotron

http://getbootstrap.com/components/#jumbotron

http://getbootstrap.com/examples/jumbotron/

http://getbootstrap.com/examples/jumbotron-narrow/

Jumbotron

```html
<div class="jumbotron">
  <h1>Hello, Bootstrap!</h1>
  <p>'There's no sort of use in knocking,' said the
Footman, 'and that for two reasons. First, because I'm on
the same side of the door as you are; secondly, because
they're making such a noise inside, no one could possibly
hear you.'</p>
  <a class="btn btn-primary btn-lg" role="button">Learn
more</a>
</div>
```

Dropdown Menus

http://getbootstrap.com/components/#dropdowns

Dropdown Menus

```html
<div class="dropdown">
  <button class="btn dropdown-toggle" type="button" data-toggle="dropdown">
      Dropdown Menu
    <span class="caret"></span>
  </button>
  <ul class="dropdown-menu">
    <li><a href="#">One</a></li>
    <li><a href="#">Two</a></li>
    <li><a href="#">Three</a></li>
    <li><a href="#">Four</a></li>
  </ul>
</div>
```

Nav Bars

http://getbootstrap.com/components/#navbar

http://getbootstrap.com/examples/blog/

Nav Bars

```
<nav class="navbar navbar-default">
  <div class="container-fluid">
    <div class="navbar-header">
      <a class="navbar-brand" href="#">AwesomeCorp</a>
    </div>
    <p class="navbar-text">Bootstrap is Great</p>
    <p class="navbar-text navbar-right">This is Aligned to Right</p>
  </div>
</nav>
```

Footer

http://getbootstrap.com/components/#navbar

http://getbootstrap.com/examples/blog/

Carousel

Bigger example, requires JavaScript enabled

http://getbootstrap.com/javascript/#carousel

http://getbootstrap.com/examples/carousel/

`data-target` attribute controls carousel and controls

`item`s in `carousel-inner` control what is displayed

`carousel-control` elements allow user navigation

Tabs

Display content that you can rotate through with tabs

http://getbootstrap.com/javascript/#tabs

```
data-toggle="tab"
```

```
a href="#tab-pane-to-display"
```

shows `tab-content` with `id="tab-pane-to-display"`

Tabs

```html
<ul class="nav nav-tabs">
  <li class="active"><a href="#red" data-toggle="tab">Red</a></li>
  <li><a href="#blue" data-toggle="tab">Blue</a></li>
  <li><a href="#green" data-toggle="tab">Green</a></li>
  <li><a href="#yellow" data-toggle="tab">Yellow</a></li>
</ul>
<div class="tab-content">
  <div class="tab-pane active" id="red">Red</div>
  <div class="tab-pane" id="blue">Blue</div>
  <div class="tab-pane" id="green">Green</div>
  <div class="tab-pane" id="yellow">Yellow</div>
</div>
```

Fading Tabs

```html
<ul class="nav nav-tabs">
  <li class="active"><a href="#orange" data-toggle="tab">Orange</a></li>
  <li><a href="#purple" data-toggle="tab">Blue</a></li>
</ul>
<div class="tab-content">
  <div class="tab-pane fade in active" id="orange">Orangle</div>
  <div class="tab-pane fade" id="purple">Purple</div>
</div>
```

Modals

Dialogs for your web applications

http://getbootstrap.com/javascript/#modals

`data-toggle` for launching modal

`data-dismiss` for dismissing modal

`data-target` on the toggle must match the modal id

Modals

```
<button class="btn btn-primary btn-lg" data-toggle="modal" data-target="#demo-modal"
>Launch Modal</button>
<div class="modal fade" id="demo-modal">
  <div class="modal-dialog">
    <div class="modal-content">
      <div class="modal-header">...</div>
      <div class="modal-body">...</div>
      <div class="modal-footer">
        <button type="button" class="btn btn-default" data-dismiss="modal">
          Close the Modal
        </button>
      </div>
    </div>
  </div>
</div>
```

Bootstrap "in practice"

What's the difference between these elements and how a website comes together?

More Bootstrap Resources

https://wrapbootstrap.com/ - paid themes/designs

http://bootswatch.com/ - free themes/designs

http://fortawesome.github.io/Font-Awesome/ - font/icons

Free Space

Use this time to experiment with elements that you've seen

If you're not sure what to do, there are some suggested exercises in the slide html

Time permitting, demos!

Other Resources

Text Tutorials

http://www.sitepoint.com/understanding-twitter-bootstrap-3/

Youtube Tutorials

http://www.youtube.com/playlist?list=PLMvLDJ7usmZB-Mu4kNB-Qtr_1serQjfti

Thank You!

Go off and build with Bootstrap!