BOOTSTRAP

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Bootstrap is the most popular HTML, CSS, and JS framework for developing responsive, mobile first projects on the web.

WHAT IS BOOTSTRAP?

► Bootstrap is the most popular framework for quickly styling your website.

► Bootstrap lets us skip writing CSS and focus instead on HTML.

WHAT IS BOOTSTRAP?

CSS

- ► Grid system
- ► Typography
- ► Forms
- ► Buttons
- ► Responsive utilities
- ► …

Components

- ► Glyphicons
- ► Navbar
- ► Pagination
- ► Thumbnails
- ► …

WHAT IS BOOTSTRAP?

USING BOOTSTRAP

Bootstrap (currently v3.3.5) 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]

Source code

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

[Download source]

Sass

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

[Download Sass]

USING BOOTSTRAP

Bootstrap CDN

The folks over at MaxCDN graciously provide CDN support for Bootstrap's CSS and JavaScript. Just use these Bootstrap CDN links.

```
<!-- Latest compiled and minified CSS -->
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.5/css/bootstrap.min.css">

<!-- Optional theme -->
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.5/css/bootstrap-theme.min.css">

<!-- Latest compiled and minified JavaScript -->
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.5/js/bootstrap.min.js"></script>
```

Copy

MOBILE FRIENDLY

► Bootstrap 3 is mobile friendly by default.

   ► Responsive to screen size (assignment 1)

   ► Touch screen zooming

► Add following to your <head> to enable touch zooming.

```
<meta name="viewport" content="width=device-width, initial-scale=1">
```

   ► width=device-width: sets width of page to screen width of the device

   ► initial-scale=1: sets initial zoom level when the page is first loaded

.CONTAINER

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

► Responsively add margins, center, and wrap your content.

.CONTAINER

- Example

```
<body>


  <h1>My First Bootstrap Page</h1>
  <p>This part is inside a .container class.</p>
  <p>The .container class provides a responsive fixed width container.</p>


</body>
</html>
```

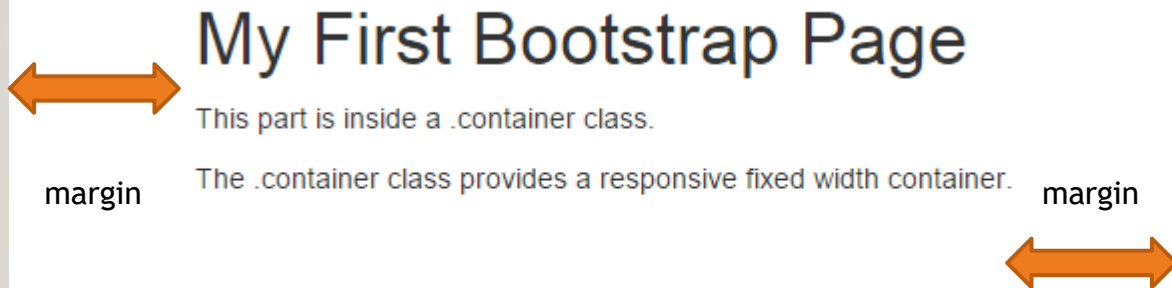## My First Bootstrap Page

This part is inside a .container class.

The .container class provides a responsive fixed width container.

.CONTAINER

► Example

```
<body>

<div class="container">
  <h1>My First Bootstrap Page</h1>
  <p>This part is inside a .container class.</p>
  <p>The .container class provides a responsive fixed width container.</p>
</div>

</body>
```

My First Bootstrap Page

This part is inside a .container class.

The .container class provides a responsive fixed width container.

margin

margin

GRID SYSTEM

▶ Bootstrap divides a page into a grid of 12 columns and multiple rows for easier positioning of elements.

▶ Grid system is responsive and columns will rearrange automatically depending on the screen size.

span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1
span 4			span 4			span 4		
span 4			span 8								
span 6						span 6					
span 12											

GRID SYSTEM

Grid options

See how aspects of the Bootstrap grid system work across multiple devices with a handy table.

	Extra small devices Phones (<768px)	Small devices Tablets (≥768px)	Medium devices Desktops (≥992px)	Large devices Desktops (≥1200px)
Grid behavior	Horizontal at all times	Collapsed to start, horizontal above breakpoints		
Container width	None (auto)	750px	970px	1170px
Class prefix	.col-xs-	.col-sm-	.col-md-	.col-lg-
# of columns	12			
Column width	Auto	~62px	~81px	~97px
Gutter width	30px (15px on each side of a column)			
Nestable	Yes			
Offsets	Yes			
Column ordering	Yes			

GRID SYSTEM - BASICS

- ► Place columns inside `<div class="row"></div>` for each row.
- ► Set each column width using class prefixes:
  - ► .col-xs-*, .col-sm-*, .col-md-*, .col-lg-*

EXAMPLE

Create a row of columns of width 3, 4, and 5.

```html
<div class="bs-docs-grid">
    <div class="row show-grid">
        <div class="col-md-3">.col-md-3</div>
        <div class="col-md-4">.col-md-4</div>
        <div class="col-md-5">.col-md-5</div>
    </div>
</div>
```

| .col-md-3 | .col-md-4 | .col-md-5 |

GRID SYSTEM - MULTIPLE DEVICES

► Sometimes columns are stacked vertically on smaller screens

► Use col-xs-*, col-sm-*, col-md-* together to set different column widths for different screen sizes

EXAMPLE

Allow 2 columns in a row for mobile, 3 for desktop

```html
<div class="row show-grid">
    <div class="col-xs-6 col-md-4">.col-xs-6 .col-md-4</div>
    <div class="col-xs-6 col-md-4">.col-xs-6 .col-md-4</div>
    <div class="col-xs-6 col-md-4">.col-xs-6 .col-md-4</div>
</div>
```

On Desktop:

.col-xs-6 .col-md-4	.col-xs-6 .col-md-4	.col-xs-6 .col-md-4

On Mobile:

.col-xs-6 .col-md-4	.col-xs-6 .col-md-4
.col-xs-6 .col-md-4	

GRID SYSTEM – COLUMN RESETS

Sometimes at breakpoints, columns may be aligned in wrong places.

```html
<div class="row show-grid">
  <div class="col-xs-6 col-sm-3">
     .col-xs-6 .col-sm-3
     <br>
     Resize your viewport or check it out on your phone for an example.
  </div>
  <div class="col-xs-6 col-sm-3">.col-xs-6 .col-sm-3</div>
  <div class="col-xs-6 col-sm-3">.col-xs-6 .col-sm-3</div>
  <div class="col-xs-6 col-sm-3">.col-xs-6 .col-sm-3</div>
</div>
```

Problem:

Correct Output:

.col-xs-6 .col-sm-3 Resize your viewport or check it out on your phone for an example.	.col-xs-6 .col-sm-3
	.col-xs-6 .col-sm-3
.col-xs-6 .col-sm-3	

.col-xs-6 .col-sm-3 Resize your viewport or check it out on your phone for an example.	.col-xs-6 .col-sm-3
.col-xs-6 .col-sm-3	.col-xs-6 .col-sm-3

GRID SYSTEM – COLUMN RESETS

Fix

```
<!-- Add the extra clearfix for only the required viewport -->
<div class="clearfix visible-xs"></div>
```

► .clearfix clears float CSS attribute

► visible-xs is one of many responsive utilities

   ► clearfix is applied to only mobile devices (visible-xs)

GRID SYSTEM – COLUMN RESETS

Fix

```html
<div class="row">
  <div class="col-xs-6 col-sm-3">.col-xs-6 .col-sm-3</div>
  <div class="col-xs-6 col-sm-3">.col-xs-6 .col-sm-3</div>

  <!-- Add the extra clearfix for only the required viewport -->
  <div class="clearfix visible-xs-block"></div>

  <div class="col-xs-6 col-sm-3">.col-xs-6 .col-sm-3</div>
  <div class="col-xs-6 col-sm-3">.col-xs-6 .col-sm-3</div>
</div>
```

Go to next line

RESPONSIVE UTILITIES

Available classes

Use a single or combination of the available classes for toggling content across viewport breakpoints.

	Extra small devices Phones (<768px)	Small devices Tablets (≥768px)	Medium devices Desktops (≥992px)	Large devices Desktops (≥1200px)
.visible-xs	Visible	Hidden	Hidden	Hidden
.visible-sm	Hidden	Visible	Hidden	Hidden
.visible-md	Hidden	Hidden	Visible	Hidden
.visible-lg	Hidden	Hidden	Hidden	Visible
.hidden-xs	Hidden	Visible	Visible	Visible
.hidden-sm	Visible	Hidden	Visible	Visible
.hidden-md	Visible	Visible	Hidden	Visible
.hidden-lg	Visible	Visible	Visible	Hidden

GRID SYSTEM - OFFSETTING

- ► col-xs-offset-*
- ► col-sm-offset-*
- ► col-md-offset-*
- ► col-lg-offset-*

EXAMPLE

```
<div class="row show-grid">
  <div class="col-md-3 col-md-offset-3">.col-md-3 .col-md-offset-3</div>
  <div class="col-md-3 col-md-offset-3">.col-md-3 .col-md-offset-3</div>
</div>
```

| .col-md-3 .col-md-offset-3 | | .col-md-3 .col-md-offset-3 |

GRID SYSTEM – NESTED COLUMNS

Level 1: .col-md-9

Level 2: .col-md-6 | Level 2: .col-md-6

```html
<div class="row">
  <div class="col-md-9">
    Level 1: .col-md-9
    <div class="row">
      <div class="col-md-6">
        Level 2: .col-md-6
      </div>
      <div class="col-md-6">
        Level 2: .col-md-6
      </div>
    </div>
  </div>
</div>
```

Nested columns add up to its parent or less

TYPOGRAPHY - HEADINGS

Supports <h1> to <h6>, same as HTML

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

TYPOGRAPHY -ALIGNMENT

EXAMPLE

Left aligned text.

Center aligned text.

Right aligned text.

Justified text.

```
<p class="text-left">Left aligned text.</p>
<p class="text-center">Center aligned text.</p>
<p class="text-right">Right aligned text.</p>
<p class="text-justify">Justified text.</p>
```

TYPOGRAPHY –ADDRESSES

EXAMPLE

Twitter, Inc.
795 Folsom Ave, Suite 600
San Francisco, CA 94107
P: (123) 456-7890

Full Name
first.last@example.com

```
<address>
  <strong>Twitter, Inc.</strong><br>
  795 Folsom Ave, Suite 600<br>
  San Francisco, CA 94107<br>
  <abbr title="Phone">P:</abbr> (123) 456-7890
</address>

<address>
  <strong>Full Name</strong><br>
  <a href="mailto:#">first.last@example.com</a>
</address>
```

append `<br>` to preserve formatting

TYPOGRAPHY - DESCRIPTION

EXAMPLE

Description lists
A description list is perfect for defining terms.
Euismod
Vestibulum id ligula porta felis euismod semper eget lacinia odio sem nec elit.
Donec id elit non mi porta gravida at eget metus.
Malesuada porta
Etiam porta sem malesuada magna mollis euismod.

```
<dl>
   <dt>...</dt>
   <dd>...</dd>
</dl>
```

TYPOGRAPHY – HORIZONTAL DESCRIPTION

EXAMPLE

Description lists A description list is perfect for defining terms.

Euismod Vestibulum id ligula porta felis euismod semper eget lacinia odio sem nec elit.

Donec id elit non mi porta gravida at eget metus.

Malesuada porta Etiam porta sem malesuada magna mollis euismod.

Felis euismod semp... Fusce dapibus, tellus ac cursus commodo, tortor mauris condimentum nibh, ut fermentum massa justo sit amet risus.

```
<dl class="dl-horizontal">
  <dt>...</dt>
  <dd>...</dd>
</dl>
```

Notice truncation for "Felis euismod semp…"

GLYPHICONS

► Bootstrap comes with 200 icons to use, named "glyphicons"

GLYPHICON SYNTAX

► Syntax

```
<span class="glyphicon glyphicon-name"></span>
```

► Examples

```
<p>Envelope icon: <span class="glyphicon glyphicon-envelope"></span></p>
```

Envelope icon: ✉

```
<p>Search icon: <span class="glyphicon glyphicon-search"></span></p>
```

Search icon: 🔍

```
<p>Search icon on a styled button:
  <button type="button" class="btn btn-info">
    <span class="glyphicon glyphicon-search"></span> Search
  </button>
</p>
```

Search icon on a styled button: 🔍 Search

RESIZING GLYPHICONS

► Glyphicons are text!!!

► To resize glyphicons, simply increase its font size in CSS!

► Example

```css
<style>
    .features .glyphicon {
        font-size: 32px;
    }
</style>
```

```html
<body>
    <div class="container">
        <div class="row features">
            <p>With font-size: 32px <span class="glyphicon glyphicon-briefcase"></span></p>
        </div>
        <div class="row">
            <p>With font-size: 14px <span class="glyphicon glyphicon-briefcase"></span></p>
        </div>
    </div>
    <script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.5/js/bootstrap.min.js"></script>
</body>
```

► Output

With font-size: 32px 💼

With font-size: 14px 💼

FORMS

► Automatically applies some global styling with Bootstrap.

► Examples

Text input

Textarea

☐ Option one is this and that—be sure to include why it's great
☐ Option two is disabled

⦿ Option one is this and that—be sure to include why it's great
◯ Option two can be something else and selecting it will deselect option one
◯ Option three is disabled

@   ✔

FORMS

► Layouts supported by Bootstrap

- ► Vertical Form

- ► Horizontal Form

- ► Inline Form

► Tips on using forms with Bootstrap

► <form role="form">	*Improves accessibility*
► <div class="form-group">	*Improves spacing of form elements*
► .form-control	*Give width of 100% to text form elements*

FORMS – VERTICAL LAYOUT

Email:

Enter email

Password:

Enter password

☐ Remember me

Submit

```
<form role="form">
  <div class="form-group">
    <label for="email">Email address:</label>
    <input type="email" class="form-control" id="email">
  </div>
  <div class="form-group">
    <label for="pwd">Password:</label>
    <input type="password" class="form-control" id="pwd">
  </div>
  <div class="checkbox">
    <label><input type="checkbox"> Remember me</label>
  </div>
  <button type="submit" class="btn btn-default">Submit</button>
</form>
```

FORMS – HORIZONTAL LAYOUT

FORMS – INLINE LAYOUT

| Email: | Enter email | Password: | Enter password | ☐ Remember me | Submit |

```html
<form class="form-inline" role="form">
  <div class="form-group">
    <label for="email">Email address:</label>
    <input type="email" class="form-control" id="email">
  </div>
  <div class="form-group">
    <label for="pwd">Password:</label>
    <input type="password" class="form-control" id="pwd">
  </div>
  <div class="checkbox">
    <label><input type="checkbox"> Remember me</label>
  </div>
  <button type="submit" class="btn btn-default">Submit</button>
</form>
```

FORMS - CONTROLS

Supports HTML form elements

► \<input>

► \<textarea>

► \<input type="checkbox">

► \<input type="radio">

► \<select>

► ...

FORMS – VALIDATION STATES

► Bootstrap allows you to give validation status to your form elements.

► Bootstrap supports

  ► .has-warning

  ► .has-error

  ► .has-success

► Example

VALIDATION STATES - INPUT

Input with success

Input with warning

Input with error

```
<div class="form-group has-success">
  <label class="control-label" for="inputSuccess1">Input with success</label>
  <input type="text" class="form-control" id="inputSuccess1">
</div>
<div class="form-group has-warning">
  <label class="control-label" for="inputWarning1">Input with warning</label>
  <input type="text" class="form-control" id="inputWarning1">
</div>
<div class="form-group has-error">
  <label class="control-label" for="inputError1">Input with error</label>
  <input type="text" class="form-control" id="inputError1">
</div>
```

FORMS – VALIDATION STATES WITH ICONS

- To add feedback icons

1. add has-feedback class to parent

2. insert specifying glyphicon for the control's feedback

-

VALIDATION STATES WITH ICONS

Input with success


```
<div class="form-group has-success has-feedback">
  <label class="control-label" for="inputSuccess2">Input with success</label>
  <input type="text" class="form-control" id="inputSuccess2" aria-describedby="inputSuccess2Status">
  <span class="glyphicon glyphicon-ok form-control-feedback" aria-hidden="true"></span>
  <span id="inputSuccess2Status" class="sr-only">(success)</span>
</div>
```
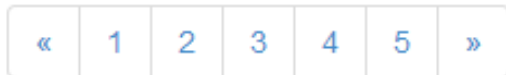
PAGINATION

► You can use Bootstrap to divide your website into pages.

EXAMPLE

« 1 2 3 4 5 »

Simply add pagination class to ul element.

Each page is a list of href element.

Use pagination-lg or pagination-sm to size page button sizes

<ul class="pagination">

e.g. 1

EXAMPLE - PAGINATION


```
<ul class="pagination">
  <li>
    <a href="#" aria-label="Previous">
      <span aria-hidden="true">&laquo;</span>
    </a>
  </li>
  <li><a href="#">1</a></li>
  <li><a href="#">2</a></li>
  <li><a href="#">3</a></li>
  <li><a href="#">4</a></li>
  <li><a href="#">5</a></li>
  <li>
    <a href="#" aria-label="Next">
      <span aria-hidden="true">&raquo;</span>
    </a>
  </li>
</ul>
```

PAGER

Simpler version with **"Previous"** or **"Next"** buttons

EXAMPLE

Previous   Next

```
<ul class="pager">
  <li><a href="#">Previous</a></li>
  <li><a href="#">Next</a></li>
</ul>
```

You can also align buttons using .previous and .next

EXAMPLE

← Older   Newer →

```
<ul class="pager">
  <li class="previous"><a href="#">&larr; Older</a></li>
  <li class="next"><a href="#">Newer &rarr;</a></li>
</ul>
```
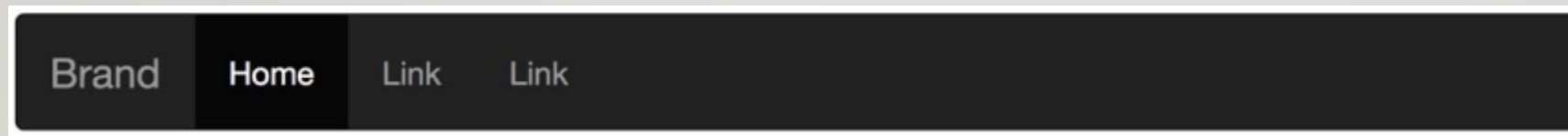
NAVIGATION & NAVIGATION BARS

► Navigation (nav)

► Navigation Bar (navbar)

NAVIGATION (NAV)

► Use unordered list and give .nav class attribute.

► Example

Page 1   Page 2   Page 3

Makes navigation inline

```
<div>
  <ul class="nav navbar-nav">
    <li class="active"><a href="#">Home</a></li>
    <li><a href="#">Page 1</a></li>
    <li><a href="#">Page 2</a></li>
    <li><a href="#">Page 3</a></li>
  </ul>
</div>
```
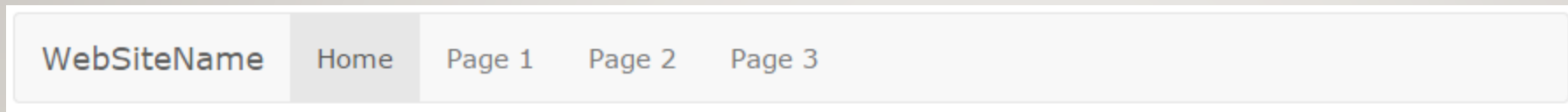
.NAV MODIFIERS

```
<ul class='nav nav-pills'>...</ul>
```

```
<ul class='nav nav-tabs'>...</ul>
```

```
<ul class='nav navbar-nav navbar-right'>...</ul>
```

Right aligned

NAVIGATION BAR (.NAVBAR)

► Creates a visible bar with navigation elements.

► Example

| WebSiteName | Home | Page 1 | Page 2 | Page 3 |

```html
<body>
<nav class="navbar navbar-default">
  <div class="container-fluid">
    <div class="navbar-header">
      <a class="navbar-brand" href="#">WebSiteName</a>
    </div>
    <div>
      <ul class="nav navbar-nav">
        <li class="active"><a href="#">Home</a></li>
        <li><a href="#">Page 1</a></li>
        <li><a href="#">Page 2</a></li>
        <li><a href="#">Page 3</a></li>
      </ul>
    </div>
  </div>
</nav>
```

.NAVBAR MODIFIERS

`.navbar-default`

Blasting Off With Bootstrap   Tickets   Stations   About

`.navbar-inverse`

Blasting Off With Bootstrap   Tickets   Stations   About

`.navbar-static-top`   `.navbar-static-bottom`

`.navbar-fixed-top`   `.navbar-fixed-bottom`   and others …

THERE ARE STILLMANY MORE TO LEARN!

► Go over http://getbootstrap.com/getting-started/#examples

► Playground for bootstrap http://www.bootply.com/

► Get started with Bootstrap https://getbootstrap.com/docs/5.2/getting-started/introduction/