BootstrapJS

BootstrapJS

Lesson Objective

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o Why Bootstrap 3

o Designers and Developers

o The Mobile Web

o Responsive Web Design

o Mobile First Responsive Web Design

o Bootstrapping of the Web

Achieve Responsive Layouts using Bootstrap3

o Fluid Grid System for Responsive Layout

o What is the Grid System?

o Using the Grid System for responsive layout

o Scale up layout

o Multiple Grid Types

o Using Multiple Grids

o Offsets and Rows

Responsive Navigation with Bootstrap3

o Bootstraps Navbar

o Styling the Navbar

o Logo

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What is Bootstrap?

- Bootstrap is a free front-end framework for faster and easier web development

- Bootstrap includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and many other, as well as optional JavaScript plugins

- Bootstrap also gives you the ability to easily create responsive designs

- Bootstrap was developed by Mark Otto and Jacob Thornton at Twitter, and released as an open source product in August 2011 on GitHub.

- **In June 2014 Bootstrap was the No.1 project on GitHub!**

Why Bootstrap?

- **Easy to use:** Anybody with just basic knowledge of HTML and CSS can start using Bootstrap

- **Responsive features:** Bootstrap's responsive CSS adjusts to phones, tablets, and desktops

- **Mobile-first approach:** In Bootstrap 3, mobile-first styles are part of the core framework

- **Browser compatibility:** Bootstrap is compatible with all modern browsers (Chrome, Firefox, Internet Explorer, Safari, and Opera)

Install Bootstrap?

- Download Bootstrap from
http://getbootstrap.com

- Include Bootstrap from a CDN (Content Delivery Network)

MaxCDN:

```
<!-- Latest compiled and minified CSS -->
    <link rel="stylesheet"
    href="http://maxcdn.bootstrapcdn.com/bootstrap/3.3.4/css/bootstrap.min.css">

<!-- jQuery library -->
    <script
    src="https://ajax.googleapis.com/ajax/libs/jquery/1.11.1/jquery.min.js"></script>

<!-- Latest compiled JavaScript -->
    <script
    src="http://maxcdn.bootstrapcdn.com/bootstrap/3.3.4/js/bootstrap.min.js"></script>
```

Bootstrap Grid System

- Bootstrap's grid system allows up to 12 columns across the page.

- The Bootstrap grid system has four classes:
  - xs (for phones)
  - sm (for tablets)
  - md (for desktops)
  - lg (for larger desktops)

● Classes operate on text

- .lead   Makes a paragraph stand out
- .small   Indicates smaller text (set to 85% of the size of the parent)
- .text-left   Indicates left-aligned text
- .text-center   Indicates center-aligned text
- .text-right   Indicates right-aligned text
- .text-justify   Indicates justified text
- .text-nowrap   Indicates no wrap text
- .text-lowercase   Indicates lowercased text
- .text-uppercase   Indicates uppercased text
- .text-capitalize   Indicates capitalized text

Table classes

- .table
- .bordered
- .hover
- .striped

BootstrapJS

Responsive Layouts using Bootstrap3

Responsive Layouts using Bootstrap3

- Fluid Grid System for Responsive Layout

- What is the Grid System?

- Using the Grid System for responsive layout

- Scale up layout

- Multiple Grid Types

- Using Multiple Grids

- Offsets and Rows

Bootstrap Grid System

Bootstrap's grid system allows up to 12 columns across the page.

If you do not want to use all 12 column individually, you can group the columns together to create wider columns:

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											

Bootstrap's grid system is responsive, and the columns will re-arrange depending on the screen size: On a big screen it might look better with the content organized in three columns, but on a small screen it would be better if the content items were stacked on top of each other.

Grid System Rules

Some Bootstrap grid system rules:

- Rows must be placed within a `.container` (fixed-width) or `.container-fluid` (full-width) for proper alignment and padding
- Use rows to create horizontal groups of columns
- Content should be placed within columns, and only columns may be immediate children of rows
- Predefined classes like `.row` and `.col-sm-4` are available for quickly making grid layouts
- Columns create gutters (gaps between column content) via padding. That padding is offset in rows for the first and last column via negative margin on `.rows`
- Grid columns are created by specifying the number of 12 available columns you wish to span. For example, three equal columns would use three `.col-sm-4`

Grid Classes

The Bootstrap grid system has four classes:

- xs (for phones)
- sm (for tablets)
- md (for desktops)
- lg (for larger desktops)

The classes above can be combined to create more dynamic and flexible layouts.

Basic Structure of Bootstrap

The following is a basic structure of a Bootstrap grid:

```html
<div class="container">
  <div class="row">
    <div class="col-*-*"></div>
  </div>
  <div class="row">
    <div class="col-*-*"></div>
    <div class="col-*-*"></div>
    <div class="col-*-*"></div>
  </div>
  <div class="row">
    ...
  </div>
</div>
```

So, to create the layout you want, create a container (`<div class="container">`). Next, create a row (`<div class="row">`). Then, add the desired number of columns (tags with appropriate `.col-*-*` classes). Note that numbers in `.col-*-*` should always add up to 12 for each row.

Bootstrap grid system works across multiple devices

	Extra small devices Phones (<768px)	Small devices Tablets (>=768px)	Medium devices Desktops (>=992px)	Large devices Desktops (>=1200px)
Grid behaviour	Horizontal at all times	Collapsed to start, horizontal above breakpoints	Collapsed to start, horizontal above breakpoints	Collapsed to start, horizontal above breakpoints
Container width	None (auto)	750px	970px	1170px
Class prefix	.col-xs-	.col-sm-	.col-md-	.col-lg-
Number of columns	12	12	12	12

Three Equal Columns

.col-sm-4	.col-sm-4	.col-sm-4

The following example shows how to get a three equal-width columns starting at tablets and scaling to large desktops. On mobile phones, the columns will automatically stack:

Example

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

Three Unequal Columns

.col-sm-3	.col-sm-6	.col-sm-3

The following example shows how to get a three various-width columns starting at tablets and scaling to large desktops:

Example

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

Offsetting Columns

Move columns to the right using `.col-md-offset-*` classes. These classes increase the left margin of a column by * columns:

Example

```
<div class="row">
  <div class="col-sm-5 col-md-6">.col-sm-5 .col-md-6</div>
  <div class="col-sm-5 col-sm-offset-2 col-md-6 col-md-offset-0">
  .col-sm-5 .col-sm-offset-2 .col-md-6 .col-md-offset-0</div>
</div>
```
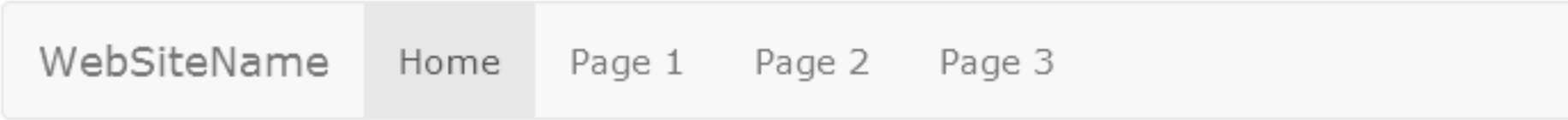
Push And Pull – Change Column Ordering

Change the order of the grid columns with `.col-md-push-*` and `.col-md-pull-*` classes:

Example

```html
<div class="row">
  <div class="col-sm-4 col-sm-push-8">.col-sm-4 .col-sm-push-8</div>
  <div class="col-sm-8 col-sm-pull-4">.col-sm-8 .col-sm-pull-4</div>
</div>
```

Navigation Bars

A navigation bar is a navigation header that is placed at the top of the page:

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

With Bootstrap, a navigation bar can extend or collapse, depending on the screen size.

A standard navigation bar is created with `<nav class="navbar navbar-default">`.

Navigation with Bootstrap

Example

```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>
...
```
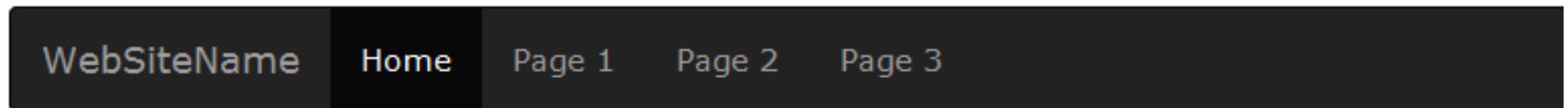
Inverted Navigation Bar

If you don't like the style of the default navigation bar, Bootstrap provides an alternative, black navbar:

WebSiteName	Home	Page 1	Page 2	Page 3

Just change the `.navbar-default` class into `.navbar-inverse`:

Example

```html
<nav class="navbar navbar-inverse">
  <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>
```

Fixed Navigation Bar

The navigation bar can also be fixed at the top or at the bottom of the page.

A fixed navigation bar stays visible in a fixed position (top or bottom) independent of the page scroll.

The `.navbar-fixed-top` class makes the navigation bar fixed at the top:

Example

```html
<nav class="navbar navbar-inverse navbar-fixed-top">
  <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>
```

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

Navigation bars can also hold dropdown menus.

The following example adds a dropdown menu for the "Page 1" button:

Example

```html
<nav class="navbar navbar-inverse">
  <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 class="dropdown">
          <a class="dropdown-toggle" data-toggle="dropdown" href="#">Page 1
          <span class="caret"></span></a>
          <ul class="dropdown-menu">
            <li><a href="#">Page 1-1</a></li>
            <li><a href="#">Page 1-2</a></li>
            <li><a href="#">Page 1-3</a></li>
          </ul>
        </li>
```

Right-Aligned Navigation Bar

WebSiteName	Home	Page 1	Page 2	Page 3	👤 Sign Up	➲ Login

The `.navbar-right` class is used to right-align navigation bar buttons.

Example

```html
<nav class="navbar navbar-inverse">
  <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>
      <ul class="nav navbar-nav navbar-right">
        <li><a href="#"><span class="glyphicon glyphicon-user"></span> Sign Up</a></li>
        <li><a href="#"><span class="glyphicon glyphicon-log-in"></span> Login</a></li>
      </ul>
    </div>
  </div>
</nav>
```

Collapsing The Navigation Bar

The navigation bar takes up too much space on a small screen.

We should hide the navigation bar; and only show it when it is needed.

In the following example the navigation bar is replaced by a button in the top right corner. Only when the button is clicked, the navigation bar will be displayed:

Navigation with Bootstrap

```html
<nav class="navbar navbar-inverse">
  <div class="container-fluid">
    <div class="navbar-header">
      <button type="button" class="navbar-toggle" data-toggle="collapse"
data-target="#myNavbar">
        <span class="icon-bar"></span>
        <span class="icon-bar"></span>
        <span class="icon-bar"></span>
      </button>
      <a class="navbar-brand" href="#">WebSiteName</a>
    </div>
    <div class="collapse navbar-collapse" id="myNavbar">
      <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>
      <ul class="nav navbar-nav navbar-right">
        <li><a href="#"><span class="glyphicon glyphicon-user"></span> Sign Up</a></li>
        <li><a href="#"><span class="glyphicon glyphicon-log-in"></span> Login</a></li>
      </ul>
    </div>
  </div>
</nav>
```

Bootstrap Image Shapes

Rounded Corners: Circle: Thumbnail:

Rounded Corners

The `.img-rounded` class adds rounded corners to an image (IE8 does not support rounded corners):

Example

```
<img src="cinqueterre.jpg" class="img-rounded" alt="Cinque Terre" width="304" height="236">
```

Circle

The `.img-circle` class shapes the image to a circle (IE8 does not support rounded corners):

Example

```
<img src="cinqueterre.jpg" class="img-circle" alt="Cinque Terre" width="304" height="236">
```

Thumbnail

The `.img-thumbnail` class shapes the image to a thumbnail:

Example

```
<img src="cinqueterre.jpg" class="img-thumbnail" alt="Cinque Terre" width="304" height="236">
```

Responsive Images

Images comes in all sizes. So do screens. Responsive images automatically adjust to fit the size of the screen.

Create responsive images by adding an `.img-responsive` class to the `<img>` tag. The image will then scale nicely to the parent element.

The `.img-responsive` class applies `display: block;` and `max-width: 100%;` and `height: auto;` to the image:

Example

```
<img class="img-responsive" src="img_chania.jpg" alt="Chania">
```

Responsive Embeds

Also let videos or slideshows scale properly on any device.

Classes can be applied directly to <iframe>, <embed>, <video>, and <object> elements.
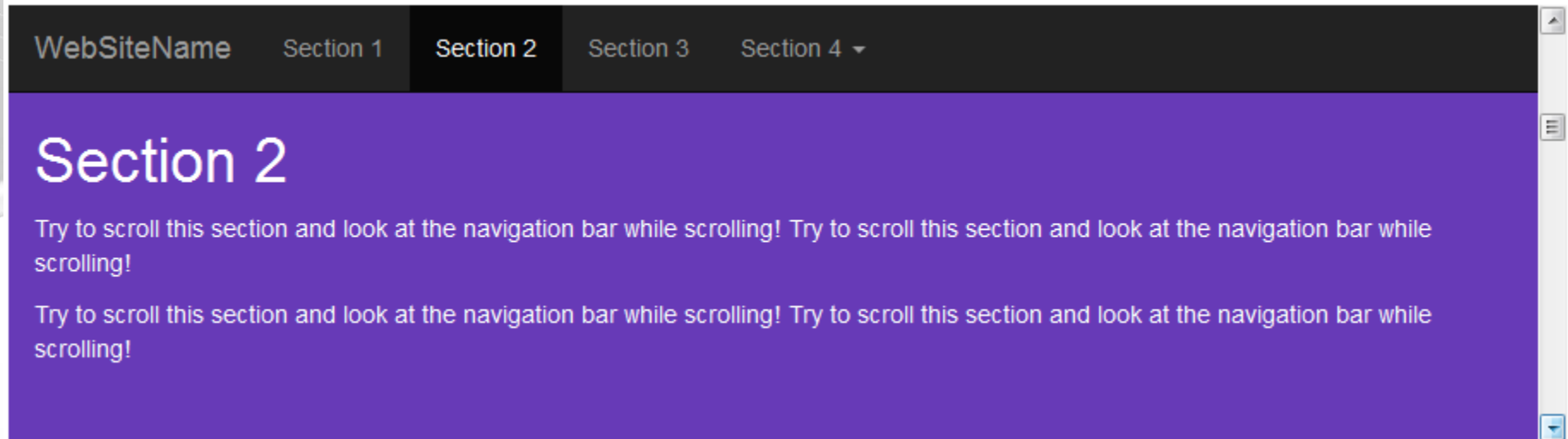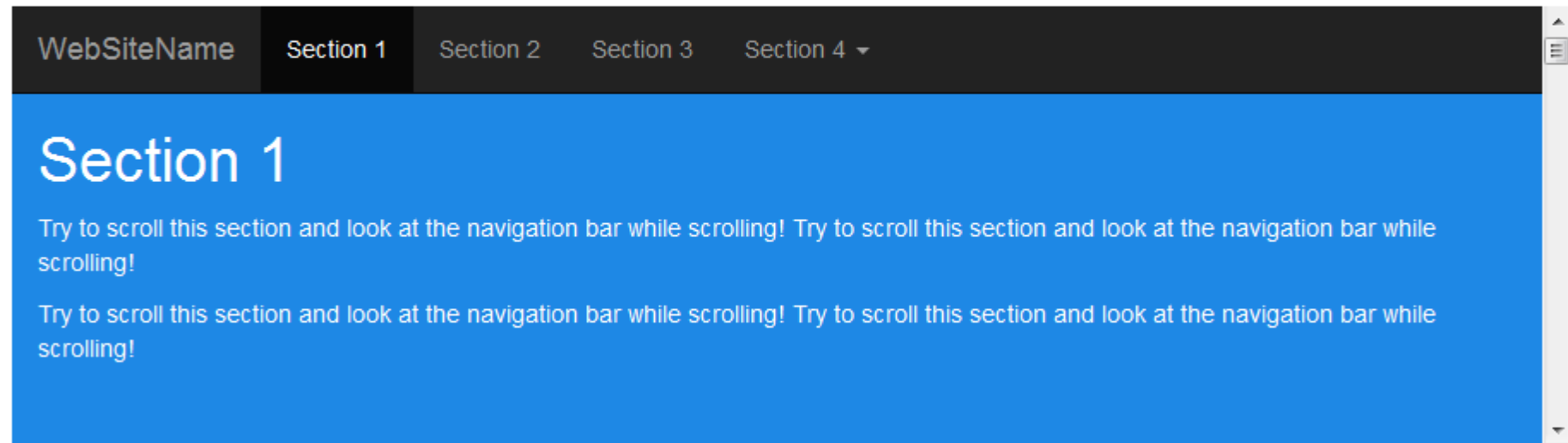
The following example creates a responsive video by adding an `.embed-responsive-item` class to an `<iframe>` tag (the video will then scale nicely to the parent element). The containing `<div>` defines the aspect ratio of the video:

Example

```
<div class="embed-responsive embed-responsive-16by9">
  <iframe class="embed-responsive-item" src="..."></iframe>
</div>
```
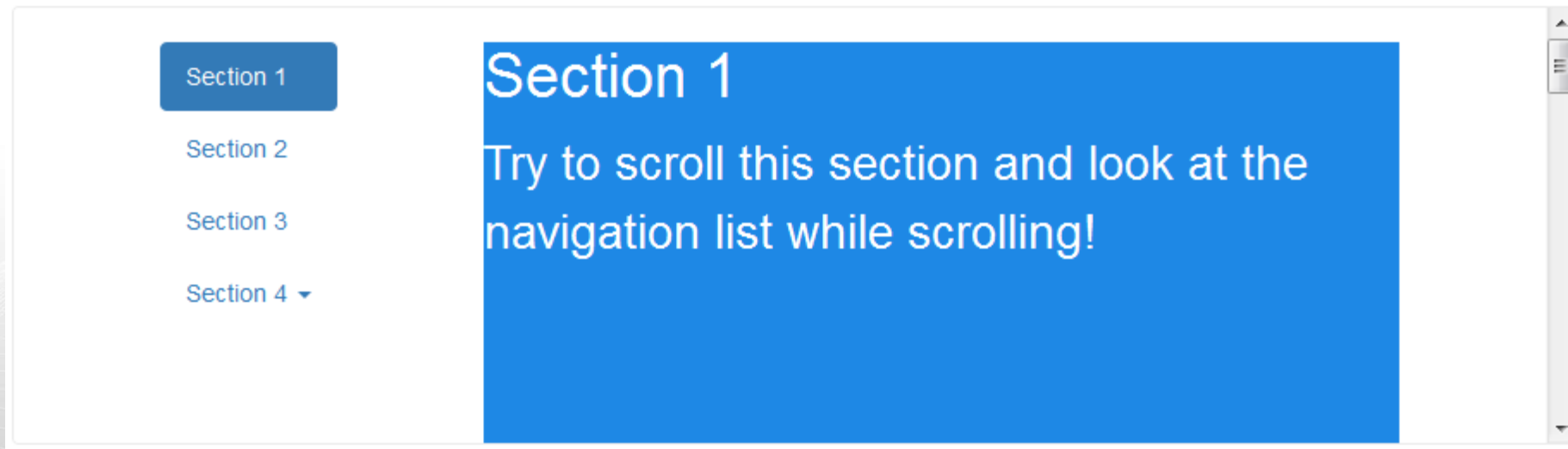
The Scrollspy Plugin

The Scrollspy plugin is used to automatically update links in a navigation list based on scroll position.

| WebSiteName | **Section 1** | Section 2 | Section 3 | Section 4 ▾ |

Section 1

Try to scroll this section and look at the navigation bar while scrolling! Try to scroll this section and look at the navigation bar while scrolling!

Try to scroll this section and look at the navigation bar while scrolling! Try to scroll this section and look at the navigation bar while scrolling!

| WebSiteName | Section 1 | **Section 2** | Section 3 | Section 4 ▾ |

Section 2

Try to scroll this section and look at the navigation bar while scrolling! Try to scroll this section and look at the navigation bar while scrolling!

Try to scroll this section and look at the navigation bar while scrolling! Try to scroll this section and look at the navigation bar while scrolling!

Scrollspy Vertical Menu

Section 1

Section 2

Section 3

Section 4 ▾

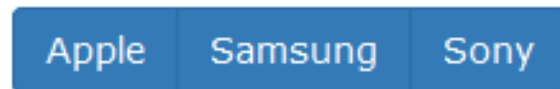### Section 1

Try to scroll this section and look at the navigation list while scrolling!

Button Groups

Bootstrap allows you to group a series of buttons together (on a single line) in a button group:

| Apple | Samsung | Sony |

Use a `<div>` element with class `.btn-group` to create a button group:

Example

```html
<div class="btn-group">
  <button type="button" class="btn btn-primary">Apple</button>
  <button type="button" class="btn btn-primary">Samsung</button>
  <button type="button" class="btn btn-primary">Sony</button>
</div>
```

Bootstrap Breadcrumbs

A breadcrumb is a navigation scheme that indicates current page's location to the user within a website or application. Breadcrumb navigation can greatly enhance the accessibility of the websites having a large number of pages

Home / Products / Accessories

Bootstrap - theme

Online Store:

Jumbotron

Navbar

4 col	4 col	4 col

4 col	4 col	4 col

Footer

Webpage:

Navbar

2 col	8 col	2 col

Footer

Bootstrap - theme

Online Store:

Jumbotron		
Navbar		
4 col	4 col	4 col
4 col	4 col	4 col
Footer		

Webpage:

Navbar		
2 col	8 col	2 col
Footer		