

BootStrap

BootStrap is a predefined responsive web design framework used to rapidly develop websites.

Add the BootStrap Framework

1. Open the folder **lab_9** in Brackets.
2. Open the file **index.html** in Brackets.
3. Add the following to the **<head>** element:

```
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
```

4. Either go to the website http://www.w3schools.com/bootstrap/bootstrap_get_started.asp and copy and paste the MaxCDN into the **<head>** of the document or type out the following:

```
<!-- Latest compiled and minified CSS -->
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/
bootstrap.min.css">

<!-- jQuery library -->
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></
script>

<!-- Latest compiled JavaScript -->
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"
></script>
```

5. The MaxCDN will automatically load the Bootstrap framework into your webpage. Save the file and preview it in a web browser. Notice how the fonts are preformatted to behave differently at different screen sizes.

Create a fluid container

The fluid container is needed so that columns can be preformatted into different and predetermined sizes.

1. Find the **<main>** element. Add the following attribute to the opening tag:

```
class="container">
```

2. Save the file and preview it in a web browser. Notice how when the screen changes size, the content changes.

Create column based layouts

Bootstrap's grid system allows up to 12 columns across the page. If you do not want to use all 12 columns individually, you can group the columns together to create wider columns. 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.

1. Find <div id="tagline">. Add the following attribute:

class="col-md-12"

2. Save the file and preview it in a web browser. Notice how when the screen changes size, the content changes.

3. Find each <section> element. Add the following attribute to each one:

class="col-md-6"

4. Save the file and preview it in a web browser. Notice how when the screen changes size, the section elements change from 2 columns to one.

5. Find each <article> element. Add the following attribute to each one:

class="col-md-4"

6. Save the file and preview it in a web browser. Notice how when the screen changes size, the article elements change from 3 columns to one.

More on responsive grids http://www.w3schools.com/bootstrap/bootstrap_grid_basic.asp
http://www.w3schools.com/bootstrap/bootstrap_grid_system.asp

Making images Responsive

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

1. Find each element. Add the following attribute to each one:

class="img-responsive"

2. Save the file and preview it in a web browser. Notice how when the screen changes size, the images automatically adjust in size.

More on responsive images http://www.w3schools.com/bootstrap/bootstrap_images.asp

Making a Responsive Navigation Bar

A navigation bar is a navigation header that is placed at the top of the page. With Bootstrap, a navigation bar can extend or collapse, depending on the screen size. In order to do this we must write some html and CSS. The CSS will override some of the settings that are defaulted in Bootstrap.

1. Find the <header> element. Insert the following code:

```
<nav class="navbar navbar-default navbar-fixed-top navbar-center">
  <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="index.html">Will Wilson's Widgets</a>
    </div>
    <div class="collapse navbar-collapse" id="myNavbar">
      <ul class="nav navbar-nav navbar-right">
        <li class="active"><a href="index.html">Home</a></li>
        <li class="dropdown">
          <a class="dropdown-toggle" data-toggle="dropdown" href="products.html">Products<span class="caret"></span></a>
          <ul class="dropdown-menu navbar-center">
            <li><a href="products1.html">Product 1</a></li>
            <li><a href="products2.html">Product 2</a></li>
            <li><a href="products3.html">Product 3</a></li>
          </ul>
        </li>
        <li><a href="about.html">About Us</a></li>
        <li><a href="contact.html">Contact Us</a></li>
      </ul>
    </div>
  </div>
  <div id="search">
    <button type="button" class="btn btn-info">
      <span class="glyphicon glyphicon-search"></span> Search
    </button>
  </div>
</nav>
```

2. Save the file.

3. Create a new file called **screen.css**. Save this file in your root folder.

4. Add the following code to **screen.css**:

```
#search {  
  width: 90px;  
  height: 35px;  
  float: right;  
}  
  
.navbar {  
  background-color: lightgray;  
}  
  
.btn {  
  background-color: black;  
}  
  
.navbar-center {  
  width: 100%;  
  text-align: center;  
}
```

5. Save the file.
6. Go back to **index.html**. Add the following to the <head> of the document to link it to your CSS page:

```
<link rel="stylesheet" type="text/css" href="screen.css" />
```

7. Save the file and preview it in a web browser. Notice that when the screen size is changed that the navigation menu collapses.

In addition to creating collapsible navigation Bootstrap can create navigation that changes in format.

1. Go back to **index.html**. Add the following to the <footer> element:

```
<nav class="navbar navbar-default navbar-center">
  <div class="container-fluid">
    <ul class="nav navbar-nav">
      <li class="active"><a href="index.html">Home</a></li>
      <li class="dropdown"><a class="dropdown-toggle" data-toggle="dropdown" href="products.html">Products<span
class="caret"></span></a>
        <ul class="dropdown-menu navbar-center">
          <li><a href="products1.html">Product 1</a></li>
          <li><a href="products2.html">Product 2</a></li>
          <li><a href="products3.html">Product 3</a></li>
        </ul>
      </li>
      <li><a href="about.html">About Us</a></li>
      <li><a href="contact.html">Contact Us</a></li>
    </ul>
  </div>
  <div id="social">
    <a href="http://www.facebook.com"></a>

    <a class="text-center" href="http://www.twitter.com"></a>

    <a class="text-center" href="http://www.link.com"></a>
  </div>
</nav>
```

2. Save the file.
3. Add the following code to **screen.css**:

```
#social {
  width: 200px;
  height: auto;
  margin-left: auto;
  margin-right: auto;
  margin-bottom: 20px;
}
```

4. Save the file.
5. Go back to **index.html**. Preview it in a web browser. Notice that when the screen size is changed that the navigation menu moves into a stacked orientation.

More on Navigation Menus http://www.w3schools.com/bootstrap/bootstrap_navbar.asp

Create a Responsive Slideshow

The Carousel plugin is a component for cycling through elements, like a carousel (slideshow).

1. Find the `<div id="slideshow">` element. Add the following code to the element:

```
<div id="myCarousel" class="carousel slide" data-ride="carousel">

  <!--Indicators-->

  <ol class="carousel-indicators">
    <li data-target="#myCarousel" data-slide-to="0" class="active"></li>
    <li data-target="#myCarousel" data-slide-to="1"></li>
    <li data-target="#myCarousel" data-slide-to="2"></li>
    <li data-target="#myCarousel" data-slide-to="3"></li>
  </ol>

  <!--Wrapper for slides-->

  <div class="carousel-inner" role="listbox">
    <div class="item active">
      
    </div>

    <div class="item">
      
    </div>

    <div class="item">
      
    </div>

    <div class="item">
      
    </div>

  </div>

  <!--Left and right controls-->

  <a class="left carousel-control" href="#myCarousel" role="button" data-slide="prev">
    <span class="glyphicon glyphicon-chevron-left" aria-hidden="true"></span>
    <span class="sr-only">Previous</span>
  </a>

  <a class="right carousel-control" href="#myCarousel" role="button" data-slide="next">
    <span class="glyphicon glyphicon-chevron-right" aria-hidden="true"></span>
    <span class="sr-only">Next</span>
  </a>
</div>
```

6. Save the file.

7. Add the following code to **screen.css**:

```
#slideshow {
  float: left;
  width: 100%;
```

```

padding: 0;
border: none;
margin-top: 75px;
background-color: gray;
overflow: hidden;
background-position: center center;
background-repeat: no-repeat;
}
.carousel-inner > .item > img,
.carousel-inner > .item > a > img {
width: 70%;
margin: auto;
}

```

8. Save the file.
9. Go back to **index.html**. Preview it in a web browser. Notice that when the screen size is changed that the slideshow also adjusts.

More on responsive carousels http://www.w3schools.com/bootstrap/bootstrap_carousel.asp

Overriding the Default Bootstrap Framework

Styles in the Bootstrap Framework can be overridden very easily.

1. Go back to **screen.css**. Add the following code:

```

h2 {
    color: dimgray;
}

h3 {
    color: lightgray;
}

@media only screen and (max-width: 1024px) {
    h1 {
        font-size: 40px;
        font-family: sans-serif;
        font-weight: 500;
        color: black;
        line-height: 1.3em;
    }
    h2 {
        font-size: 25px;
        font-family: sans-serif;
        color: dimgray;
        font-weight: 500;
        line-height: 1.2em;
    }
    h3 {
        font-size: 20px;
        font-family: sans-serif;
        color: lightgray;
        font-weight: 500;
        line-height: 1.2em;
    }
    p {
        font-size: 12px;
        font-family: sans-serif;
        color: black;
        line-height: 2em;
    }
}

@media only screen and (max-width: 600px) {
    h1 {
        font-size: 28px;
        font-family: sans-serif;
        color: black;
        line-height: 1.3em;
    }
}

```

10. Save the file.

11. Go back to **index.html**. Preview it in a web browser. Notice that typefaces and styles of each of the headings has been changed.

More on Typography http://www.w3schools.com/bootstrap/bootstrap_typography.asp

Finishing Up.

1. Change the <title>, <meta description>, <meta keywords> and <meta author> to your own information.
2. Save the file.

