**Unloop Full Stack Web Development**

# Bootstrap Lab

## Introduction

**What is Bootstrap?**

Bootstrap is an extremely powerful front-end framework that provides many styles and functionalities out of the box. For this reason, Bootstrap is ***the most*** popular front-end framework used for developing responsive, mobile first websites today.

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!

**What does it include?**

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

### Bootstrap Grid System

One of the most powerful components that Bootstrap provides is its responsive Grid System.

Like other popular frameworks (such as the 960.gs Framework you may have seen in your HTML & CSS textbook) 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, meaning that 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.

To leverage Bootstrap’s responsive grid design, break up your website layout into components: Elements that you would like to have on one line should be nested in an HTML element that uses the “row” class. Specify how many columns you would like your component to take up in the grid system using the following syntax:

“col-\*-\*”

The first \* allows you to specify which device you want the styles to apply to.

The second \* specifies how many columns in the 12 column grid you want your element to take up.

#### Example 1:

In the example below, we specify the .col-md-6 class (without .col-sm-\*). This means that medium and large devices will split 50%/50% - because the class scales up. However, for small devices, it will stack vertically (100% width):

<div class="row">  
  <div class="col-md-6" style="background-color:yellow;">  
    <p>Lorem ipsum...</p>  
  </div>  
  <div class="col-md-6" style="background-color:pink;">  
    <p>Sed ut perspiciatis...</p>  
</div>

#### Example 2:

The below <div>’s are in one “row.” With the following classes included on each div, Bootstrap is going to say "on a small size device, look at classes with -sm- in them and use those. On a medium sized device, look at classes with -md- in them and use those".

On a small device, the first div will take up three columns, and the second div will take up 9.

On a medium device each div will take up 50% of the screen (because 6 is ½ of 12). ☺

<div class="row">

<div class="col-sm-3 col-md-6">....</div>  
<div class="col-sm-9 col-md-6">....</div>

</div>

**TIP:** Make sure that-- in each row-- the sum always adds up to 12.

For full documentation on the functionality of the Bootstrap Grid System reference: [Bootstrap Grid System](file:///R:\Software%20Shortcuts\W3%20Schools\www.w3schools.com\bootstrap\bootstrap_grid_basic.html)

# **Lab Section**

In this lab, you will be re-creating the portfolio website you saw in the Udacity videos by leveraging the Bootstrap Grid System (and a couple other “components”)!

## Resources:

* A PDF of the website you will be recreating is named “design-mockup-portfolio.pdf” inside the bootstrap\_lab folder.
  + Do not include the three boxes (referred to as color swatches) on the lefthand side of the website design in your site.
* The bootstrap framework version 3 (in full) is located under the [Resources\Frameworks](file:///\\edccsrv0001\classroom%20resources\computer%20programming\Full%20Stack%20Web%20Development%20-%20Quarter%201\Resources\Frameworks\bootstrap-3.0) folder. **For this lab, you will only need to include the first file named “bootstrap.css” under the css folder. Copy this file and place it inside the “frameworks” folder inside of your project folder.**
  + Note: some Bootstrap components *do* use JavaScript. In this case, you will need to include the “bootstrap.js” file. Do not worry about this for now.
* To complete this lab you will need to use the following components:
  + [Bootstrap Grid Framework](file:///\\edccsrv0001\classroom%20resources\Computer%20Programming\Software%20Shortcuts\W3%20Schools\www.w3schools.com\bootstrap\bootstrap_grid_basic.html)
  + [Bootstrap Responsive Images](file:///\\edccsrv0001\classroom%20resources\Computer%20Programming\Software%20Shortcuts\W3%20Schools\www.w3schools.com\bootstrap\bootstrap_images.html)
    - .img-responsive will span the image width to the width of its parent tag.
  + [Bootstrap CSS Typography](file:///\\edccsrv0001\classroom%20resources\Computer%20Programming\Software%20Shortcuts\W3%20Schools\www.w3schools.com\bootstrap\bootstrap_ref_css_text.html)

Requirements:

* The layout of components should be created using the Bootstrap Grid System.
* Use images of your choice, including the logo on the upper lefthand corner.
  + Replace the title text with your name!
* Font used in website must be the Lato font, found in the [fonts folder](file:///R:\Full%20Stack%20Web%20Development%20-%20Quarter%201\Resources\fonts) in the class resources share.
  + Instructions on how to include external fonts: [About Fonts.docx](file:///R:\Full%20Stack%20Web%20Development%20-%20Quarter%201\Resources\fonts\About-Fonts.docx)
* Once you have made your website look similar to the PDF, add 3 Bootstrap components of your choice to your site.

Your project folder should look something like this:

