Bootstrap – part 1
What is bootstrap & why should you use it anyway?

What is Bootstrap?

Bootstrap is a web framework developed by Twitter. 

How to use it

it is a huge tool with a lot of features --- is it daunting to use?

Other web frameworks

Pros and cons

Mark Otto and Jacob Thornton
Build websites faster!!!
A web framework is a tool that programmers and web developers can use to simplify writing a website – they provide HTML, CSS and JS for the underlying structure and fxn.
A Framework Is More Than Just a Template-

It is a group of tools you can use to create your web pages.
Bootstrap uses a 12-column default grid
default Bootstrap grid as shown on an iPhone
### Pros and cons of using Bootstrap

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speedy</td>
<td>Code bloat</td>
</tr>
<tr>
<td>Efficient</td>
<td>(an argument to use</td>
</tr>
<tr>
<td>Complete</td>
<td>Less and Sass)</td>
</tr>
<tr>
<td>Maintainable</td>
<td>Repetitive – lack of</td>
</tr>
<tr>
<td>Standardized</td>
<td>originality(?)</td>
</tr>
<tr>
<td></td>
<td>Steep learning curve</td>
</tr>
</tbody>
</table>
Bootstrap is released under the MIT open source license.
Where to get the official version of Bootstrap

Go to: Website (see below)

Click download

Open zip file

Move the css, font, and js directories into your root directory

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

Download Bootstrap
Bootstrap
Directory Structure

```plaintext
bootstrap/
  css/
    bootstrap.css
    bootstrap.min.css
    bootstrap-theme.css
    bootstrap-theme.min.css
  js/
    bootstrap.js
    bootstrap.min.js
  fonts/
    glyphicons-halflings-regular.eot
    glyphicons-halflings-regular.svg
    glyphicons-halflings-regular.ttf
    glyphicons-halflings-regular.woff
```

If you use any of the JavaScript plugins included in Bootstrap, you will also need to include jQuery in your HTML. Bootstrap 3.3.1 requires at least jQuery 1.9.1 or higher to work.

**Note: Bootstrap Requires jQuery**
Download jQuery v1.12.1 or v2.2.1

View Source on GitHub →
How jQuery Works →
To locally download these files, right-click the link and select “Save as...” from the menu.

**jQuery 1.x**

The jQuery 1.x line had major changes as of jQuery 1.9.0. We strongly recommend that you also use the jQuery Migrate plugin if you are upgrading from pre-1.9 versions of jQuery or need to use plugins that haven’t yet been updated. Read the [jQuery 1.9 Upgrade Guide](#) and the [jQuery 1.9 release blog post](#) for more information.

*Download the compressed, production jQuery 1.12.1*

*Download the uncompressed, development jQuery 1.12.1*

*Download the map file for jQuery 1.12.1*

*jQuery 1.12.1 release notes*

**jQuery 2.x**

jQuery 2.x has the same API as jQuery 1.x, but does not support Internet Explorer 6, 7, or 8. All the notes in the [jQuery 1.9 Upgrade Guide](#) apply here as well. Since IE 8 is still relatively common, we recommend using the 1.x version unless you are certain no IE 6/7/8 users are visiting the site. Please read the [2.0 release notes](#) carefully.

*Download the compressed, production jQuery 2.2.1*

*Download the uncompressed, development jQuery 2.2.1*

*Download the map file for jQuery 2.2.1*

*jQuery 2.2.1 release notes*
Save it into your js directory
Minified Files?

the CSS and JavaScript files with .min in the filename have had all of the unnecessary characters removed.
Hi Class!

```html
<!DOCTYPE html>
<html>
  <head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title>Using Bootstrap - 1st website</title>
    <link href="css/bootstrap.min.css" rel="stylesheet">
  </head>
  <body>
    <h1>Hi Class!</h1>
    <!-- jQuery (Bootstrap JS plugins depend on it!) -->
    <script src="js/jquery-1.12.1.min.js"></script>
    <script src="js/bootstrap.min.js"></script>
    <script src="js/script.js"></script>
  </body>
</html>
```
It’s all about the GRID system!
• Grid system is the number 1 reason people use Bootstrap
• Makes creating responsive sites much easier
• Let’s focus on how grid systems work
• Create a layout grid for a responsive site
Grids provide structure to your designs.

Vertical columns help reinforce the grid structure.

Structure makes pages more predictable.

The best web grids to use are flexible – they adjust in size and width of the browser.

Web pages are usually read using the “F-shape”.

Use grids as a guideline in your design.

http://www.puidokas.com/portfolio/gridfox/
Examples of webpages that lack structure.

Includes a 12 column grid

Responsive mobile first system

Columns change with the width of the device

Four sizes of media queries

Bootstrap
The viewport meta tag helps mobile browsers display pages more effectively. This version says to set the width of the page to the device width and the initial zooming to 100%.

This line ensures that your pages are easier to read in larger DPI, small-screen devices like iPhones and modern Android phones.
4 Class!
Typography and Basic Link Styling with Bootstrap

- Bootstrap automatically sets the background color on the element `<body>` to white (#fff).
- Links are only underlined when they are hovered over with `:hover`.
- The global link color is set via `@link-color`.

Bootstrap uses the `@font-family-base`, `@font-size-base`, and `@line-height-base` attributes as the typographic base.
<!DOCTYPE html>
<html>
  
  <head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title>Using Bootstrap - 1st website</title>
    <link href="css/bootstrap.min.css" rel="stylesheet">
    <link href="css/style.css" rel="stylesheet">
  </head>
  
  <body>
    
    <h1>Hi Class!</h1>
    
    <!-- jQuery (Bootstrap JS plugins depend on it!) -->
    <script src="js/jquery-1.12.1.min.js"></script>
    <script src="js/bootstrap.min.js"></script>
    <script src="js/script.js"></script>
    
  </body>

</html>
Hi Class!

Hi Class!
The Bootstrap Grid Basics

1. 

2. 

3. 

```html
<div class="container">
  <div class="row">
    <div class="col-md-4">Col 1</div>
    ...
  </div>
</div>
```
container and **container-fluid** classes

1. Bootstrap grid must always be inside a container (or container-fluid) wrapper –

container-fluid class stretches your layout the full width of the browser and provides consistent padding around your grid and other content

container class has predetermined fixed width that is still responsive based on the width of the browser

Remember, that break points are those media query range boundaries
The `row` class creates horizontal groups of columns.

```html
<div class="container">
  <div class="row">
    <div class="col-md-4">Col 1</div>
    ... 
  </div>
</div>
```

- **Row class creates** horizontal groups of columns.
- Columns **WITHIN a row** interact with each other as a GROUP – but independently from columns in another row.
- **Nuance info:** The row class creates a negative margin – to counteract the padding of the container class. (example to follow)
The **col-SIZE-SPAN** class template

Every Bootstrap column class is defined using a template:

- **SIZE** is a screen range width identifier. MD for medium, LG for large.

For example, LG is defined at 1200 px or above. Columns will collapse (stack) on each other when the size is less than 1200px.

**SPAN** is how many columns the element should span. Remember: values are from 1 to 12. Bootstrap is a 12 column grid layout.
Content outside of the grid but still within the container. Once upon a time, there was a little red hen who lived on a farm. She was friends with a lazy
Once upon a time, there was a little red hen who lived on a farm. She was friends with a lazy...
Use the elements that make sense to your design --- just maintain the organization of container, row, col.
Add the following to your style.css

```css
body {
    background-color: #ccf6fa;
    margin-left: 0.5%;
}

.row {
    margin-bottom: 15px;
}

.row > div {
    border: 2px solid black;
    background-color: yellow;
}
```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title>Using Bootstrap - 1st website</title>
    <link href="css/bootstrap.min.css" rel="stylesheet">
    <link href="css/style.css" rel="stylesheet">
  </head>
  <body>
    <h1>Hi Class!</h1>
    <div class="container-fluid">
      <div class="row">
        <div class="col-md-12">col 1</div>
      </div>
    </div>
    <!-- jQuery (Bootstrap JS plugins depend on it!) -->
    <script src="js/jquery-1.12.1.min.js"></script>
    <script src="js/bootstrap.min.js"></script>
    <script src="js/script.js"></script>
  </body>
</html>
<html>
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title>Using Bootstrap - 1st website</title>
    <link href="css/bootstrap.min.css" rel="stylesheet">
    <link href="css/style.css" rel="stylesheet">
</head>
<body>
    <h1>Hi Class!</h1>
    <div class="container-fluid">
        <div class="row">
            <div class="col-md-12">col 1</div>
        </div>
        <div class="row">
            <div class="col-sm-3">col 1</div>
            <div class="col-sm-3">col 2</div>
            <div class="col-sm-3">col 3</div>
            <div class="col-sm-3">col 3</div>
        </div>
    </div>
    <!-- jQuery (Bootstrap JS plugins depend on it!) -->
    <script src="js/jquery-1.12.1.min.js"></script>
    <script src="js/bootstrap.min.js"></script>
    <script src="js/script.js"></script>
</body>
</html>
<body>
  <h1>Hi Class!</h1>
  <div class="container-fluid">
    <div class="row">
      <div class="col-md-12">col 1</div>
    </div>
    <div class="row">
      <div class="col-sm-3">col 1</div>
      <div class="col-sm-3">col 2</div>
      <div class="col-sm-3">col 3</div>
      <div class="col-sm-3">col 3</div>
    </div>
    <div class="row">
      <div class="col-xs-3">col 1</div>
      <div class="col-xs-3">col 2</div>
      <div class="col-xs-3">col 3</div>
      <div class="col-xs-3">col 3</div>
    </div>
  </div>
</body>
<div class="col-sm-3">col 1</div>

<div class="col-sm-3">col 2</div>

<div class="col-sm-3">col 3</div>

</div>

</div>

<h1>All of the columns:</h1>

<div class="row">
  <div class="col-md-12">col 1</div>
</div>

<div class="row">
  <div class="col-md-6">col 1</div>
  <div class="col-md-6">col 2</div>
</div>

<!-- jQuery (Bootstrap JS plugins depend on it!) -->
<script src="js/jquery-1.12.1.min.js"></script>
<script src="js/bootstrap.min.js"></script>
<script src="js/scripts.js"></script>
</body>
<div class="col-sm-3">col 3</div>

<div class="row">
  <div class="col-xs-3">col 1</div>
  <div class="col-xs-3">col 2</div>
  <div class="col-xs-3">col 3</div>
  <div class="col-xs-3">col 4</div>
</div>

<h1>All of the columns:</h1>

<div class="row">
  <div class="col-md-12">col 1</div>
</div>

<div class="row">
  <div class="col-md-6">col 1</div>
  <div class="col-md-6">col 2</div>
</div>

<div class="row">
  <div class="col-md-4">col 1</div>
  <div class="col-md-4">col 2</div>
  <div class="col-md-4">col 3</div>
</div>

<!-- jQuery (Bootstrap JS plugins depend on it!) -->
<div class="col-xs-3">col 2</div>
<div class="col-xs-3">col 3</div>
</div>

<h1>Hi Class!</h1>

<div class="row">
  <div class="col-md-12">col 1</div>
</div>

<div class="row">
  <div class="col-md-6">col 1</div>
  <div class="col-md-6">col 2</div>
</div>

<div class="row">
  <div class="col-md-4">col 1</div>
  <div class="col-md-4">col 2</div>
  <div class="col-md-4">col 3</div>
</div>

<div class="row">
  <div class="col-sm-3">col 1</div>
  <div class="col-sm-3">col 2</div>
  <div class="col-sm-3">col 3</div>
  <div class="col-sm-3">col 4</div>
</div>

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Bootstrap 1 Class Example</title>
</head>
<body>
  <div class="container">
    <div class="row">
      <div class="col-sm-3 col-md-6 col-lg-4">
        Example of a single column grid layout.
      </div>
      <div class="col-sm-3 col-md-6 col-lg-4">
        Another example of a single column grid layout.
      </div>
      <div class="col-sm-3 col-md-6 col-lg-4">
        Additional example of a single column grid layout.
      </div>
    </div>
    <div class="row">
      <div class="col-sm-3 col-md-4">
        Example of a two-column grid layout.
      </div>
      <div class="col-sm-3 col-md-4">
        Another example of a two-column grid layout.
      </div>
      <div class="col-sm-3 col-md-4">
        Additional example of a two-column grid layout.
      </div>
    </div>
    <div class="row">
      <div class="col-sm-3 col-md-3">
        Example of a three-column grid layout.
      </div>
      <div class="col-sm-3 col-md-3">
        Another example of a three-column grid layout.
      </div>
      <div class="col-sm-3 col-md-3">
        Additional example of a three-column grid layout.
      </div>
    </div>
  </div>
</body>
</html>
```html
<div class="row"

  <div class="col-sm-2">col 1</div>
  <div class="col-sm-2">col 2</div>
  <div class="col-sm-2">col 3</div>
  <div class="col-sm-2">col 4</div>
  <div class="col-sm-2">col 5</div>
  <div class="col-sm-2">col 6</div>

</div>

<div class="row"

  <div class="col-sm-1">col 1</div>
  <div class="col-sm-1">col 2</div>
  <div class="col-sm-1">col 3</div>
  <div class="col-sm-1">col 4</div>
  <div class="col-sm-1">col 5</div>
  <div class="col-sm-1">col 6</div>

</div>

<!-- jQuery (Bootstrap JS plugins depend on it!) -->

```

Hi Class!

All of the columns: