BootStrap Notes

History of Bootstrap

- Bootstrap was developed by Mark Otto and Jacob Thornton at Twitter as a framework to encourage consistency across internal tools.
- Bootstrap was released as an open source product in August 2011 on GitHub.
- *In June 2014 Bootstrap was the No.1 project on GitHub!*
- *Latest version : 4.0*

Introduction

- Bootstrap is the most popular HTML, CSS, and JavaScript framework for developing responsive, mobile-first projects on the web.
- Bootstrap is a free collection of tools for creating websites and web applications
- Bootstrap contains HTML and CSS-based design templates for text, forms, buttons, navigation and other components
- Bootstrap also contains optional JavaScript extensions
- Bootstrap is open source and available on GitHub

Uses of Bootstrap

- **Mobile-first approach:** Since Bootstrap 3, the framework consists of mobile-first styles throughout the entire library
- **Browser support:** Bootstrap is supported by all popular browsers
- **Responsive web design:** Bootstrap's responsive CSS adjusts to Desktops, Tablets, and Mobile phones
  Note: Responsive web design is to create web sites which adjust and align
  themselves according to what media tool you use for viewing it.
- **Easy to get started:** With just the knowledge of HTML and CSS anyone can get started with Bootstrap

What Does Bootstrap Include?

- **Scaffolding:** Contains layout, grid system, fluid grid system, and responsive design
- **Base CSS:** Contains classes for typography, tables,forms, buttons, images, and more
- **Components:** Contains reusable components: icons, dropdowns, navbars, breadcrumbs, alerts, and more
- **JavaScript Plugins:** Contains over a dozen custom jQuery plugins. You can include them all, or one by one
- **Customizable Components :** Customize Bootstrap's components, LESS variables, and jQuery plugins to create your own version

Adding Bootstrap to Your Web Pages

There are two ways of starting to use Bootstrap on your own web site.
You can:
- Download Bootstrap from getbootstrap.com
- Include Bootstrap from a CDN, like MaxCDN(Content Delivery Network)

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

<!-- Optional: Include the jQuery library -->
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.31/jquery.min.js"></script>
<!-- Optional: Incorporate the Bootstrap JavaScript plugins -->
<script src="http://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"></script>
```

Bootstrap Grid System

Bootstrap is built on responsive 12-column grids, layouts, and components.
Grid
- In graphic design, a grid is a structure made up of a series of vertical and horizontal lines used to structure content.
- A grid is widely used to design layout and content structure in print design.
- In web design, a grid is a very effective method to create a consistent layout rapidly and effectively using HTML and CSS.

Bootstrap provides a responsive, mobile-first fluid 12-column grid system.

The responsive grid system appropriately scales up to 12 columns as the device or viewport size increases.

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

Grid Classes

The Bootstrap grid system has four classes: xs (phones), sm (tablets), md (desktops), and lg (larger desktops). These classes can be combinated to create more dynamic and flexible layouts.

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

Basic Structure of a Bootstrap Grid

```
<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>
```

Grid Options

	Extra small devices	Small devices Tablets (>=768px)	Medium devices Desktops	Large devices Desktops

	Phones (<768px)		(>=992px)	(>=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
Column width	Auto	~62px	~81px	~97px
Gutter width	30px (15px on each side of a column)	30px (15px on each side of a column)	30px (15px on each side of a column)	30px (15px on each side of a column)
Nestable	Yes	Yes	Yes	Yes
Offsets	Yes	Yes	Yes	Yes
Column ordering	Yes	Yes	Yes	Yes

Ref:

- https://getbootstrap.com/
- http://www.w3schools.com/bootstrap/