



Front-end Essentials

Bootstrap 4



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Lesson Objectives





- Understand basic concepts of Bootstrap 4
- Able to create layout using Bootstrap 4
- Able to use Components of Bootstrap 4 to create complex web app





Section 1

Overview

Overview – What is Bootstrap?





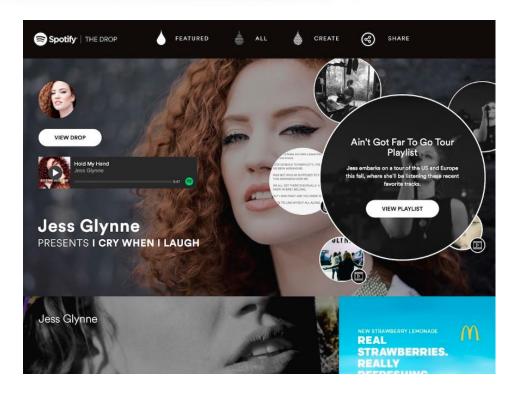
- CSS framework for faster and easier web development.
- Includes HTML and CSS based design templates.
- Easily create responsive designs.

Overview – Why Bootstrap?





- Beautiful, Modern Design
- Browser support
- Easy to learn
- Responsive Web Design
- Design faster



Overview – How to use Bootstrap?





- Step 1: Download Bootstrap at https://getbootstrap.com/
- Step 2: Add the HTML5 doctype
- Step 3: Add meta tag and links

Overview – Summary





- CSS framework for faster and easier web development.
- Benefits: Beautiful and Modern Design, Browser support,
 Easy to learn, Responsive Web Design, Design faster
- Start using Bootstrap 4 by download and add it to html page





Section 2

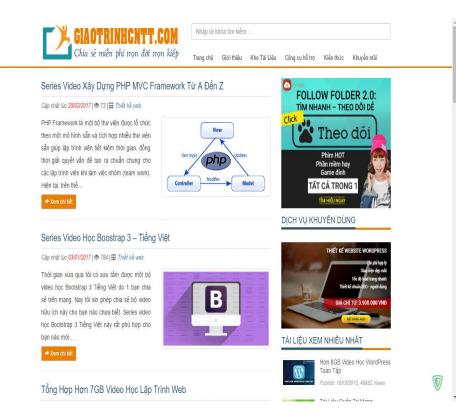
Layout

Layout – Container





- Important in Web design
- Help to create a skeleton for our web page



Layout – Container





Syntax:

```
<div class="container">
  <!-- Content here -->
</div>
```

```
<div class="container-fluid">
...
</div>
```

 Use .container-fluid for a full width container, spanning the entire width of the viewport

Layout – Grid System





- Problem: How to create vertically align block?
- Simple Solution: Use CSS float or position property
- With Bootstrap: Use Grid System

```
<div class="container">
    <div class="row">
        <div class="col-sm">
            One of three columns
        </div>
        <div class="col-sm">
            One of three columns
        </div>
        <div class="col-sm">
            One of three columns
        </div>
        </div>
        </div>
        </div>
        </div>
        </div>
    </div></div></div></div>
```

Layout – Grid System





- Syntax: .col-a-b
 - ✓ a: symbol of device (sm, md, lg, xl)
 - \checkmark b: number of columns (1, 2, 3 up to 12)

	Extra small <576px	Small ≥576px	Medium ≥768px	Large ≥992px	Extra large ≥1200px
Max container width	None (auto)	540px	720px	960px	1140px
Class prefix	.col-	.col-sm-	.col-md-	.col-lg-	.col-xl-
# of columns	12				
Gutter width	30px (15px on each side of a column)				
Nestable	Yes				
Column ordering	Yes				

Layout - Summary





- Use .container and .container-fluid to create frame/skeleton for you web page
- Create complex layout with Grid System
- Grid System consists of row where each row is composed of 12 columns
- Use class prefix .col, .col-sm-, .col-md-, .col-lg-, .col-xlto create responsive web app





Section 3

Typography

Typography – Headings





All HTML headings, <h1> through <h6>, are available

Heading	Example
<h1></h1>	h1. Bootstrap heading
<h2></h2>	h2. Bootstrap heading
<h3></h3>	h3. Bootstrap heading
<h4></h4>	h4. Bootstrap heading
<h5></h5>	h5. Bootstrap heading
<h6></h6>	h6. Bootstrap heading

Typography – Headings





Classes .h1 through .h6 are also available

h1. Bootstrap heading

h2. Bootstrap heading

h3. Bootstrap heading

h4. Bootstrap heading

h5. Bootstrap heading

h6. Bootstrap heading

```
class="h1">h1. Bootstrap heading
h2. Bootstrap heading
h3. Bootstrap heading
h4. Bootstrap heading
h5. Bootstrap heading
h5. Bootstrap heading
h6. Bootstrap heading
```

Typography – Text alignment





 Easily realign text to components with text alignment classes Left aligned text on all viewport sizes.

Center aligned text on all viewport sizes.

Right aligned text on all viewport sizes.

Left aligned text on viewports sized SM (small) or wider.

Left aligned text on viewports sized MD (medium) or wider.

Left aligned text on viewports sized LG (large) or wider.

Left aligned text on viewports sized XL (extra-large) or wider.

```
class="text-left">Left aligned text on all viewport sizes.
class="text-center">Center aligned text on all viewport sizes.
class="text-right">Right aligned text on all viewport sizes.
class="text-sm-left">Left aligned text on viewports sized SM (small) or wider.
class="text-md-left">Left aligned text on viewports sized MD (medium) or wider
class="text-lg-left">Left aligned text on viewports sized LG (large) or wider.
class="text-xl-left">Left aligned text on viewports sized XL (extra-large) or viewports sized XL (extra-large)
```

Typography – Text transform





Transform text in components with text capitalization classes

lowercased text.

UPPERCASED TEXT.

CapiTaliZed Text.

```
Lowercased text.
Uppercased text.
CapiTaliZed text.
```

Copy

Typography – Lists





 Unstyled: Remove the default list-style and left margin on list items

```
Lorem ipsum dolor sit amet
 Consectetur adipiscing elit
 Integer molestie lorem at massa
 Facilisis in pretium nisl aliquet
 Nulla volutpat aliquam velit
  <l>
    Phasellus iaculis neque
    Purus sodales ultricies
    Vestibulum laoreet porttitor sem
    Ac tristique libero volutpat at
  Faucibus porta lacus fringilla vel
 Aenean sit amet erat nunc
 Eget porttitor lorem
```

Lorem ipsum dolor sit amet Consectetur adipiscing elit Integer molestie lorem at massa Facilisis in pretium nisl aliquet Nulla volutpat aliquam velit

- Phasellus iaculis neque
- Purus sodales ultricies
- Vestibulum laoreet porttitor sem
- Ac tristique libero volutpat at

Faucibus porta lacus fringilla vel Aenean sit amet erat nunc Eget porttitor lorem

Typography – Lists





Inline: Remove a list's bullets and apply some light margin with a combination of two classes, .listinline and .list-inline-item

Lorem ipsum Phasellus iaculis Nulla volutpat

```
     Lorem ipsum
     cli class="list-inline-item">Phasellus iaculis
     cli class="list-inline-item">Nulla volutpat
```

Typography – Summary





- Bootstrap sets basic global display, typography, and link styles
- Change text alignment, transform, style, weight, and color with our <u>text utilities</u> and <u>color utilities</u>.





Section 4

Common Components

Common Components





- Navigation Bar
- Breadcrumb
- Table
- Forms
- Buttons
- Images
- Icons

- Dropdown
- Pagination
- Label
- Badges
- Alert
- Progress bar
- List Group

Common Components – Navigation Bar





- Navigation Bar is a section of a graphical user interface intended to aid visitors in accessing information
- Require a wrapping .navbar with .navbar-expand{-sm|-md|-lg|-xl}

Navbar Home Link Dropdown ▼ Disabled Search

Common Components – Breadcrumb





 Indicate the current page's location within a navigational hierarchy that automatically adds separators via CSS.

Home
Home / Library
Home / Library / Data

Common Components – Tables





- Table represents tabular data
- Bootstrap 4 support for table by adding .table class to any element

#	First	Last	Handle
1	Mark	Otto	@mdo
2	Jacob	Thornton	@fat
3	Larry the Bird		@twitter

Common Components – Forms





 Bootstrap provides several form control styles, layout options, and custom components for creating a wide variety of forms.

Email address
Enter email
We'll never share your email with anyone else.
Password
Password
Check me out
Submit

Common Components – Forms





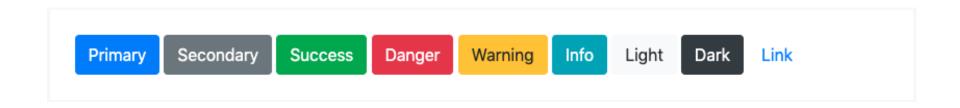
- Form controls: Textual form controls like <input>s, <select>s, and <textarea>s—are styled with the .form-control
- Default checkboxes and radios are improved upon with the help of .form-check

Common Components – Buttons





- Bootstrap includes several predefined button styles, each serving its own semantic purpose
- Add .btn-lg or .btn-sm for additional sizes
- Make buttons look inactive by adding the disabled boolean attribute to any <button> element



Common Components – Images





Images in Bootstrap are made responsive with .img-fluid (max-width: 100%; and height: auto;)



Common Components – Icons





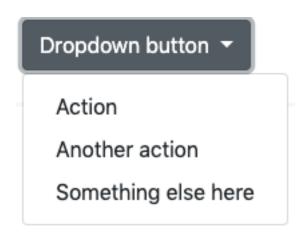
- Bootstrap doesn't include an icon library by default
- Preferred:
 - ✓ Iconic
 - ✓ Octicons

Common Components – Dropdown





- Dropdowns are toggleable, contextual overlays for displaying lists of links and more
- JavaScript is required for Dropdown



Common Components – Dropdown





- Wrap the dropdown's toggle (your button or link) and the dropdown menu within .dropdown
- Add .dropdown-item to each item and .dropdown-menu to the menu

Common Components – Summary





- Bootstrap provides many UI Components that help you to developer faster and easier
- To use a component you must specify correct Bootstrap syntax with corresponding class
- Most Components only need HTML and CSS
- For Dropdown you must add JavaScript





Thank you