BOOTSTRAP NOTES

❖ What is Bootstrap?

Bootstrap is a free front-end framework for faster and easier web development

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

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

What is Responsive Web Design?

Responsive web design is about creating web sites which automatically adjust themselves to look good on all devices, from small phones to large desktops.

❖ Why Used The Bootstrap?

Advantages of Bootstrap:

- **Easy to use:** Anybody with just basic knowledge of HTML and CSS can start using Bootstrap
- **Responsive features:** Bootstrap's responsive CSS adjusts to phones, tablets, and desktops
- **Mobile-first approach:** In Bootstrap 3, mobile-first styles are part of the core framework
- **Browser compatibility:** Bootstrap is compatible with all modern browsers (Chrome, Firefox, Internet Explorer, Edge, Safari, and Opera)

- You can include Bootstrap in your project by adding the Bootstrap CDN (Content Delivery Network). links to your HTML file or by downloading the Bootstrap files and hosting them local

❖ <!-- Bootstrap CSS -->

- **<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-QWTKZyjpPEjISv5WaRU9OFeRpok6YctnYmDr5pNlyT2bRjXh0JMhjY6hW+ALEwIH" crossorigin="anonymous">**

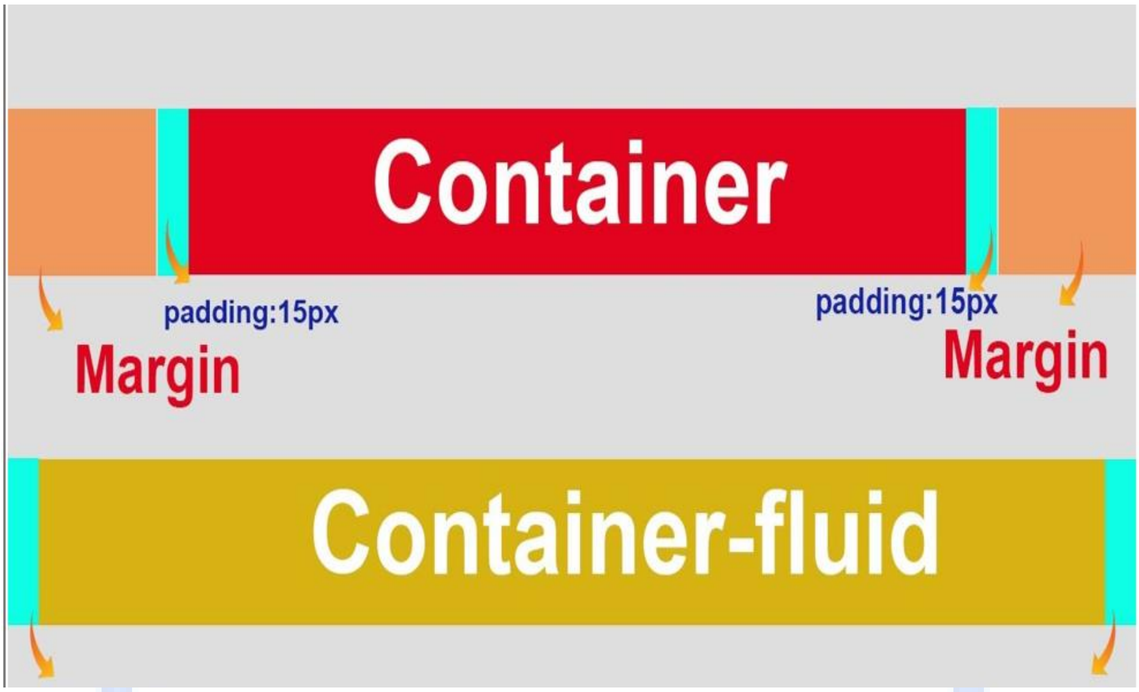
- <!-- Bootstrap JS and dependencies -->
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js" integrity="sha384-YvpcrYf0tY3lHB60NNkmXc5s9fDVZLESaAA55NDzOxhy9GkcIdslK1eN7N6jIeHz" crossorigin="anonymous"></script

❖ Containers

Bootstrap also requires a containing element to wrap site contents.

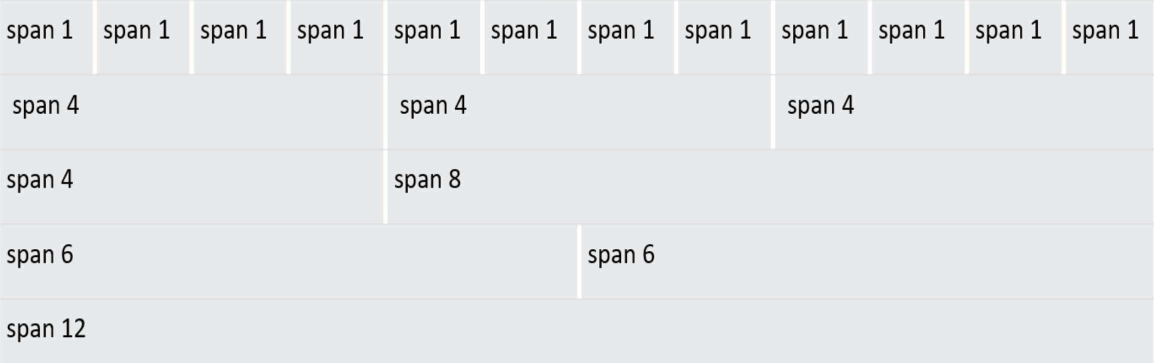
There are two container classes to choose from:

1. The .container class provides a responsive **fixed width container**
2. The .container-fluid class provides a **full width container**, spanning the entire width of the viewport



❖ Bootstrap Grid System

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:



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											

❖ Grid Classes

The Bootstrap grid system has four classes:

- **Xs:** (for phones - screens less than 768px wide)
- **Sm:** (for tablets - screens equal to or greater than 768px wide)
- **Md:** (for small laptops - screens equal to or greater than 992px wide)
- **Lg:** (for laptops and desktops - screens equal to or greater than 1200px wide)

❖ Bootstrap's Default Settings

Bootstrap's global default font-size is 14px, with a line-height of 1.428. This is applied to the <body> element and all paragraphs (<p>).

In addition, all <p> elements have a bottom margin that equals half their computed line-height (10px by default)

- ### Contextual Colors and Backgrounds

Bootstrap also has some contextual classes that can be used to provide "meaning through colors".

The classes for text colors are:.text-muted, .text-primary, .text-success, .text-info, .text-warning, and .text-danger:

Example: -

```
<h2>Contextual Colors</h2>
<p>Use the contextual classes to provide "meaning through colors":</p>
<p class="text-muted">This text is muted.</p>
<p class="text-primary">This text is important.</p>
<p class="text-success">This text indicates success.</p>
<p class="text-info">This text represents some information.</p>
<p class="text-warning">This text represents a warning.</p>
<p class="text-danger">This text represents danger.</p>
```

- ### Backgrounds

The classes for background colors are:.bg-primary, .bg-success, .bg-info, .bg-warning, and .bg-danger:

```
<div class="container">
  <h2>Contextual Backgrounds</h2>
  <p>Use the contextual background classes to provide "meaning through colors":</p>
  <p class="bg-primary">This text is important.</p>
  <p class="bg-success">This text indicates success.</p>
  <p class="bg-info">This text represents some information.</p>
  <p class="bg-warning">This text represents a warning.</p>
  <p class="bg-danger">This text represents danger.</p>
</div>
```

Class	Description
.lead	Makes a paragraph stand out
.small	Indicates smaller text (set to 85% of the size of the parent)
.text-left	Indicates left-aligned text
.text-center	Indicates center-aligned text
.text-right	Indicates right-aligned text
.text-lowercase	Indicates lowercased text
.text-uppercase	Indicates uppercased text
.text-capitalize	Indicates capitalized text

- **Example of .lead**

```
<div class="container">
  <h2>Typography</h2>
  <p>Use the .lead class to make a paragraph "stand out":</p>
  <p class="lead">This paragraph stands out.</p>
  <p>This is a regular paragraph.</p>
</div>
```

- **Example of . small**

```
<div class="container">
    <h2>Typography</h2>
    <p>Use the .small class to make the text smaller:</p>
    <p class="small">This paragraph is smaller.</p>
    <p>This is a regular paragraph.</p>
  </div>
```

- **Example of the .pre-scrollable class**

```
<div class="container">
  <h2>Code</h2>
  <p>For multiple lines of code, use the pre element:</p>
  <pre>Text in a pre element
  is displayed in a fixed-width
  font, and it preserves
  both      spaces and
  line breaks.</pre>
  <p>If you add the .pre-scrollable class, the pre element gets a max-height of 350px and provides a y-axis scrollbar:</p>
  <pre class="pre-scrollable">Text in a pre element
  is displayed in a fixed-width
  font, and it preserves
  both      spaces and
  line breaks.</pre>
</div>
```

- **Button Styles**

Bootstrap provides different styles of buttons:

To achieve the button styles above, Bootstrap has the following classes:

- .btn
- .btn-default
- .btn-primary
- .btn-success
- .btn-info
- .btn-warning
- .btn-danger
- .btn-link

Button Sizes

Bootstrap provides four button sizes:

The classes that define the different sizes are:

- .btn-lg
- .btn-sm
- .btn-xs

The following example shows the code for different button sizes:

Active/Disabled Buttons

A button can be set to an active (appear pressed) or a disabled (unclickable) state:

The class .active makes a button appear pressed, and the class .disabled makes a button unclickable:

```
<div class="container">
  <h2>Button States</h2>
  <button type="button" class="btn btn-primary">Primary Button</button>
  <button type="button" class="btn btn-primary active">Active Primary</button>
  <button type="button" class="btn btn-primary disabled">Disabled Primary</button>
</div>
```

❖ Bootstrap Images

In Bootstrap 3, there are several image classes that apply different styles to images. Here are the differences between .img-rounded, .img-circle, .img-thumbnail, and other classes:

.img-rounded

- **Purpose**: To add slightly rounded corners to an image.
- **Styling**: Adds a border-radius: 6px; to the image, making the corners appear rounded.
- **Use Case**: Use this class when you want the image to have subtle, rounded corners without being a full circle.

.img-circle

- **Purpose**: To make the image appear as a circle.
- **Styling**: Adds a border-radius: 50%; to the image, making it a perfect circle.
- **Use Case**: Use this class when you want a circular image, typically for profile pictures or icons.

.img-thumbnail

- **Purpose**: To style the image with a thumbnail appearance, including a border, padding, and background.
- **Styling**: Adds a border, padding, and a light background color to the image, and also applies max-width: 100%; and height: auto; to make it responsive.
- **Use Case**: Use this class when you want the image to look like a traditional thumbnail with additional styling and responsiveness.

.img-responsive

- **Purpose**: To make the image responsive, ensuring it scales with the parent element.
- **Styling**: Applies max-width: 100%; and height: auto; to the image.
- **Use Case**: Use this class when you want the image to be fully responsive without any additional styling.

- ## Example of Bootstrap image:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Bootstrap 3 Image Classes</title>
  <!-- Bootstrap 3 CSS -->
  <link href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css" rel="stylesheet">
</head>
<body>
  <div class="container">
    <h1>Bootstrap 3 Image Classes</h1>
    <!-- Rounded corners -->
    <h2>Rounded Image (.img-rounded)</h2>
    <img src="/img/cow6.jpg" class="img-rounded" alt="Rounded Image">
    <!-- Circle image -->
    <h2>Circle Image (.img-circle)</h2>
    <img src="/img/cow6.jpg" class="img-circle" alt="Circle Image">
    <!-- Thumbnail image -->
    <h2>Thumbnail Image (.img-thumbnail)</h2>
    <img src="/img/cow6.jpg" class="img-thumbnail" alt="Thumbnail Image">

    <!-- Responsive image -->
    <h2>Responsive Image (.img-responsive)</h2>
    <img src="/img/cow6.jpg" class="img-responsive" alt="Responsive Image">
  </div>
  <!-- Bootstrap 3 JavaScript -->
  <script src="https://code.jquery.com/jquery-3.2.1.min.js"></script>
  <script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"></script>
```

```
</body>

</html>
```

- ## Responsive Embeds

Videos or slideshows scale properly on any device.

Classes can be applied directly to <iframe>, <embed>, <video>, and <object> elements.

The following example creates a responsive video by adding an .embed-responsive-item class to an <iframe> tag (the video will then scale nicely to the parent element). The containing <div> defines the aspect ratio of the video:

- **Example:**

```
<div class="container">
  <h2>Responsive Embed</h2>
  <p>Create a responsive video and scale it nicely to the parent element with an 16:9 aspect ratio</p>
  <div class="embed-responsive embed-responsive-16by9">
    <iframe class="embed-responsive-item"
src="https://www.youtube.com/embed/tgbNymZ7vqY"></iframe>
  </div>
</div>
```

What is aspect ratio?

The aspect ratio of an image describes the proportional relationship between its width and its height. Two common video aspect ratios are 4:3 (the universal video format of the 20th century), and 16:9 (universal for HD television and European digital television).

```
<!-- 16:9 aspect ratio -->
<div class="embed-responsive embed-responsive-16by9">
  <iframe class="embed-responsive-item" src="..."></iframe>
</div>

<!-- 4:3 aspect ratio -->
<div class="embed-responsive embed-responsive-4by3">
```

```
  <iframe class="embed-responsive-item" src="..."></iframe>
</div>
```

❖ Bootstrap Tables

A basic Bootstrap table has a light padding and only horizontal dividers.

The .table class adds basic styling to a table:

Striped Rows

The .table-striped class adds zebra-stripes to a table:

Bordered Table

The .table-bordered class adds borders on all sides of the table and cells:

Hover Rows

The .table-hover class adds a hover effect (grey background color) on table rows:

Condensed Table

The .table-condensed class makes a table more compact by cutting cell padding in half:

- **Creating a Jumbotron**

A jumbotron indicates a big box for calling extra attention to some special content or information. A jumbotron is displayed as a grey box with rounded corners. It also enlarges the font sizes of the text inside it.

Tip: Inside a jumbotron you can put nearly any valid HTML, including other Bootstrap elements/classes.

Use a <div> element with class .jumbotron to create a jumbotron:

```
<div class="container">
<div class="jumbotron">
<h1>Bootstrap Tutorial</h1>
<p>Bootstrap is the most popular HTML, CSS, and JS framework for developing responsive, mobile-first projects on the web.</p>
</div>
```

```
<p>This is some text.</p>
<p>This is another text.</p>
</div>
```

- **page-header**

  Use a <div> element with class .page-header to create a page header:

```
<div class="page-header">
  <h1>Example Page Header</h1>
</div>
```

- The .well class adds a rounded border around an element with a gray background color and some padding:

```
 <div class="well">Basic Well</div>
```

Well Size

Change the size of the well by adding the .well-sm class for small wells or .well-lg class for large wells:

❖ Button Groups

Bootstrap allows you to group a series of buttons together (on a single line) in a button group:

Use a <div> element with class .btn-group to create a button group:

```
<div class="btn-group btn-group-lg">
  <button type="button" class="btn btn-primary">Apple</button>
  <button type="button" class="btn btn-primary">Samsung</button>
  <button type="button" class="btn btn-primary">Sony</button>
</div>
```

Instead of applying button sizes to every button in a group, use class .btn-group-lg|sm|xs to size all buttons in the group:

- **Vertical Button Groups**

Use the class .btn-group-vertical to create a vertical button group:

```
<div class="btn-group-vertical ">
  <button type="button" class="btn btn-primary">Apple</button>
  <button type="button" class="btn btn-primary">Samsung</button>
  <button type="button" class="btn btn-primary">Sony</button>
</div>
```

- **Justified Button Groups**

To span the entire width of the screen, use the .btn-group-justified class:

This is with <a> tag

```
<div class="btn-group btn-group-justified">
  <a href="#" class="btn btn-primary">Apple</a>
  <a href="#" class="btn btn-primary">Samsung</a>
  <a href="#" class="btn btn-primary">Sony</a>
</div>
```

For <button> elements, you must wrap each button in a .btn-group class:

```
<div class="btn-group btn-group-justified">
  <div class="btn-group">
    <button type="button" class="btn btn-primary">Apple</button>
  </div>
  <div class="btn-group">
    <button type="button" class="btn btn-primary">Samsung</button>
  </div>
  <div class="btn-group">
    <button type="button" class="btn btn-primary">Sony</button>
  </div>
</div>
```

❖ Nesting Button Groups & Dropdown Menus

Nest button groups to create dropdown menus:

```
<div class="btn-group">
  <button type="button" class="btn btn-primary">Apple</button>
  <button type="button" class="btn btn-primary">Samsung</button>
  <div class="btn-group">
  <button type="button" class="btn btn-primary dropdown-toggle" data-
toggle="dropdown">
    Sony <span class="caret"></span></button>
    <ul class="dropdown-menu" role="menu">
      <li><a href="#">Tablet</a></li>
     <li><a href="#">Smartphone</a></li>
    </ul>
  </div>
</div>
```

- **class="dropdown-toggle"**: Indicates a button that toggles a dropdown menu.
- **data-toggle="dropdown"**: Enables the dropdown functionality for the button.
- **class="dropdown-menu"**: Styles the list as a dropdown menu.
- **role="menu"**: ARIA role for accessibility.
- **Purpose**:
    - The role="menu" attribute is used to define a group of selectable items presented to the user.
    - It is typically applied to an unordered list (<ul>) or ordered list (<ol>) that acts as a menu in an application.
- **Menus and Menu Bars:**
    - The role="menu" is used in scenarios where a list of options or commands is presented in a menu format, such as dropdown menus or context menus.

❖ Glyphicons

Glyphicons can be used in text, buttons, toolbars, navigation, forms, etc.

Here are some examples of glyphicons:

Syntax:= <span class="glyphicon glyphicon-*name*"></span>

```
<p>Envelope icon: <span class="glyphicon glyphicon-envelope"></span></p>
<p>Envelope icon as a link:
  <a href="#"><span class="glyphicon glyphicon-envelope"></span></a>
</p>
<p>Search icon: <span class="glyphicon glyphicon-search"></span></p>
<p>Search icon on a button:
  <button type="button" class="btn btn-default">
    <span class="glyphicon glyphicon-search"></span> Search
  </button>
</p>
<p>Search icon on a styled button:
  <button type="button" class="btn btn-info">
    <span class="glyphicon glyphicon-search"></span> Search
  </button>
</p>
<p>Print icon: <span class="glyphicon glyphicon-print"></span></p>
<p>Print icon on a styled link button:
  <a href="#" class="btn btn-success btn-lg">
    <span class="glyphicon glyphicon-print"></span> Print
  </a>
</p>
```

❖ Creating Tabs with Bootstrap 3

Bootstrap 3 provides an easy way to create navigation tabs using the nav and nav-tabs classes. Here's a step-by-step explanation:

```
<div class="container">
 <h2>Navigation Tabs</h2>
 <ul class="nav nav-tabs">
 <li class="active"><a href="#home">Home</a></li>
 <li><a href="#menu1">Menu 1</a></li>
<li><a href="#menu2">Menu 2</a></li>
 <li><a href="#menu3">Menu 3</a></li>
</ul>
```

- **Tabs can also hold dropdown menus.**

```
<ul class="nav nav-tabs">
  <li class="active"><a href="#">Home</a></li>
  <li class="dropdown">
    <a class="dropdown-toggle" data-toggle="dropdown" href="#">Menu 1
    <span class="caret"></span></a>
    <ul class="dropdown-menu">
      <li><a href="#">Submenu 1-1</a></li>
      <li><a href="#">Submenu 1-2</a></li>
      <li><a href="#">Submenu 1-3</a></li>
    </ul>
  </li>
  <li><a href="#">Menu 2</a></li>
  <li><a href="#">Menu 3</a></li>
</ul>
```

❖ Pills

Pills are created with <ul class="nav nav-pills">. Also mark the current page with <li class="active">:

```
<ul class="nav nav-pills">
  <li class="active"><a href="#">Home</a></li>
  <li><a href="#">Menu 1</a></li>
  <li><a href="#">Menu 2</a></li>
  <li><a href="#">Menu 3</a></li>
</ul>
```

- **Pills can also be displayed vertically. Just add the .nav-stacked class:**

```
<ul class="nav nav-pills nav-stacked">
  <li class="active"><a href="#">Home</a></li>
  <li><a href="#">Menu 1</a></li>
  <li><a href="#">Menu 2</a></li>
  <li><a href="#">Menu 3</a></li>
</ul>
```

- **Toggleable / Dynamic Tabs**

To make the tabs toggleable, add the data-toggle="tab" attribute to each link. Then add a .tab-pane class with a unique ID for every tab and wrap them inside a <div> element with class .tab-content.

```
<ul class="nav nav-tabs">
  <li class="active"><a data-toggle="tab" href="#home">Home</a></li>
  <li><a data-toggle="tab" href="#menu1">Menu 1</a></li>
  <li><a data-toggle="tab" href="#menu2">Menu 2</a></li>
</ul>

<div class="tab-content">
  <div id="home" class=" tab-pane fade in active">
    <h3>HOME</h3>tab-pane
    <p>Some content.</p>
  </div>
  <div id="menu1" class="tab-pane fade">
    <h3>Menu 1</h3>
    <p>Some content in menu 1.</p>
```

```
      </div>
      <div id="menu2" class="tab-pane fade">
        <h3>Menu 2</h3>
        <p>Some content in menu 2.</p>
      </div>
    </div>
```

- **Toggleable / Dynamic Pills**

```
<ul class="nav nav-pills">
  <li class="active"><a data-toggle="pill" href="#home">Home</a></li>
  <li><a data-toggle="pill" href="#menu1">Menu 1</a></li>
  <li><a data-toggle="pill" href="#menu2">Menu 2</a></li>
</ul>

<div class="tab-content">
  <div id="home" class="tab-pane fade in active">
    <h3>HOME</h3>
    <p>Some content.</p>
  </div>
  <div id="menu1" class="tab-pane fade">
    <h3>Menu 1</h3>
    <p>Some content in menu 1.</p>
  </div>
  <div id="menu2" class="tab-pane fade">
    <h3>Menu 2</h3>
    <p>Some content in menu 2.</p>
  </div>
</div>
```

❖ Navigation Bars

A navigation bar is a navigation header that is placed at the top of the page:

A standard navigation bar is created with <nav class="navbar navbar-default">.

```
<nav class="navbar navbar-default">
  <div class="container-fluid">
    <div class="navbar-header">
      <a class="navbar-brand" href="#">WebSiteName</a>
    </div>
    <ul class="nav navbar-nav">
      <li class="active"><a href="#">Home</a></li>
      <li><a href="#">Page 1</a></li>
      <li><a href="#">Page 2</a></li>
      <li><a href="#">Page 3</a></li>
    </ul>
  </div>
</nav>
```

- **<nav class="navbar navbar-default">**:
- <nav>: Defines a section intended for navigation links.
- class="navbar navbar-default": Applies the Bootstrap styles to create a default (light-colored) navbar.
- **<div class="navbar-header">**:
- class="navbar-header": Applies Bootstrap styles to contain elements such as the brand name and the responsive toggle button (if included).
- **<a class="navbar-brand" href="#">WebSiteName</a>**:
- class="navbar-brand": Applies Bootstrap styles to this link, making it the brand or logo of the navbar.
- **<ul class="nav navbar-nav">:**
- class="nav navbar-nav": Applies Bootstrap styles to make the list items horizontal navigation links suitable for a navbar.

- **Inverted Navigation Bar**

If you don't like the style of the default navigation bar, Bootstrap provides an alternative, black navbar:

```
<nav class="navbar navbar-inverse">
  <div class="container-fluid">
   <div class="navbar-header">
    <a class="navbar-brand" href="#">WebSiteName</a>
   </div>
   <ul class="nav navbar-nav">
    <li class="active"><a href="#">Home</a></li>
    <li><a href="#">Page 1</a></li>
    <li><a href="#">Page 2</a></li>
    <li><a href="#">Page 3</a></li>
   </ul>
  </div>
 </nav>
```

- **Fixed Navigation Bar**

The .navbar-fixed-top class makes the navigation bar fixed at the top:
The .navbar-fixed-bottom class makes the navigation bar fixed at the top:

❖ Bootstrap Forms

Bootstrap Form Layouts:

Bootstrap provides three types of form layouts:

- Vertical form (this is default)
- Horizontal form
- Inline form

Standard rules for all three form layouts:

- Wrap labels and form controls in <div class="form-group"> (needed for optimum spacing)
- Add class .form-control to all textual <input>, <textarea>, and <select> elements

```
<form action="/action_page.php">
  <div class="form-group">
    <label for="email">Email address:</label>
    <input type="email" class="form-control" id="email">
  </div>
  <div class="form-group">
    <label for="pwd">Password:</label>
    <input type="password" class="form-control" id="pwd">
  </div>
  <div class="checkbox">
    <label><input type="checkbox"> Remember me</label>
  </div>
  <button type="submit" class="btn btn-default">Submit</button>
</form>
```

❖ Bootstrap Inline Form

In an inline form, all of the elements are inline, left-aligned, and the labels are alongside.

Additional rule for an inline form:

- Add class .form-inline to the <form> element

```
<form class="form-inline" action="/action_page.php">
  <div class="form-group">
    <label for="email">Email address:</label>
    <input type="email" class="form-control" id="email">
  </div>
  <div class="form-group">
    <label for="pwd">Password:</label>
    <input type="password" class="form-control" id="pwd">
  </div>
  <div class="checkbox">
    <label><input type="checkbox"> Remember me</label>
  </div>
  <button type="submit" class="btn btn-default">Submit</button>
</form>
```

If you don't include a label for every input, screen readers will have trouble with your forms. You can hide the labels for all devices, except screen readers, by using the .sr-only class:

❖ Bootstrap Horizontal Form

A horizontal form means that the labels are aligned next to the input field (horizontal) on large and medium screens. On small screens (767px and below), it will transform to a vertical form (labels are placed on top of each input).

Additional rules for a horizontal form:

- Add class .form-horizontal to the <form> element
- Add class .control-label to all <label> elements

Supported Form Controls

Bootstrap supports the following form controls:

- input
- textarea
- checkbox
- radio
- select

Bootstrap Checkboxes

Checkboxes are used if you want the user to select any number of options from a list of preset options.

```
<div class="checkbox">
  <label><input type="checkbox" value="">Option 1</label>
</div>
<div class="checkbox">
  <label><input type="checkbox" value="">Option 2</label>
</div>
<div class="checkbox disabled">
  <label><input type="checkbox" value="" disabled>Option 3</label>
</div>
```

Use the .checkbox-inline class if you want the checkboxes to appear on the same line:

```
<label class="checkbox-inline"><input type="checkbox" value="">Option 1</label>
<label class="checkbox-inline"><input type="checkbox" value="">Option 2</label>
<label class="checkbox-inline"><input type="checkbox" value="">Option 3</label>
```

- ## Bootstrap Radio Buttons

Radio buttons are used if you want to limit the user to just one selection from a list of preset options.

```
<div class="radio">
  <label><input type="radio" name="optradio" checked>Option 1</label>
</div>
<div class="radio">
  <label><input type="radio" name="optradio">Option 2</label>
</div>
<div class="radio disabled">
  <label><input type="radio" name="optradio" disabled>Option 3</label>
</div>
```

Use the .radio-inline class if you want the radio buttons to appear on the same line:

❖ The Carousel Plugin

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

```
<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>
  </ol>

  <!-- Wrapper for slides -->
  <div class="carousel-inner">
    <div class="item active">
      <img src="la.jpg" alt="Los Angeles">
    </div>

    <div class="item">
      <img src="chicago.jpg" alt="Chicago">
    </div>

    <div class="item">
      <img src="ny.jpg" alt="New York">
    </div>
  </div>

  <!-- Left and right controls -->
  <a class="left carousel-control" href="#myCarousel" data-slide="prev">
    <span class="glyphicon glyphicon-chevron-left"></span>
    <span class="sr-only">Previous</span>
  </a>
  <a class="right carousel-control" href="#myCarousel" data-slide="next">
    <span class="glyphicon glyphicon-chevron-right"></span>
    <span class="sr-only">Next</span>
  </a>
</div>
```

- **Example Explained**

The outermost <div>:

Carousels require the use of an id (in this case id="myCarousel") for carousel controls to function properly. The class="carousel" specifies that this <div> contains a carousel.

The .slide class adds a CSS transition and animation effect, which makes the items slide when showing a new item. Omit this class if you do not want this effect.

The data-ride="carousel" attribute tells Bootstrap to begin animating the carousel immediately when the page loads.

The "Indicators" part:

The indicators are the little dots at the bottom of each slide (which indicates how many slides there are in the carousel, and which slide the user is currently viewing). The indicators are specified in an ordered list with class .carousel-indicators. The data-target attribute points to the id of the carousel. The data-slide-to attribute specifies which slide to go to, when clicking on the specific dot.

The "Wrapper for slides" part:

The slides are specified in a <div> with class .carousel-inner.

The content of each slide is defined in a <div> with class .item. This can be text or images.

The .active class needs to be added to one of the slides. Otherwise, the carousel will not be visible.

The "Left and right controls" part:

This code adds "left" and "right" buttons that allows the user to go back and forth between the slides manually.

The data-slide attribute accepts the keywords "prev" or "next", which alters the slide position relative to its current position.

❖ The Modal Plugin

The Modal plugin is a dialog box/popup window that is displayed on top of the current page:

```
<!-- Trigger the modal with a button -->
<button type="button" class="btn btn-info btn-lg" data-toggle="modal" data-
target="#myModal">Open Modal</button>

<!-- Modal -->
<div id="myModal" class="modal fade" role="dialog">
  <div class="modal-dialog">

    <!-- Modal content-->
    <div class="modal-content">
      <div class="modal-header">
        <button type="button" class="close" data-dismiss="modal">&times;</button>
        <h4 class="modal-title">Modal Header</h4>
      </div>
      <div class="modal-body">
        <p>Some text in the modal.</p>
      </div>modal-footer
      <div class="">
        <button type="button" class="btn btn-default" data-
dismiss="modal">Close</button>
      </div>
    </div>

  </div>
</div>
```

- **The "Trigger" part:**

To trigger the modal window, you need to use a button or a link.

Then include the two data-* attributes:

- data-toggle="modal" opens the modal window
- data-target="#myModal" points to the id of the modal

- **The "Modal" part:**
  - The parent <div> of the modal must have an ID that is the same as the value of the data-target attribute used to trigger the modal ("myModal").
  - The .modal class identifies the content of <div> as a modal and brings focus to it.
  - The .fade class adds a transition effect which fades the modal in and out. Remove this class if you do not want this effect.
  - The attribute role="dialog" improves accessibility for people using screen readers.
  - The .modal-dialog class sets the proper width and margin of the modal.

- **The "Modal content" part:**
  - The <div> with class="modal-content" styles the modal (border, background-color, etc.). Inside this <div>, add the modal's header, body, and footer.
  - The .modal-header class is used to define the style for the header of the modal. The <button> inside the header has a data-dismiss="modal" attribute which closes the modal if you click on it. The .close class styles the close button, and the .modal-title class styles the header with a proper line-height.
  - The .modal-body class is used to define the style for the body of the modal. Add any HTML markup here; paragraphs, images, videos, etc.
  - The .modal-footer class is used to define the style for the footer of the modal. Note that this area is right aligned by default.

- **Modal Size**

Change the size of the modal by adding the .modal-sm class for small modals or .modal-lg class for large modals.

Add the size class to the <div> element with class .modal-dialog:

Small Modal :

```
<div class="modal-dialog modal-sm">
```

Large Modal :

```
<div class="modal-dialog modal-lg">
```