**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 also gives you the ability to easily create responsive designs

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 Use 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, Safari, and Opera

**Downloading Bootstrap**

If you want to download and host Bootstrap yourself, go to [getbootstrap.com](http://getbootstrap.com/getting-started/), and follow the instructions there.

**Bootstrap CDN**

If you don't want to download and host Bootstrap yourself, you can include it from a CDN (Content Delivery Network).

MaxCDN provides CDN support for Bootstrap's CSS and JavaScript. You must also include jQuery:

<!-- Latest compiled and minified CSS -->  
<link rel="stylesheet"href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css">  
  
<!-- jQuery library -->  
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>  
  
<!-- Latest compiled JavaScript -->  
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"></script>

**One advantage of using the Bootstrap CDN:**  
Many users already have downloaded Bootstrap from MaxCDN when visiting another site. As a result, it will be loaded from cache when they visit your site, which leads to faster loading time. Also, most CDN's will make sure that once a user requests a file from it, it will be served from the server closest to them, which also leads to faster loading time.

**jQuery**  
Bootstrap uses jQuery for JavaScript plugins (like modals, tooltips, etc). However, if you just use the CSS part of Bootstrap, you don't need jQuery.

**Create First Web Page With Bootstrap**

**1. Add the HTML5 doctype**

Bootstrap uses HTML elements and CSS properties that require the HTML5 doctype.

Always include the HTML5 doctype at the beginning of the page, along with the lang attribute and the correct character set:

<!DOCTYPE html>  
<html lang="en">  
  <head>  
    <meta charset="utf-8">   
  </head>  
</html>

**2. Bootstrap 3 is mobile-first**

Bootstrap 3 is designed to be responsive to mobile devices. Mobile-first styles are part of the core framework.

To ensure proper rendering and touch zooming, add the following <meta> tag inside the <head> element:

<meta name="viewport" content="width=device-width, initial-scale=1">

The width=device-width part sets the width of the page to follow the screen-width of the device (which will vary depending on the device).

The initial-scale=1 part sets the initial zoom level when the page is first loaded by the browser.

**3. 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

.container

.container-fluid

**Two Basic Bootstrap Pages**

The following example shows the code for a basic Bootstrap page (with a responsive fixed width container):

Example

<!DOCTYPE html>  
<html lang="en">  
<head>  
  <title>Bootstrap Example</title>  
  <meta charset="utf-8">  
  <meta name="viewport" content="width=device-width, initial-scale=1">  
  <link rel="stylesheet"href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css">  
  <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>  
  <script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"></script>  
</head>  
<body>  
  
<div class="container">  
  <h1>My First Bootstrap Page</h1>  
  <p>This is some text.</p>   
</div>  
  
</body>  
</html>

Ex2:

The following example shows the code for a basic Bootstrap page (with a full width container):

<!DOCTYPE html>  
<html lang="en">  
<head>  
  <title>Bootstrap Example</title>  
  <meta charset="utf-8">  
  <meta name="viewport" content="width=device-width, initial-scale=1">  
  <link rel="stylesheet"href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css">  
  <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>  
  <script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"></script>  
</head>  
<body>  
  
<div class="container-fluid">  
  <h1>My First Bootstrap Page</h1>  
  <p>This is some text.</p>   
</div>  
  
</body>  
</html>

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 | | | | | | | | | | | |

Bootstrap's grid system is responsive, and the columns will re-arrange automatically depending on the screen size.

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)

The classes above can be combined to create more dynamic and flexible layouts.

Basic Structure of a Bootstrap Grid

The following is a basic structure of a Bootstrap grid:

<div class="row">  
  <div class="col-\*-\*"></div>  
  <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>

First; create a row (<div class="row">). Then, add the desired number of columns (tags with appropriate .col-\*-\*classes). Note that numbers in .col-\*-\* should always add up to 12 for each row.

Below we have collected some examples of basic Bootstrap grid layouts.

**Three Equal Columns**

.col-sm-4

.col-sm-4

.col-sm-4

The following example shows how to get a three equal-width columns starting at tablets and scaling to large desktops. On mobile phones or screens that are less than 768px wide, the columns will automatically stack:

**Example**

<div class="row">  
  <div class="col-sm-4">.col-sm-4</div>  
  <div class="col-sm-4">.col-sm-4</div>  
  <div class="col-sm-4">.col-sm-4</div>  
</div>

**Two Unequal Columns**

.col-sm-4

.col-sm-8

The following example shows how to get two various-width columns starting at tablets and scaling to large desktops:

**Example**

<div class="row">  
  <div class="col-sm-4">.col-sm-4</div>  
  <div class="col-sm-8">.col-sm-8</div>  
</div>

**Typography**

Using **<small> :**

<!DOCTYPE html>

<html lang="en">

<head>

<title>Bootstrap Example</title>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css">

<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>

<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"></script>

</head>

<body>

<div class="container">

<h1>Lighter, Secondary Text</h1>

<p>The small element is used to create a lighter, secondary text in any heading:</p>

<h1>h1 heading <small>secondary text</small></h1>

<h2>h2 heading <small>secondary text</small></h2>

<h3>h3 heading <small>secondary text</small></h3>

<h4>h4 heading <small>secondary text</small></h4>

<h5>h5 heading <small>secondary text</small></h5>

<h6>h6 heading <small>secondary text</small></h6>

</div>

</body>

</html>

**Using <mark> : Used to highlight a part of text**

<div class="container">

<h1>Highlight Text</h1>

<p>Use the mark element to <mark>highlight</mark> text.</p>

</div>

**Using <abbr> :** used to to show tool tip on abbriviations

<div class="container">

<h1>Abbreviations</h1>

<p>The abbr element is used to mark up an abbreviation or acronym:</p>

<p>The <abbr title="World Health Organization">WHO</abbr> was founded in 1948.</p>

</div>

**Using <dl> tags :** used to bold dt items of dl

<div class="container">

<h1>Description Lists</h1>

<p>The dl element indicates a description list:</p>

<dl>

<dt>Coffee</dt>

<dd>- black hot drink</dd>

<dt>Milk</dt>

<dd>- white cold drink</dd>

</dl>

</div>

**Using <code>:** used to display the html tags .. we need to include html tag in text where as in browser its shows with out tags

<div class="container">

<h1>Code Snippets</h1>

<p>Inline snippets of code should be embedded in the code element:</p>

<p>The following HTML elements: <code>span</code>, <code>section</code>, and <code>div</code> defines a section in a document.</p>

</div>

**Using <kbd> :** used to show the keyboard short cuts

<div class="container">

<h1>Keyboard Inputs</h1>

<p>To indicate input that is typically entered via the keyboard, use the kbd element:</p>

<p>Use <kbd>ctrl + p</kbd> to open the Print dialog box.</p>

</div>

## 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

<div class="container">

<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>

</div>

**Contextual background colors :**

<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>

**Additonal Contextual Classes**

|  |  |
| --- | --- |
| **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-justify | Indicates justified text |
| .text-nowrap | Indicates no wrap text |
| .text-lowercase | Indicates lowercased text |
| .text-uppercase | Indicates uppercased text |
| .text-capitalize | Indicates capitalized text |
| .initialism | Displays the text inside an <abbr> element in a slightly smaller font size |
| .list-unstyled | Removes the default list-style and left margin on list items (works on both <ul> and <ol>). This class only applies to immediate children list items (to remove the default list-style from any nested lists, apply this class to any nested lists as well) |
| .list-inline | Places all list items on a single line |
| .dl-horizontal | Lines up the terms (<dt>) and descriptions (<dd>) in <dl> elements side-by-side. Starts off like default <dl>s, but when the browser window expands, it will line up side-by-side |
| .pre-scrollable | Makes a <pre> element scrollable |

**Working with Tables**

<table class="table">

<thead>

<tr>

<th>Firstname</th>

<th>Lastname</th>

<th>Email</th>

</tr>

</thead>

<tbody>

<tr>

<td>John</td>

<td>Doe</td>

<td>john@example.com</td>

</tr>

<tr>

<td>Mary</td>

<td>Moe</td>

<td>mary@example.com</td>

</tr>

<tr>

<td>July</td>

<td>Dooley</td>

<td>july@example.com</td>

</tr>

</tbody>

</table>

**More Table Styles :**

<table class="table table-striped">

<table class="table table-bordered">

<table class="table table-condensed">

**Responsive Tables :** Table will scroll horizontally on divices width less than 760px

Ex:

<div class="table-responsive">  
  <table class="table">  
    ...  
  </table>  
</div>

**Ex: for contextual colors on table**

<table class="table">

<thead>

<tr>

<th>Firstname</th>

<th>Lastname</th>

<th>Email</th>

</tr>

</thead>

<tbody>

<tr>

<td>Default</td>

<td>Defaultson</td>

<td>def@somemail.com</td>

</tr>

<tr class="success">

<td>Success</td>

<td>Doe</td>

<td>john@example.com</td>

</tr>

<tr class="danger">

<td>Danger</td>

<td>Moe</td>

<td>mary@example.com</td>

</tr>

<tr class="info">

<td>Info</td>

<td>Dooley</td>

<td>july@example.com</td>

</tr>

<tr class="warning">

<td>Warning</td>

<td>Refs</td>

<td>bo@example.com</td>

</tr>

<tr class="active">

<td>Active</td>

<td>Activeson</td>

<td>act@example.com</td>

</tr>

</tbody>

</table>

**Working with Images**

<img src="cinqueterre.jpg" class="img-rounded" alt="Cinque Terre">

<img src="cinqueterre.jpg" class="img-circle" alt="Cinque Terre">

<img src="cinqueterre.jpg" class="img-thumbnail" alt="Cinque Terre">

<img class="img-responsive" src="img\_chania.jpg" alt="Chania">

Responsive images will adjust teir size according to the parent element

**Working with buttons**

<button type="button" class="btn">Basic</button>  
<button type="button" class="btn btn-default">Default</button>  
<button type="button" class="btn btn-primary">Primary</button>  
<button type="button" class="btn btn-success">Success</button>  
<button type="button" class="btn btn-info">Info</button>  
<button type="button" class="btn btn-warning">Warning</button>  
<button type="button" class="btn btn-danger">Danger</button>  
<button type="button" class="btn btn-link">Link</button>

**Button Sizes**

Bootstrap provides four button sizes:

Large Medium Small XSmall

The classes that define the different sizes are:

* .btn-lg
* .btn-md
* .btn-sm
* .btn-xs

**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:

Ex:

<div class="btn-group">  
  <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>

Ex:

<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**

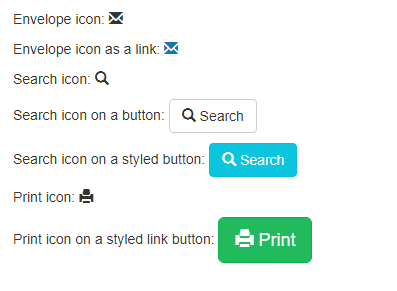
Used To span the entire width of the screen

<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 to justify we must wrap each element in div

<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>

**Using Glyphycons:**



<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>

</div>

**Badges**

Badges are numerical indicators of how many items are associated with a link:





<a href="#">News <span class="badge">5</span></a><br>  
<a href="#">Comments <span class="badge">10</span></a><br>  
<a href="#">Updates <span class="badge">2</span></a>

<button type="button" class="btn btn-primary">Primary <span class="badge">7</span></button>

**Working with Dropdown**

A dropdown menu is a toggleable menu that allows the user to choose one value from a predefined list:



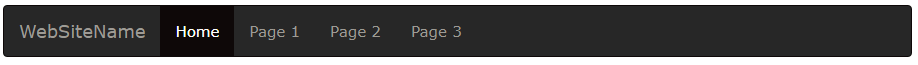
<div class="dropdown">  
  <button class="btn btn-primary dropdown-toggle" type="button" data-toggle="dropdown">Dropdown Example  
  <span class="caret"></span></button>  
  <ul class="dropdown-menu">  
    <li><a href="#">HTML</a></li>  
    <li><a href="#">CSS</a></li>  
    <li><a href="#">JavaScript</a></li>  
  </ul>  
</div>

**Working with navBars**

Ex:



<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-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>



<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>  
    </ul>  
    <ul class="nav navbar-nav navbar-right">  
      <li><a href="#"><span class="glyphicon glyphicon-user"></span> Sign Up</a></li>  
      <li><a href="#"><span class="glyphicon glyphicon-log-in"></span> Login</a></li>  
    </ul>  
  </div>  
</nav>



<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>  
    </ul>  
    <form class="navbar-form navbar-left" action="/action\_page.php">  
      <div class="form-group">  
        <input type="text" class="form-control" placeholder="Search">  
      </div>  
      <button type="submit" class="btn btn-default">Submit</button>  
    </form>  
  </div>  
</nav>

**Working with FormLayouts**

Bootstrap provides three types of form layouts:

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

Standard rules for all three form layouts:

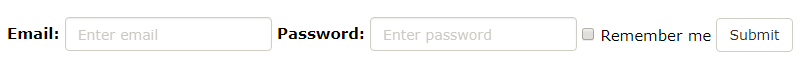
* Wrap labels and form controls in <div class="form-group"> (needed for optimum spacing)
* Add class .form-control to all textual <input>, <textarea>, and <select> elements

**Vertical Form**



<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>

**Inline Forms**



<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>

**Horizontal Forms**



<form class="form-horizontal" action="/action\_page.php">  
  <div class="form-group">  
    <label class="control-label col-sm-2" for="email">Email:</label>  
    <div class="col-sm-10">  
      <input type="email" class="form-control" id="email" placeholder="Enter email">  
    </div>  
  </div>  
  <div class="form-group">  
    <label class="control-label col-sm-2" for="pwd">Password:</label>  
    <div class="col-sm-10">   
      <input type="password" class="form-control" id="pwd" placeholder="Enter password">  
    </div>  
  </div>  
  <div class="form-group">   
    <div class="col-sm-offset-2 col-sm-10">  
      <div class="checkbox">  
        <label><input type="checkbox"> Remember me</label>  
      </div>  
    </div>  
  </div>  
  <div class="form-group">   
    <div class="col-sm-offset-2 col-sm-10">  
      <button type="submit" class="btn btn-default">Submit</button>  
    </div>  
  </div>  
</form>