Bootstrap

* Bootstrap is a free and open-source framework for creating websites and web applications.
* Bootstrap can make things a lot easier. Bootstrap enables you to create responsive websites without you needing to put in much effort.
* Responsive means a web site which automatically adjust itself to look good on all devices, from small phones to large desktops.
* Bootstrap includes components such as buttons, navbars, dropdown menus, alert boxes, and more. In most cases, you can make use of a component simply by using the appropriate class name.

Why Bootstrap?

* **Mobile first approach**: this means that it is primarily designed for mobile devices, then scaled up from there to desktop.
* **Easy to get started**: With just the knowledge of HTML and CSS anyone can get started with bootstrap. Bootstrap official site can help you with documentation.
* **Responsive design**: Bootstrap's responsive CSS adjusts to Desktops, Tablets and Mobiles.
* It contains beautiful and functional built-in components which are easy to customize.
* It also provides web-based customization.
* And best of all it is an open source.

What to do first

* Bootstrap uses its own CSS and JavaScript files, which you need to link to.
* Copy-paste the stylesheet link into your <head>  before all other stylesheets to load our CSS.

<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0-beta.2/css/bootstrap.min.css" integrity="sha384-PsH8R72JQ3SOdhVi3uxftmaW6Vc51MKb0q5P2rRUpPvrszuE4W1povHYgTpBfshb" crossorigin="anonymous">

* Then place the following javascript files at the bottom of your document just before the end of <body> tag.
* <!-- Latest compiled and minified CSS -->  
  <link rel="stylesheet"href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css">
* <!-- jQuery library -->  
  <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
* <!-- Popper JS -->  
  <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"></script>
* <!-- Latest compiled JavaScript -->  
  <script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>

Bootstrap Grid System

**Here's how the Bootstrap grid system works:**

* Rows must be placed within a **.container** class for proper alignment and padding. Use rows to create horizontal groups of columns.
* Content should be placed within the columns.
* Predefined grid classes like **.row** and **.col-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 the last column via negative margin on .rows.
* Grid columns are created by specifying the number of twelve available columns .
* For example, three equal columns would use three .col-sm-4.

Basic Structure

<div class="container">

<div class="row">

<div class="col-xl-1">col1</div>

<div class="col-lg-1">col2</div>

<div class="col-md-1">col3</div>

<div class="col-sm-1">col4</div>

</div>

</div>

* Here xl- extra large

lg- large

md- medium

sm- small

* These are the size of the grid present in bootstrap.

Bootstrap Typography

Bootstrap includes styles that define how text elements appear.

1. **Headings**

* there are headings from h1 to h6 similar to that which are found in html
* Subheadings
* To add an inline subheading to any of the headings, simply add **.small** class and you will get smaller text in a lighter color.
* **Eg.**

<h1>Heading 1 <small>Sub-heading</small></h1>

<h2>Heading 2 <small>Sub-heading</small></h2>

<h3>Heading 3 <small>Sub-heading</small></h3>

<h4>Heading 4 <small>Sub-heading</small></h4>

<h5>Heading 5 <small>Sub-heading</small></h5>

<h6>Heading 6 <small>Sub-heading</small></h6>

**2. Display headings**

* These are designed to stand out more than the normal headings. There are 4 sizes of display heading **(.display-1, .display-2, .display-3, .display-4)**
* **Eg.**

<h1 class="display-1">Display 1</h1>

<h1 class="display-2">Display 2</h1>

<h1 class="display-3">Display 3</h1>

<h1 class="display-4">Display 4</h1>

Table

* For a basic table with lightly padded cells and horizontal dividers, apply Bootstrap’s **.table** of the <table> element
* **Eg.**

<table class="table">

<thead>

<tr>

<th>Header 1</th>

<th>Header 2</th>

</tr>

</thead>

<tbody>

<tr>

<td>Cell</td>

<td>Cell</td>

</tr>

</tbody>

</table>

Buttons

* Anything that is given a class of **.btn** will inherit the default look of a gray button with rounded corners.
* Here are different classes and their descriptions
* **btn:** Default/Standard button.
* **btn-primary:** Provides extra visual weight and identifies the primary action in a set of buttons
* **btn-success:** Indicates a successful or positive action.
* **btn-info:** Contextual button for informational alert messages.
* **btn-warning:** Indicates caution should be taken with this action.
* **btn-danger:** Indicates a dangerous or potentially negative action.
* **btn-link:** Deemphasize a button by making it look like a link while maintaining button behavior.

Form

* Bootstrap makes it easy with the simple HTML markup and extended classes for different styles of forms.
* **.form-control** with <input> and <textarea> are used.
* **.form-group** is used for optimum spacing.
* **Eg.**

<form

action="/html/tags/html\_form\_tag\_action.cfm">

<fieldset class="form-group">

<label for="first\_name">First Name</label>

<input type="text" class="form-control"

id="first\_name” name="first\_name">

</fieldset>

<button type="submit" class="btn

btn-default">Submit</button>

</form>

Examples

* <!--Standard button-->

<button type="button" class="btn

btn-default">Default button</button>

* <!--Provides extra visual weight and identifies the primary action in a set of buttons-->

<button type="button" class="btn

btn-primary">Primary Button</button>

* <!--Indicates a successful or positive action-->

<button type="button" class="btn btn-success">Success Button</button>

Similarly you can use different classes

Navbars

* Navbar means navigation bar. Bootstrap helps you to style navigation bar.
* **Eg.**

<nav class="navbar navbar-expand-sm navbar-light

bg-faded">

<button class="navbar-toggler" type="button"

data-target="#nav-content" aria-controls

="nav-content" aria-expanded="false"

aria-label="Toggle navigation">

<span class="navbar-toggler-icon"></span>

</button>

<!-- Brand -->

<a class="navbar-brand" href="#">Logo</a>

<!-- Links -->

<div class="collapse navbar-collapse"

id="nav-content">

<ul class="navbar-nav">

<li class="nav-item">

<a class="nav-link" href="#">Link

1</a>

</li>

<li class="nav-item">

<a class="nav-link" href="#">Link

2</a>

</li>

<li class="nav-item">

<a class="nav-link" href="#">Link

3</a>

</li>

</ul>

</div>

</nav>

DropDown

* Can include dropdown in navbar

<nav>

<ul>

<li class="nav-item dropdown">

<a class="nav-link dropdown-toggle"

data-toggle="dropdown"

id="Preview" href="#" role="button"

aria-haspopup="true"

aria-expanded="false">

Dropdown

</a>

<div class="dropdown-menu"

aria-labelledby="Preview">

<a class="dropdown-item" href="#">Dropdown Link 1</a>

<a class="dropdown-item" href="#">Dropdown Link 2</a>

<a class="dropdown-item" href="#">Dropdown Link 3</a>

</div>

</li>

</ul>

</nav>

Jumbotron

* A jumbotron is a large box that is styled with large text. By default, Bootstrap 4 jumbotrons are styled in light gray, but you can change this to any color.
* To create a jumbotron, apply the **.jumbotron**.
* **Eg.**

<div class="container">

<div class="jumbotron">

<h1>My Jumbotron</h1>

<p>Think BIG with a Bootstrap

Jumbotron!</p>

</div>

</div>

Cards

* A card is a container in which you can place any content.
* Styling options such as alignment, padding, colors, headings, and more.
* To create a basic card, apply the **.card** and **.card-body** classes.
* Add **.card-title** to any heading elements and .card-text to text elements
* **Eg.**

<div class="card card-body">

<h4 class="card-title">Boot Polish</h4>

<p class="card-text">Boot polish is used to

give shine to your shoes</p>

<a href="#" class="btn btn-primary">

More</a>

</div>

Carousel

* The Bootstrap carousel component enables you to add scrolling images and text that slide in, pause, then slide out.
* Controls enable the user to scroll forwards or backwards.
* **Eg.**

<div id="myCarousel" class="carousel slide w-50

ml-auto mr-auto" data-ride="carousel">

<div class="carousel-inner" role="listbox">

<div class="carousel-item active">

<img class="d-block w-100"

src="/pix/samples/27m.jpg"

alt="First slide">

</div>

<div class="carousel-item">

<img class="d-block w-100"

src="/pix/samples/28m.jpg" alt="Second

slide">

</div>

</div>

Refer

* For knowing about more classes and their uses you can refer official website of bootstrap 4
* W3c orgs.