BootStrap

Bootstrap is an open-source Javascript framework developed by the team at Twitter. It is a combination of HTML, CSS, and Javascript code designed to help build user interface components. Bootstrap was also programmed to support both HTML5 and CSS3.

Also it is called Front-end-framework.

Bootstrap is a free collection of tools for creating a websites and web applications.

It contains HTML and CSS-based design templates for typography, forms, buttons, navigation and other interface components, as well as optional JavaScript extensions.

Some Reasons for programmers preferred Bootstrap Framework

1. Easy to get started
2. Great grid system
3. Base styling for most HTML elements(Typography,Code,Tables,Forms,Buttons,Images,Icons)
4. Extensive list of components
5. Bundled Javascript plugins
6. Responsive Web designing

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.

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:

MaxCDN:

```
<!-- 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/3.2.1/jquery.min.js"></script>

<!-- Latest compiled JavaScript -->
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"></script>
```

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

Grid System:

What is a Grid?

- Grid is a structure (usually two-dimensional) made up of a series of intersecting straight (vertical, horizontal) lines used to structure the content.

- It is widely used to design layout and content structure in print design. In web design, it is a very effective method to create a consistent layout rapidly and effectively using HTML and CSS.

In Simple terms, grids in web design organize and structure content, makes the websites easy to scan and reduces the cognitive load on users.

Bootstrap Grid System

- ✓ The Bootstrap Grid System allows up to 12 columns across the page.
- ✓ You can use all 12 columns individually or you can groups the columns together to create wider columns.

If you do not want to use all 12 columns individually, you can group the columns together to create wider columns:

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											

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

Grid Classes:

There are four classes in Bootstrap Grid System:

- ✓ xs (for phones)
- ✓ sm (for tablets)
- ✓ md (for desktops)
- ✓ lg (for larger desktops)

You can combine the above classes to create more dynamic and flexible layouts.

Basic Structure of a Bootstrap Grid:

```
<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>
```

Instructions while creating a Bootstrap Grid:

- ✓ Create a row (<div class="row">).
- ✓ Add the number of columns, you want in the grid (tags with appropriate .col-*-* classes).
- ✓ Note that numbers in .col-*-* should always add up to 12 for each row.

<u>BootStrapping Tables:</u>

Classes in tables as follows.

➢ **.table-striped class** is used to add zebra-stripes to a table

➢ **.table-bordered class** is used to add borders on all sides of the table and cells

➢ **table-hover class** is used to enable a hover state on table rows

➢ **.table-condensed class** is used to make a table more compact by cutting cell padding in half

Bootstrap Contextual classes:

Contextual classes are used to color table rows (<tr>) or table cells (<td>):

Following are the different contextual classes:

Class	Description
.active	It is used to apply the hover color to the table row or table cell
.success	It indicates a successful or positive action
.info	It indicates a neutral informative change or action
.warning	It specifies a warning that might need attention
.danger	It indicates a dangerous or potentially negative action

Bootstrap Buttons

There are seven styles to add a button in Bootstrap. Use the following classes to achieve the different button styles:

✓ .btn-default

- ✓ .btn-primary

- ✓ .btn-success

- ✓ .btn-info

- ✓ .btn-warning

- ✓ .btn-danger

- ✓ .btn-link

  For Button Sizes,

  Following classes define the different sizes:

- ✓ .btn-lg

- ✓ .btn-md

- ✓ .btn-sm

- ✓ .btn-xs

  Note: **active class** is used to make a button appear pressed, and the **class .disabled** makes a button unclickable.

Bootstrap Alerts

Bootstrap Alerts are used to provide an easy way to create predefined alert messages. Alert adds a style to your messages to make it more appealing to the users.

- ✓ There are four classes that are used within <div> element for alerts.

- ✓ .alert-success

- ✓ .alert-info

- ✓ .alert-warning

✓ .alert-danger

<u>BootStrap Wells:</u>

In Bootstrap, wells are used to add a rounded border around an element with a gray background color and some padding.

 It is like a container that displays the content.

The **class .well** is used with <div> element to add well.

By Default, wells size is medium but you can change the size of the well according to your need. The **.well-sm** class is used for small wells and **.well-lg** class is used for large wells.

Bootstrap Images

Bootstrap supports for images.

There are three classes in Bootstrap that can be used to apply some simple style to the images.

The following classes add style to the images:

Classes	Uses
.img-rounded	It adds border-radius:6px to give the image rounded corners.
.img-circle	It makes the entire image round by adding border-radius:500px.
.img-thumbnail	It adds a bit of padding and a gray border.