What is BOOTSTRAP ?

BOOTSTRAP is a free and one of the popular open source CSS framework that allows us to build fast responsive websites. It contains CSS and option JAVASCRIPT base design template forms, button & nav…

Advantages of Bootstrap

- **Supports Responsive Design** : Bootstrap automatically adapt to the screen sizes of multiples devices .

- **Saves a lot of Development time** : Instead of writing codes from scratch, bootstrap offers ready made blocks of codes to suit application requirements.

- **Consistency** : Bootstrap was develop to encourage consistency across the internal tools by giving the developer a centralise code base.

- **Customizable** : Bootstrap is also highly customizable (i.e. it allows check and uncheck of whatever features we are working with or not)

Advantages of Bootstrap

- **Support** : Bootstrap has a very large community base and excellent documentation (i.e. with examples and demo the webpages allows developer to learn quickly if you are new to it.

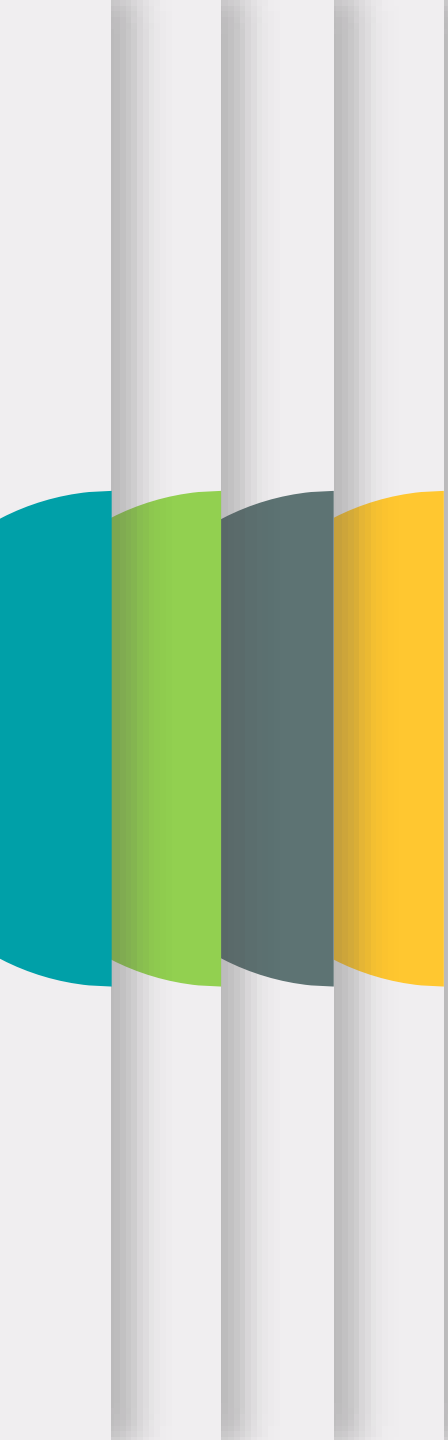# Downloading ,setting up and Understanding different bootstrap components

- Visit getbootstrap.com and click get started

- Two ways to get started are :

i.   {Quick way (using bootstrap CDN)}

ii.   {Downloading the source(src) files of bootstrap and include them in a project}

Bootstrap GRID system (How to create page layouts using Bootstrap Grid system)

- The Grid system consist of 12 column and its so flexible that you can create any layout you want.

- Bootstrap Grid classes (set up the layout using bootstrap container and row class respectively follow by our column classes.

- Add a new style sheet (for example, customStyles.css) and link to the html.

```
File  Edit  Selection  View  Go  Run  Terminal  Help              ● index.html - Bootstrap v5 Alpha - Visual Studio Code        —  □  X

index.html ●

index.html > html > body > div.container > div.row > div.col

 1  <!DOCTYPE html>
 2  <html lang="en">
 3  <head>
 4      <meta charset="UTF-8">
 5      <meta name="viewport" content="width=device-width, initial-scale=1.0">
 6      <title>Bootstrap v5 - Alpha1</title>
 7      <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/5.0.0-alpha1/css/bootstrap.min.css"
        integrity="sha384-r4NyP46KrjDleawBgD5tp8Y7UzmLA05oM1iAEQ17CSuDqnUK2+k9luXQOfXJCJ4I" crossorigin="anonymous">
 8  </head>
 9  <body>
10
11      <div class="container">
12          <div class="row">
13              <div class="col">Col One</div>
14              <div class="col">Col One</div>
15          </div>
16      </div>
17
18      <script src="https://cdn.jsdelivr.net/npm/popper.js@1.16.0/dist/umd/popper.min.js" integrity="sha384-Q6E9RHvbIyZFJoft
        +2mJbHaEWldlvI9IOYy5n3zV9zzTtmI3UksdQRVvoxMfooAo" crossorigin="anonymous"></script>
19      <script src="https://stackpath.bootstrapcdn.com/bootstrap/5.0.0-alpha1/js/bootstrap.min.js"
        integrity="sha384-oesi62hOLfzrys4LxRF630JCXdXDipiYWBnvTl9Y9/TRlw5xlKIEHpNyvvDShgf/" crossorigin="anonymous"></script>
20  </body>
21  </html>
```

○ index.html ✕

○ index.html ⟩ ⊘ html ⟩ ⊘ body ⟩ ⊘ div.container ⟩ ⊘ div.row ⟩ ⊘ div.col-sm-6.order-sm-1

```html
1    <!DOCTYPE html>
2    <html lang="en">
3    <head>
4        <meta charset="UTF-8">
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         integrity="sha384-r4NyP46KrjDleawBgD5tp8Y7UzmLA05oM1iAEQ17CSuDqnUK2+k9luXQOfXJCJ4I" crossorigin="anonymous">
8    </head>
9    <body>
10
11       <div class="container">
12           <div class="row">
13               <div class="col-sm-12 col-md-6 col-lg-2">Col One</div>
14               <div class="col-sm-12 col-md-6 col-lg-8">Col Two</div>
15           </div>
16
17           <div class="row">
18               <div class="col-sm-6 order-sm-2">Col One</div>
19               <div class="col-sm-6 order-sm-1">Col Two</div>
20           </div>
21       </div>
22
23       <script src="https://cdn.jsdelivr.net/npm/popper.js@1.16.0/dist/umd/popper.min.js" integrity="sha384-Q6E9RHvbIyZFJoft
         +2mJbHaEWldlvI9IOYy5n3zV9zzTtmI3UksdQRVvoxMfooAo" crossorigin="anonymous"></script>
24       <script src="https://stackpath.bootstrapcdn.com/bootstrap/5.0.0-alpha1/js/bootstrap.min.js"
         integrity="sha384-oesi62hOLfzrys4LxRF63OJCXdXDipiYWBnvTl9Y9/TRlw5xlKIEHpNyvvDShgf/" crossorigin="anonymous"></script>
25   </body>
26   </html>
```

```html
        <div class="col-sm-12 col-md-6 col-lg-8">Col Two</div>
    </div>


    <div class="row">
        <div class="col-sm-6 order-sm-2">Col One</div>
        <div class="col-sm-6 order-sm-1">Col Two</div>
    </div>


    <div class="row">
        <div class="col-sm-4 offset-2">Col One</div>
        <div class="col-sm-4 offset-1">Col Two</div>
    </div>


    <div class="row my-custom-row justify-content-center align-items-center">
        <div class="col-sm-4"><div class="p-3 border bg-light">Col One</div></div>
        <div class="col-sm-4"><div class="p-3 border bg-light">Col Two</div></div>
    </div>



    </div>

    <script src="https://cdn.jsdelivr.net/npm/popper.js@1.16.0/dist/umd/popper.min.js" integrity="sha384-Q6E9RHvbIyZFJoft
+2mJbHaEWldlvI9IOYy5n3zV9zzTtmI3UksdQRVvoxMfooAo" crossorigin="anonymous"></script>
    <script src="https://stackpath.bootstrapcdn.com/bootstrap/5.0.0-alpha1/js/bootstrap.min.js"
    integrity="sha384-oesi62hOLfzrys4LxRF63OJCXdXDipiYWBnvTl9Y9/TRlw5xlKIEHpNyvvDShgf/" crossorigin="anonymous"></script>
</body>
</html>
```

Bootstrap Grid System

Bootstrap Grid system is used for creating page layouts through a series of rows and columns. The Grid System consists of 12 columns.

1	2	3	4	5	6	7	8	9	10	11	12

3 column layout using the Bootstrap Grid System

LEFT SIDE BAR	MAIN CONTENT AREA	RIGHT SIDE BAR

Bootstrap Grid System

Bootstrap Grid Classes

Device	Bootstrap Class
Extra small devices - Mobile Phones (< 768px)	.col-xs-*
Small devices - Tablets (≥768px)	.col-sm-*
Medium devices - Desktops (≥992px)	.col-md-*
Large devices - Desktops (≥1200px)	.col-lg-*

```html
<body>
    <div class="container">
        <div class="row">
            <div class="col-md-2">Left Side Bar</div>
            <div class="col-md-8">Main Content Area</div>
            <div class="col-md-2">Right Side Bar</div>
        </div>
    </div>
```

```html
<body>
    <div class="container">
        <div class="row">
            <div class="col-md-2">
                <div class="customDiv">Left Side Bar</div>
            </div>
            <div class="col-md-8">
                <div class="customDiv">Main Content Area</div>
            </div>
            <div class="col-md-2">
                <div class="customDiv">Right Side Bar</div>
            </div>
        </div>
    </div>
```

Bootstrap Grid System

LEFT SIDE BAR	MAIN CONTENT AREA	RIGHT SIDE BAR

```css
.customDiv{
    margin:3px;
    min-height:300px;
    background-color:silver;
    text-align:center;
    font-size:large
}
```

```html
<div class="container">
    <div class="row">
        <div class="col-md-2">
            <div class="customDiv">LEFT SIDE BAR</div>
        </div>
        <div class="col-md-8">
            <div class="customDiv">MAIN CONTENT AREA</div>
        </div>
        <div class="col-md-2">
            <div class="customDiv">RIGHT SIDE BAR</div>
        </div>
    </div>
</div>
```

Bootstrap 3 Grid Classes

Create 2 equal columns on a small device

Column 1	Column 2
Column 3	Column 4

```html
<div class="container">
    <div class="row">
        <div class="col-md-3 col-lg-9 col-sm-6">
            <div class="customDiv">Column 1</div>
        </div>
        <div class="col-md-3 col-lg-3 col-sm-6">
            <div class="customDiv">Column 2</div>
        </div>
        <div class="col-md-3 col-lg-9 col-sm-6">
            <div class="customDiv">Column 3</div>
        </div>
        <div class="col-md-3 col-lg-3 col-sm-6">
            <div class="customDiv">Column 4</div>
        </div>
    </div>
</div>
```

With these Grid classes, you have complete control over the layout of your website on different screen sizes.

Bootstrap Grid Column Offset

Center the 2 columns in the first row

Bootstrap Grid Classes	Bootstrap Offset Classes
.col-xs-*	.col-xs-offset-*
.col-sm-*	.col-sm-offset-*
.col-md-*	.col-md-offset-*
.col-lg-*	.col-lg-offset-*

```html
<div class="container">
    <div class="row">
        <div class="col-md-3 col-md-offset-3">
            <div class="customDiv">Column 1</div>
        </div>
        <div class="col-md-3">
            <div class="customDiv">Column 2</div>
        </div>
    </div>
    <div class="row">
        <div class="col-md-3">
            <div class="customDiv">Column 1</div>
        </div>
        <div class="col-md-3">
            <div class="customDiv">Column 2</div>
        </div>
        <div class="col-md-3">
            <div class="customDiv">Column 3</div>
        </div>
        <div class="col-md-3">
            <div class="customDiv">Column 4</div>
        </div>
    </div>
</div>
```

Bootstrap Grid Column Offset

Create 3 equal columns in the second row. Image in the first row should be centered.

```
<div class="container">
    <div class="row">
        <img src="Images/Tulips.jpg" class="col-md-4 col-md-offset-4" />
    </div>
    <br />
    <div class="row">
        <div class="col-md-4">
            <div class="customDiv">Column 1</div>
        </div>
        <div class="col-md-4">
            <div class="customDiv">Column 2</div>
        </div>
        <div class="col-md-4">
            <div class="customDiv">Column 3</div>
        </div>
    </div>
</div>
```

Bootstrap Grid Column Offset

To make images responsive, add img-responsive class on the img element

```
<div class="container">
    <div class="row">
        <img src="Images/Tulips.jpg" class="col-md-4 col-md-offset-4 img-responsive" />
    </div>
    <br />
    <div class="row">
        <div class="col-md-4">
            <div class="customDiv">Column 1</div>
        </div>
        <div class="col-md-4">
            <div class="customDiv">Column 2</div>
        </div>
        <div class="col-md-4">
            <div class="customDiv">Column 3</div>
        </div>
    </div>
</div>
```

Other bootstrap classes are useful to style an img element

.img-circle

.img-thumbnail

.img-rounded

To Be Continue……………