

What is Bootstrap?

Bootstrap:

- is one of the most popular responsive front-end framework built on top of [jQuery](#) library and [popper.js](#) library; meant to design responsive websites.

Responsive:

- means content being displayed properly on variety of devices of different screen sizes.
- i.e. if the content of a website is displayed properly in a mobile, PC, tablet or any other device; independent of the device screen size then it is called as a responsive website.

Front end:

- means visual side of the website
- i.e. when user visits to a website; what he/she sees at the front or what is visible to the user at first sight is called front end of the website.

Responsive front end framework:

- Generally framework is a collection of prebuilt resources working together to perform a specific task.
- Bootstrap is a collection of prebuilt resources (CSS files, JS files, font files etc), meant to design responsive visual side of the website or responsive front end of the website or simply responsive website.

Examples for more front end frameworks are:

- UIKit, Semantic-UI, Material UI, jQueryUI, Skeleton, Milligram, etc

Why Use Bootstrap?

1. Mobile first approach: Bootstrap 3 framework consists of Mobile first styles Throughout the entire library instead of them in separate files.
2. Browser Support: It is supported by all popular browsers.
3. Easy to get started: With just the knowledge of HTML and CSS anyone can get started with Bootstrap. Also the Bootstrap official site has a good documentation.
4. Responsive design: Bootstrap's responsive CSS adjusts to Desktops, Tablets and Mobiles.
5. It Provides a clean and uniform solution for building an interface for developers.
6. It contains beautiful and functional built-in components which are easy to customize.

7. It also provides web-based customization.

8. And best of all it is an open source.

Bootstrap Text Formatting Related Classes:

fw-bold: used to make text bold

```
<p>Paragraph Text</p>
```

```
<p class="fw-bold">Paragraph Text</p>
```

fw-light: used to make text light

```
<p>Paragraph Text</p>
```

```
<p class="fw-light">Paragraph Text</p>
```

fw-normal: used to convert text from bold to normal

```
<h6>Heading Text</h6>
```

```
<h6 class="fw-normal">Heading Text</h6>
```

fst-italic: used to make text italic

```
<p>Paragraph Text</p>
```

```
<p class="fst-italic">Paragraph Text</p>
```

fst-normal: used to convert text from italic to normal

```
<em>Paragraph Text</em> <br/>
```

```
<em class="fst-normal">Paragraph Text</em>
```

text-decoration-underline: used to make text underline

```
<p>Paragraph Text</p>
```

```
<p class="text-decoration-underline">Paragraph Text</p>
```

text-decoration-line-through: used to make text strike through

```
<p>Paragraph Text</p>
```

```
<p class="text-decoration-line-through">Paragraph Text</p>
```

text-decoration-none : used to remove any line from the text

```
<a href="#">Hyper Text</a> <br/>
```

```
<a href="#" class="text-decoration-none">Hyper Text</a>
```

mark: used to set the background color to light yellow

```
<p>Paragraph Text.</p>
```

```
<p class="mark">Paragraph Text.</p>
```

blockquote:

- displays text within it little bit bigger in size

blockquote-footer:

- prepends the text with --- and displays text little lighter and smaller in size

```
<div class="blockquote mark">
```

```
<p>HTML is a structural Language.</p>
<p class="blockquote-footer">Tim Berners Lee</p>
</div>
```

Complete code:

```
<p>Paragraph Text</p>
<p class="fw-bold">Paragraph Text</p>
<p class="fst-italic">Paragraph Text</p>
<p class="text-decoration-underline">Paragraph Text</p>
<p class="text-decoration-line-through">Paragraph Text</p>
<a href="#" class="text-decoration-none">Hyper Text</a>
<p class="mark">Paragraph Text</p>
<div class="blockquote mark">
    <p>HTML is a structural language</p>
    <p class="blockquote-footer">Tim Berners Lee</p>
</div>
```

Bootstrap Text Size Related Classes:

small: used to display text little bit smaller in size

```
<p>Paragraph Text</p>
<p class="small">Paragraph Text</p>
```

lead: used to display text little bit bigger in size

```
<p> Paragraph Text </p>
<p class="lead"> Paragraph Text </p>
```

fs-#: used to set different font size

```
<p> Paragraph Text </p>
<p class="fs-1"> Paragraph Text </p>
<p class="fs-2"> Paragraph Text </p>
<p class="fs-3"> Paragraph Text </p>
<p class="fs-4"> Paragraph Text </p>
<p class="fs-5"> Paragraph Text </p>
<p class="fs-6"> Paragraph Text </p>
```

display-#: used to display text in different sizes

```
<p> Paragraph Text </p>
<p class="display-1"> Paragraph Text </p>
<p class="display-2"> Paragraph Text </p>
<p class="display-3"> Paragraph Text </p>
<p class="display-4"> Paragraph Text </p>
<p class="display-5"> Paragraph Text </p>
<p class="display-6"> Paragraph Text </p>
```

Complete Code:

```
<!doctype html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <title>Bootstrap demo</title>
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link href="bootstrap/css/bootstrap.min.css" type="text/css" rel="stylesheet">
  </head>
  <body>

    <p>Paragraph Text</p>
    <p class="small">Paragraph Text</p>
    <p>Paragraph Text</p>
    <p class="lead">Paragraph Text</p>

    <p class="fs-1">Paragraph Text</p>
    <p class="fs-2">Paragraph Text</p>
    <p class="fs-3">Paragraph Text</p>
    <p class="fs-4">Paragraph Text</p>
    <p class="fs-5">Paragraph Text</p>
    <p class="fs-6">Paragraph Text</p>

    <p class="display-1">Paragraph Text</p>
    <p class="display-2">Paragraph Text</p>
    <p class="display-3">Paragraph Text</p>
    <p class="display-4">Paragraph Text</p>
    <p class="display-5">Paragraph Text</p>
    <p class="display-6">Paragraph Text</p>

    <script src="jquery/jquery.min.js" type="text/javascript"></script>
    <script src="popper/popper.min.js" type="text/javascript"></script>
    <script src="bootstrap/js/bootstrap.min.js" type="text/javascript"></script>

  </body>
</html>
```

Bootstrap Text Color Related Classes:

text-primary :displays text in blue color

```
<p class="text-primary">Paragraph Text</p>
```

text-secondary :displays text in mid gray color

```
<p class="text-secondary"> Paragraph Text </p>
```

text-success :displays text in green color

```
<p class="text-success"> Paragraph Text </p>
```

text-warning :displays text in yellow color

```
<p class="text-warning"> Paragraph Text </p>
```

text-info :displays text in cyan (fairy tale blue) color

```
<p class="text-info"> Paragraph Text </p>
```

text-danger :displays text in red color

```
<p class="text-danger"> Paragraph Text </p>
```

text-dark :displays text in dark gray color

```
<p class="text-dark"> Paragraph Text </p>
```

text-light :displays text in light gray color

```
<p class="text-light"> Paragraph Text </p>
```

text-white :displays text in white color

```
<p class="text-white"> Paragraph Text </p>
```

text-muted :displays text in mid gray color

```
<p class="text-muted"> Paragraph Text </p>
```

CSS color property:

```
<p style="color:red;"> Paragraph Text </p>
```

```
<p style="color:#ff0000;"> Paragraph Text </p>
```

```
<p style="color:rgb(255,0,0);"> Paragraph Text </p>
```

```
<p style="color:rgba(255,0,0,1);"> Paragraph Text </p>
```

Complete code:

```
<!doctype html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <title>Bootstrap demo</title>
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link href="bootstrap/css/bootstrap.min.css" type="text/css" rel="stylesheet">
  </head>
  <body>

    <p>Paragraph Text</p>
    <p class="text-primary">Paragraph Text</p>
    <p class="text-secondary">Paragraph Text</p>
    <p class="text-success">Paragraph Text</p>
    <p class="text-warning">Paragraph Text</p>
    <p class="text-info">Paragraph Text</p>
    <p class="text-danger">Paragraph Text</p>
    <p class="text-dark">Paragraph Text</p>
    <p class="text-light">Paragraph Text</p>
    <p class="text-white">Paragraph Text</p>
    <p class="text-muted">Paragraph Text</p>

    <p style="color:red;">Paragraph Text</p>
    <p style="color:#ff0000;">Paragraph Text</p>
    <p style="color:rgb(255,0,0);">Paragraph Text</p>
    <p style="color:rgba(255,0,0,1);">Paragraph Text</p>

    <script src="jquery/jquery.min.js" type="text/javascript"></script>
    <script src="popper/popper.min.js" type="text/javascript"></script>
    <script src="bootstrap/js/bootstrap.min.js" type="text/javascript"></script>

  </body>
</html>
```

Bootstrap Background Color Related Classes:

bg-primary : is used to set the blue background color

```
<p class="bg-primary">Paragraph Text</p>
```

bg-secondary : is used to set the mid gray background color

```
<p class="bg-secondary">Paragraph Text</p>
```

bg-success : is used to set the green background color

```
<p class="bg-success">Paragraph Text</p>
```

bg-warning : is used to set the yellow background color

```
<p class="bg-warning">Paragraph Text</p>
```

bg-info : is used to set the cyan background color

```
<p class="bg-info">Paragraph Text</p>
```

bg-danger : is used to set the red background color

```
<p class="bg-danger">Paragraph Text</p>
```

bg-dark : is used to set the dark gray background color

```
<p class="bg-dark">Paragraph Text</p>
```

bg-light : is used to set the light gray background color

```
<p class="bg-light">Paragraph Text</p>
```

bg-white : is used to set the white background color

```
<p class="bg-white">Paragraph Text</p>
```

CSS background-color property:

```
<p style="background-color:red;"> Paragraph Text</p>
```

```
<p style="background-color:#ff0000;"> Paragraph Text</p>
```

```
<p style="background-color:rgb(255,0,0);"> Paragraph Text</p>
```

```
<p style="background-color:rgba(255,0,0,1);"> Paragraph Text</p>
```

Complete Code:

```
<!doctype html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <title>Bootstrap demo</title>
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link href="bootstrap/css/bootstrap.min.css" type="text/css" rel="stylesheet">
  </head>
  <body>

    <p>Paragraph Text</p>
    <p class="bg-primary">Paragraph Text</p>
    <p class="bg-secondary">Paragraph Text</p>
    <p class="bg-success">Paragraph Text</p>
    <p class="bg-warning">Paragraph Text</p>
    <p class="bg-info">Paragraph Text</p>
    <p class="bg-danger">Paragraph Text</p>
    <p class="bg-dark text-white">Paragraph Text</p>
    <p class="bg-light">Paragraph Text</p>
    <p class="bg-white">Paragraph Text</p>

    <p style="background-color:red;">Paragraph Text</p>
    <p style="background-color:#ff0000;">Paragraph Text</p>
    <p style="background-color:rgb(255,0,0);">Paragraph Text</p>
    <p style="background-color:rgba(255,0,0,0.5);">Paragraph Text</p>

    <script src="jquery/jquery.min.js" type="text/javascript"></script>
    <script src="popper/popper.min.js" type="text/javascript"></script>
    <script src="bootstrap/js/bootstrap.min.js" type="text/javascript"></script>

  </body>
</html>
```


Bootstrap Heading Related Classes:

- used to display the content of an HTML tag as a heading

h1 : used to display the content of an HTML tag as HTML heading1

```
<p class="h1">Heading Text</p>
```

h2 : used to display the content of an HTML tag as HTML heading2

```
<p class="h2"> Heading Text </p>
```

h3 : used to display the content of an HTML tag as HTML heading3

```
<p class="h3"> Heading Text </p>
```

h4 : used to display the content of an HTML tag as HTML heading4

```
<p class="h4"> Heading Text </p>
```

h5 : used to display the content of an HTML tag as HTML heading5

```
<p class="h5"> Heading Text </p>
```

h6 : used to display the content of an HTML tag as HTML heading6

```
<p class="h6"> Heading Text </p>
```

Complete Code:

```
<!doctype html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <title>Bootstrap demo</title>
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link href="bootstrap/css/bootstrap.min.css" type="text/css" rel="stylesheet">
  </head>
  <body>

    <h1>Heading One</h1>
    <p class="h1">Heading One</p>

    <h2>Heading Two</h2>
    <p class="h2">Heading Two</p>

    <h3>Heading Three</h3>
    <p class="h3">Heading Three</p>

    <h4>Heading Four</h4>
    <p class="h4">Heading Four</p>

    <h5>Heading Five</h5>
    <p class="h5">Heading Five</p>

    <h6>Heading Six</h6>
```

```
<p class="h6">Heading Six</p>
```

```
<script src="jquery/jquery.min.js" type="text/javascript"></script>
```

```
<script src="popper/popper.min.js" type="text/javascript"></script>
```

```
<script src="bootstrap/js/bootstrap.min.js" type="text/javascript"></script>
```

```
</body>
```

```
</html>
```

Bootstrap Text Alignment Related Classes:

text[-*]-start : used to align the text to the left in its container

```
<p class="text-start">Paragraph Text</p>
```

where:

* = sm, md, lg, xl

text[-*]-center : used to align the text to the center in its container

```
<p class="text-center"> Paragraph Text </p>
```

where:

* = sm, md, lg, xl

text[-*]-end : used to align the text to the right in its container

```
<p class="text-end"> Paragraph Text </p>
```

where:

* = sm, md, lg, xl

CSS text-align:justify: used to justify the text in its container

```
<p style="text-align:justify; text-indent:100px;">
```

It is a long established fact that a reader will be distracted by the readable content of a page when looking at its layout. The point of using Lorem Ipsum is that it has a more-or-less normal distribution of letters, as opposed to using 'Content here, content here', making it look like readable English. Many desktop publishing packages and web page editors now use Lorem Ipsum as their default model text, and a search for 'lorem ipsum' will uncover many web sites still in their infancy. Various versions have evolved over the years, sometimes by accident, sometimes on purpose (injected humour and the like).

```
</p>
```

Complete Code:

```
<!doctype html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <title>Bootstrap demo</title>
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link href="bootstrap/css/bootstrap.min.css" type="text/css" rel="stylesheet">
  </head>
  <body>

    <p>Paragraph Text</p>
    <p class="text-start">Paragraph Text</p>
    <p class="text-center">Paragraph Text</p>
    <p class="text-end">Paragraph Text</p>
    <p class="text-sm-start text-md-center text-lg-end">Paragraph Text</p>

    <p style="text-align:justify;">
It is a long established fact that a reader will be distracted by the readable content of a page when looking at
its layout. The point of using Lorem Ipsum is that it has a more-or-less normal distribution of letters, as
opposed to using 'Content here, content here', making it look like readable English. Many desktop publishing
packages and web page editors now use Lorem Ipsum as their default model text, and a search for 'lorem
ipsum' will uncover many web sites still in their infancy. Various versions have evolved over the years,
sometimes by accident, sometimes on purpose (injected humour and the like).
    </p>

    <script src="jquery/jquery.min.js" type="text/javascript"></script>
    <script src="popper/popper.min.js" type="text/javascript"></script>
    <script src="bootstrap/js/bootstrap.min.js" type="text/javascript"></script>

  </body>
</html>
```

Bootstrap Text Transform Related Classes:

text-lowercase: is used to convert all upper case characters into lower case

`<p class="text-lowercase"> HTML is a structural language. </p>`

text-uppercase: is used to convert all lower case characters into upper case

`<p class="text-uppercase"> HTML is a structural language. </p>`

text-capitalize: is used to convert first character of all words into upper case

`<p class="text-capitalize"> HTML is a structural language. </p>`

CSS font-variant: is used to convert all lower case characters to smaller upper case characters

`<p style="font-variant: small-caps; "> HTML is a structural language. </p>`

Complete code:

```
<!doctype html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <title>Bootstrap demo</title>
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link href="bootstrap/css/bootstrap.min.css" type="text/css" rel="stylesheet">
  </head>
  <body>

    <p>HTML is a structural language.</p>
    <p class="text-lowercase">HTML is a structural language.</p>
    <p class="text-uppercase">HTML is a structural language.</p>
    <p class="text-capitalize">HTML is a structural language.</p>

    <p style="font-variant:small-caps;">HTML is a structural language.</p>

    <script src="jquery/jquery.min.js" type="text/javascript"></script>
    <script src="popper/popper.min.js" type="text/javascript"></script>
    <script src="bootstrap/js/bootstrap.min.js" type="text/javascript"></script>

  </body>
</html>
```

Bootstrap - Width & Height Related Classes:

w-25: sets the width of an element to 25% of its parent width

w-50: sets the width of an element to 50% of its parent width

w-75: sets the width of an element to 75% of its parent width

w-100: sets the width of an element to 100% of its parent width

```
<div style="border:1px solid black;">
  <div class="bg-primary w-25">SomeText</div>
  <div class="bg-secondary w-50">Some Text</div>
  <div class="bg-success w-75">Some Text</div>
  <div class="bg-warning w-100">Some Text</div>
  <div class="bg-info" style="width:65%;">Some Text</div>
</div>
```

h-25: sets the height of an element to 25% of its parent height

h-50: sets the height of an element to 50% of its parent height

h-75: sets the height of an element to 75% of its parent height

h-100: sets the height of an element to 100% of its parent height

```
<div style="border:1px solid black; height:100px;">
  <div class="bg-primary h-25">Some Text</div>
</div>
```

```
<br/>
<div style="border:1px solid black; height:100px;">
  <div class="bg-secondary h-50">Some Text</div>
</div>
```

```
<br/>
<div style="border:1px solid black; height:100px;">
  <div class="bg-success h-75">Some Text</div>
</div>
```

```
<br/>
<div style="border:1px solid black; height:100px;">
  <div class="bg-warning h-100">Some Text</div>
</div>
```

```
<br/>
<div style="border:1px solid black; height:100px;">
  <div class="bg-info" style="height:65%;">Some Text</div>
</div>
```

Complete Code:

```
<!doctype html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <title>Bootstrap demo</title>
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link href="bootstrap/css/bootstrap.min.css" type="text/css" rel="stylesheet">
  </head>
  <body>

    <div style="border:2px solid black;">
      <div class="bg-primary w-25">Some Text</div>
      <div class="bg-warning w-50">Some Text</div>
      <div class="bg-danger w-75">Some Text</div>
      <div class="bg-info w-100">Some Text</div>
      <div class="bg-warning" style="width:78%;">Some Text</div>
    </div>

    <div style="border:2px solid black; height:100px;">
      <div class="bg-primary h-25">Some Text</div>
    </div>

    <div style="border:2px solid black; height:100px;">
      <div class="bg-warning h-50">Some Text</div>
    </div>

    <div style="border:2px solid black; height:100px;">
      <div class="bg-danger h-75">Some Text</div>
    </div>

    <div style="border:2px solid black; height:100px;">
      <div class="bg-info h-100">Some Text</div>
    </div>

    <div style="border:2px solid black; height:100px;">
      <div class="bg-secondary" style="height:55%;">Some Text</div>
    </div>

    <script src="jquery/jquery.min.js" type="text/javascript"></script>
    <script src="popper/popper.min.js" type="text/javascript"></script>
    <script src="bootstrap/js/bootstrap.min.js" type="text/javascript"></script>
  </body>
</html>
```

Bootstrap - Margin & Padding Related Classes:

Margin:

- indicates the space around an HTML element

Padding:

- indicates the space around the content of an HTML element

Basic Syntax:

{property} [side - device] {- size}

where:

property: m or p

m: indicates margin

p: indicates padding

side: t, b, s, e,

t – top

b- bottom

s - left

e – right

x, or y

x - left and right

y - top and bottom

Note: if you do not specify the side then it indicates all sides

device : sm, md, lg, or xl

sm : in small screen device and above

md: in medium screen device and above

lg : in large screen device and above

xl : in extra large screen device and above

Note: if you do not specify the device then it indicates in any screen size device

size: 0, 1, 2, 3, 4, or 5

0 : \$spacer * 0 = 16px * 0 = 0px

1 : \$spacer * 0.25 = 16px * 0.25 = 4px

2 : \$spacer * 0.50 = 16px * 0.50 = 8px

3 : \$spacer * 1 = 16px * 1 = 16px

4 : \$spacer * 1.5 = 16px * 1.5 = 24px

5 : \$spacer * 2 = 16px * 2 = 32px

auto: used only with margin

Example code: Padding

```
<div style="border:1px solid black;" class="p-1"> Some Text </div>  
<div style="border:1px solid black;" class="p-2"> Some Text </div>  
<div style="border:1px solid black;" class="p-3"> Some Text </div>  
<div style="border:1px solid black;" class="p-4"> Some Text </div>  
<div style="border:1px solid black;" class="p-5"> Some Text </div>  
<div style="border:1px solid black; padding:5rem;"> Some Text </div>
```

```
<div style="border:1px solid black;" class="ps-3"> Some Text </div>  
<div style="border:1px solid black;" class="pt-3"> Some Text </div>  
<div style="border:1px solid black;" class="pe-3"> Some Text </div>  
<div style="border:1px solid black;" class="pb-3"> Some Text </div>  
<div style="border:1px solid black;" class="px-3"> Some Text </div>  
<div style="border:1px solid black;" class="py-3"> Some Text </div>
```

```
<div style="border:1px solid black;" class="p-sm-3 p-md-4 p-lg-5"> Some Text </div>
```

Example code: Margin

```
<div style="border:1px solid black;" class="m-1"> Some Text </div>  
<div style="border:1px solid black;" class="m-2"> Some Text </div>  
<div style="border:1px solid black;" class="m-3"> Some Text </div>  
<div style="border:1px solid black;" class="m-4"> Some Text </div>  
<div style="border:1px solid black;" class="m-5"> Some Text </div>  
<div style="border:1px solid black; margin:5rem;"> Some Text </div>
```

```
<div style="border:1px solid black;" class="ms-3"> Some Text </div>  
<div style="border:1px solid black;" class="mt-3"> Some Text </div>  
<div style="border:1px solid black;" class="me-3"> Some Text </div>  
<div style="border:1px solid black;" class="mb-3"> Some Text </div>  
<div style="border:1px solid black;" class="mx-3"> Some Text </div>  
<div style="border:1px solid black;" class="my-3"> Some Text </div>
```

```
<div style="border:1px solid black;" class="w-75 mx-auto"> Some Text </div>
```

```
<div style="border:1px solid black;" class="m-sm-3 m-md-4 m-lg-5"> Some Text </div>
```