

CSS 2 & 3

Fundamentals of CSS

Introduction to CSS

- CSS stands for “Cascading Style Sheet”.
- CSS is a “styling language”, which is used to apply styles to the html elements in the web page.
- CSS styles include with backgrounds, colors, margins, borders, paddings, alignments etc.
- A CSS style can overlap other CSS style; that's why it is called as "cascading" style sheets.

Syntax of CSS:

```
<style type="text/css">
    css code here
</style>
```

Syntax of CSS Style Definition:

```
selector
{
    property: value;
    property: value;
}
```

CSS Basic Selectors

- “Select” is a syntax to select the desired elements.
- CSS supports many selectors. The most important css selectors are:
 1. Tag Selector
 2. ID Selector

1. Tag Selector

- The “tag selector” selects all the instances of specific tag.
- Use tag selector to select multiple elements.

Syntax: tagname

Example: p

2. ID Selector

- The “id selector” selects a single tag, based on the “id”.
- “ID” is the “identification name”; it must be unique.
- Use ID selector to select a exact single element.

- "#" is the symbol of "ID".

Syntax: #id

Example: #p1

First Example on CSS

```
<html>
  <head>
    <title>CSS - First Example</title>
    <style type="text/css">
      p
      {
        color: green;
      }
    </style>
  </head>
  <body>
    <p>This is para</p>
    <p>This is para</p>
    <p>This is para</p>
    <p>This is para</p>
  </body>
</html>
```

Example on ID Selector

```
<html>
  <head>
    <title>CSS - ID Selector</title>
    <style type="text/css">
      #p3
      {
        color: blue;
      }
    </style>
  </head>
  <body>
    <p>para 1</p>
    <p>para 2</p>
    <p id="p3">para 3</p>
    <p>para 4</p>
    <p>para 5</p>
  </body>
</html>
```

CSS - Properties

- “Properties” are “details” or “settings” of html tag.
- Every property contains a value.

Syntax: property: value;

Example: color: green;

Colors

color

- This property specifies text color (font color) of the element.
- You can specify any color of your choice.

Syntax: color: colorname;

Example: color: green;

Example of “color” property

```
<html>
  <head>
    <title>CSS - Color</title>
    <style type="text/css">
      #p1
      {
        color: red;
      }
      #p2
      {
        color: green;
      }
      #p3
      {
        color: blue;
      }
    </style>
  </head>
  <body>
    <p id="p1">para 1. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>
    <p id="p2">para 2. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>
    <p id="p3">para 3. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>
  </body>
</html>
```

background-color

- This property specifies background color of the element.
- You can set any color as background color.

Syntax: background-color: colorname;

Example: background-color: green;

Example of “background-color” property

```

<html>
  <head>
    <title>CSS - Background Color</title>
    <style type="text/css">
      #p1
      {
        background-color: red;
      }
      #p2
      {
        background-color: green;
      }
      #p3
      {
        background-color: blue;
      }
    </style>
  </head>
  <body>
    <p id="p1">para 1</p>
    <p id="p2">para 2</p>
    <p id="p3">para 3</p>
  </body>
</html>

```

Types of colors

- Colors can be represented in 3 formats.
 1. Named colors
 2. RGB
 3. Hexadecimal number

1. Named colors:

- We can write name of the color directly.
- These are limited.
- We can't get exact shade of the color.
- Ex: white, black, red, green, orange, pink etc.
- It is not recommended in real-time.

2. RGB:

- RGB formula specifies that the composition of 3 basic colors (red, green, blue), generates 16 million colors.
- **Syntax:** `rgb(red, green, blue)`
- **Red** = 0 to 255

- **Green** = 0 to 255
- **Blue** = 0 to 255
- **Example:**
 - `rgb(0, 0, 0)` = black
 - `rgb(255, 0, 0)` = red
 - `rgb(0, 255, 0)` = green
 - `rgb(0, 0, 255)` = blue
 - `rgb(255, 255, 0)` = yellow
 - `rgb(255, 255, 255)` = white

3. Hexadecimal format:

- “Hexadecimal format” is the shortcut for “RGB”.
- Hexadecimal number system supports 16 symbols as 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, a, b, c, d, e, f.
- Hexadecimal number should be 6 symbols long, with “#” prefix. First two symbols represent red; Second two symbols represent green; Third two symbols represent blue.
- **Syntax:** #redgreenblue
- **Example:**
 - `#ffffff` = white
 - `#000000` = black
 - `#ff0000` = red
- “Hexadecimal format” is recommended in realtime.

Named colors - Example

```
<html>
  <head>
    <title>CSS - Background Color - Named Colors</title>
    <style type="text/css">
      #p1
      {
        background-color: green;
      }
    </style>
  </head>
  <body>
    <p id="p1">Para 1</p>
  </body>
</html>
```

RGB - Example

```
<html>
  <head>
    <title>CSS - Background Color - RGB</title>
    <style type="text/css">
      #p1
      {
        background-color: rgb(240, 250, 160);
      }
    </style>
  </head>
  <body>
    <p id="p1">Para 1</p>
  </body>
</html>
```

Hexadecimal colors - Example

```
<html>
  <head>
    <title>CSS - Background Color - Hex</title>
    <style type="text/css">
      #p1
      {
        background-color: #6fdca3;
      }
    </style>
  </head>
  <body>
    <p id="p1">Para 1</p>
  </body>
</html>
```

Font Styles

font-family

- This property specifies name of the font. You refer the font family names from notepad.
- It is recommended to specify multiple font family names; if specified browser tries the subsequent font if the previous font is not found / not supported in the browser.

Syntax: font-family: "fontname";

Example: font-family: "Arial";

Example of “font-family” property

```
<html>
  <head>
    <title>CSS - Font-family</title>
    <style type="text/css">
      #p1
```

```

    {
        font-family: 'Times New Roman';
        color: red;
    }
    #p2
    {
        font-family: 'Consolas';
        color: green;
    }
    #p3
    {
        font-family: 'Comic Sans MS';
        color: blue;
    }

```

</style>

</head>

<body>

<p id="p1">para 1.</p>

<p id="p2">para 2</p>

<p id="p3">para 3</p>

</body>

</html>

font-size

- This property specifies size of the font.
- You can specify the font size in the form of pixels / percentage / "EM" size.

Syntax: font-size: pixels;

Example: font-size: 30px;

Example of “font-size” property

```

<html>
    <head>
        <title>CSS - Font-size</title>
        <style type="text/css">
            #p1
            {
                font-size: 16px;
                color: red;
            }
            #p2
            {
                font-size: 30px;
                color: green;
            }
            #p3
            {
                font-size: 50px;
                color: blue;
            }

```

```

</style>
</head>
<body>
  <p id="p1">para 1</p>
  <p id="p2">para 2</p>
  <p id="p3">para 3</p>
</body>
</html>

```

font-weight

- This property applies bold.
- The default value is "normal".
- If the value is "normal", the text appears normally.
- If the value is "bold", the text appears thick (bold).

Syntax: font-weight: normal | bold;

Example: font-weight: bold;

Example of “font-weight” property

```

<html>
  <head>
    <title>CSS - Font-weight</title>
    <style type="text/css">
      #p1
      {
        font-weight: normal;
        color: red;
      }
      #p2
      {
        font-weight: bold;
        color: green;
      }
    </style>
  </head>
  <body>
    <p id="p1">para 1. You can find more information about how Google uses and stores content in
    the privacy policy.</p>
    <p id="p2">para 2. You can find more information about how Google uses and stores content in
    the privacy policy.</p>
  </body>
</html>

```

font-style

- This property applies italic.
- The default value is "normal".

- If the value is "normal", the text appears normally.
- If the value is "italic", the text appears *italic*.

Syntax: font-style: normal | italic;

Example: font-style: italic;

Example of “font-style” property

```
<html>
  <head>
    <title>CSS - Font-style</title>
    <style type="text/css">
      #p1
      {
        font-style: normal;
        color: red;
      }
      #p2
      {
        font-style: italic;
        color: green;
      }
    </style>
  </head>
  <body>
    <p id="p1">para 1. You can find more information about how Google uses and stores content in
the privacy policy.</p>
    <p id="p2">para 2. You can find more information about how Google uses and stores content in
the privacy policy.</p>
  </body>
</html>
```

Text Styles

letter-spacing

- This property specifies gap between letters. For example, in "ABC", the letter-spacing specifies gap between "A" and "B"; and also gap between "B" and "C".

Syntax: letter-spacing: pixels;

Example: letter-spacing: 10px;

Example of “letter-spacing” property

```
<html>
  <head>
    <title>CSS - Letter-spacing</title>
    <style type="text/css">
      #p1
      {
        letter-spacing: normal;
```

```

        color: red;
    }
    #p2
    {
        letter-spacing: -3px;
        color: green;
    }
    #p3
    {
        letter-spacing: 10px;
        color: blue;
    }

```

</style>

</head>

<body>

<p id="p1">para 1. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>

<p id="p2">para 2. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>

<p id="p3">para 3. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>

</body>

</html>

word-spacing

- This property specifies gap between words.
- Words are identified with spaces. Space is the separator of words.

Syntax: word-spacing: pixels;

Example: word-spacing: 10px;

Example of “word-spacing” property

```

<html>
    <head>
        <title>CSS - Word-spacing</title>
        <style type="text/css">
            #p1
            {
                word-spacing: normal;
                color: red;
            }
            #p2
            {
                word-spacing: -10px;
                color: green;
            }
            #p3
            {
                word-spacing: 20px;
                color: blue;
            }

```

```

        }
    </style>
</head>
<body>
    <p id="p1">para 1. You can find more information about how Google uses and stores content in
    the privacy policy or additional terms for particular Services.</p>
    <p id="p2">para 2. You can find more information about how Google uses and stores content in
    the privacy policy or additional terms for particular Services.</p>
    <p id="p3">para 3. You can find more information about how Google uses and stores content in
    the privacy policy or additional terms for particular Services.</p>
</body>
</html>

```

line-height

- This property specifies height of the line of text.
- You can specify the value in the form of pixels or percentage.

Syntax: line-height: pixels;

Example: line-height: 10px;

Example of “line-height” property

```

<html>
    <head>
        <title>CSS - Line-height</title>
        <style type="text/css">
            #p1
            {
                line-height: normal;
                color: red;
            }
            #p2
            {
                line-height: 12px;
                color: green;
            }
            #p3
            {
                line-height: 50px;
                color: blue;
            }
        </style>
    </head>
    <body>
        <p id="p1">para 1. You can find more information about how Google uses and stores content in
        the privacy policy or additional terms for particular Services. You can find more information about how
        Google uses and stores content in the privacy policy or additional terms for particular Services. You can
        find more information about how Google uses and stores content in the privacy policy or additional
        terms for particular Services.</p>
        <p id="p2">para 2. You can find more information about how Google uses and stores content in
        the privacy policy or additional terms for particular Services. You can find more information about how

```

Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>

<p id="p3">para 3. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>

```
</body>  
</html>
```

text-decoration

- This property specifies underline / overline / strikeout for the text.
- The default value is "none".

Syntax: text-decoration: none | underline | overline | line-through;

Example: text-decoration: underline;

Example of “text-decoration” property

```
<html>  
  <head>  
    <title>CSS - Text-decoration</title>  
    <style type="text/css">  
      #p1  
      {  
        text-decoration: none;  
        color: red;  
      }  
      #p2  
      {  
        text-decoration: underline;  
        color: green;  
      }  
      #p3  
      {  
        text-decoration: overline;  
        color: blue;  
      }  
      #p4  
      {  
        text-decoration: line-through;  
        color: hotpink;  
      }  
    </style>  
  </head>  
  <body>
```

<p id="p1">para 1. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can

find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>

<p id="p2">para 2. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>

<p id="p3">para 3. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>

<p id="p4">para 4. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>

</body>
</html>

text-transform

- This property specifies uppercase / lowercase / title case for the text.
- The default value is "none".
- If the value is "none", the text appears normally.
- If the value is "uppercase", the text appears UPPER CASE.
- If the value is "lowercase", the text appears lower case.
- If the value is "capitalize", the first letter of each word will be Capital.

Syntax: text-transform: none | uppercase | lowercase | capitalize;

Example: text-transform: underline;

Example of “text-transform” property

```
<html>
  <head>
    <title>CSS - Text-transform</title>
    <style type="text/css">
      #p1
      {
        text-transform: none;
        color: red;
      }
      #p2
      {
        text-transform: uppercase;
        color: green;
      }
      #p3
      {
```

```
text-transform: lowercase;
color: blue;
}
#p4
{
text-transform: capitalize;
color: hotpink;
}
</style>
</head>
<body>
<p id="p1">para 1. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>
<p id="p2">para 2. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>
<p id="p3">para 3. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>
<p id="p4">para 4. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>
</body>
</html>
```

text-align

- This property specifies alignment for the text.
- The default value is "left".

Syntax: text-align: left | right | center | justify;

Example: text-align: left;

Example of “text-align” property

```
<html>
<head>
<title>CSS - Text-align</title>
<style type="text/css">
#p1
{
text-align: left;
color: red;
```

```
        }
        #p2
        {
            text-align: right;
            color: green;
        }
        #p3
        {
            text-align: center;
            color: blue;
        }
        #p4
        {
            text-align: justify;
            color: hotpink;
        }
    </style>
</head>
<body>
```

<p id="p1">para 1. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>

<p id="p2">para 2. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>

<p id="p3">para 3. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>

<p id="p4">para 4. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>

```
    </body>
</html>
```

text-indent

- This property specifies left margin for the first line of the paragraph.
- It is rare to use in real-time.
- Use text-indent if you want to start first line of the paragraph from right side.

Syntax: text-indent: pixels;

Example: text-indent: 10px;

Example of “text-indent” property

```

<html>
  <head>
    <title>CSS - Text-indent</title>
    <style type="text/css">
      #p1
      {
        text-indent: 0px;
        color: red;
      }
      #p2
      {
        text-indent: 20px;
        color: green;
      }
      #p3
      {
        text-indent: 40px;
        color: blue;
      }
      #p4
      {
        text-indent: 60px;
        color: hotpink;
      }
    </style>
  </head>
  <body>
    <p id="p1">para 1. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>
    <p id="p2">para 2. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>
    <p id="p3">para 3. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>
    <p id="p4">para 4. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services. You can find more information about how Google uses and stores content in the privacy policy or additional terms for particular Services.</p>
  </body>
</html>

```


- represents a small amount of text, for which you can apply some special formatting.
- is a paired tag.
- tag doesn't apply any style by default; but we can apply any style for it.

Syntax:

```
<span>Your content here</span>
```

Example:

```
<span>Hello</span>
```

Example of span

```
<html>
  <head>
    <title>CSS - Span</title>
    <style type="text/css">
      #span1
      {
        color: hotpink;
        font-weight: bold;
      }
    </style>
  </head>
  <body>
    <p id="p1">You can find more information about how Google uses and stores content in the
    <span id="span1">privacy policy</span> or additional terms for particular Services.</p>
  </body>
</html>
```

Background Image

background-image

- This property specifies background image of the element.
- It is recommended to place the background image file in the current folder.

Syntax: background-image: url("filename.extension");

Example: background-image: url("sample.png");

Example of “background-image” property

```
<html>
  <head>
    <title>CSS - Background-image</title>
    <style type="text/css">
      #p1
      {
        background-color: skyblue;
        background-image: url('sample.png');
      }
    </style>
  </head>
  <body>
    <p id="p1">Background Image Example</p>
  </body>
</html>
```

```

</style>
</head>
<body>


Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum. Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum. Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum. Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum.


</body>
</html>

```

Note: Place "sample.png" in the current folder.

background-repeat

- This property specifies repeat mode of the background image.
- The default value is "repeat".
- If the value is "repeat", the background image repeats horizontally and vertically within the image.
- If the value is "no-repeat", the background image will not be repeated; will be displayed only once at top left corner.
- If the value is "repeat-x", the background image will be repeated horizontally.
- If the value is "repeat-y", the background image will be repeated vertically.

Syntax: background-repeat: repeat | no-repeat | repeat-x | repeat-y;

Example: background-repeat: no-repeat;

Example of "background-repeat" – "no-repeat":

```

<html>
<head>

```

```
<title>CSS - No-repeat</title>
<style type="text/css">
    #p1
    {
        background-color: skyblue;
        background-image: url('sample.png');
        background-repeat: no-repeat;
    }
</style>
</head>
<body>
    <p id="p1">Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged.</p>
</body>
</html>
```

Note: Place "sample.png" in the current folder.

Example of "background-repeat" – "repeat-x":

```
<html>
    <head>
        <title>CSS - Repeat-x</title>
        <style type="text/css">
            #p1
            {
                background-color: skyblue;
                background-image: url('sample.png');
                background-repeat: repeat-x;
            }
        </style>
    </head>
    <body>
        <p id="p1">Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged.</p>
    </body>
</html>
```

Note: Place "sample.png" in the current folder.

Example of "background-repeat" – "repeat-y":

```
<html>
    <head>
        <title>CSS - Repeat-y</title>
        <style type="text/css">
            #p1
            {
```

```

        background-color: skyblue;
        background-image: url('sample.png');
        background-repeat: repeat-y;
    }

```

</style>

</head>

<body>

<p id="p1">Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged.</p>

</body>

</html>

Note: Place "sample.png" in the current folder.

background-position

- This property specifies position of the background image.
- The default value is "top left".

Syntax: background-position: top left | top center | top right |
 center left | center center | center right | bottom left |
 bottom center | bottom right;

Example: background-position: top center;

- The "background-position" property will be useful only when "background-repeat" is set to "no-repeat".

Example of "background-position" property

```

<html>
  <head>
    <title>CSS - Background-position</title>
    <style type="text/css">
      #p1
      {
        background-color: skyblue;
        background-image: url('sample.png');
        background-repeat: no-repeat;
        background-position: bottom center;
        text-align: justify;
      }
    </style>
  </head>
  <body>
    <p id="p1">Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with
  </body>
</html>

```

desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum. Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum. Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum. Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum.

</p>

</body>

</html>

Note: Place "sample.png" in the current folder.

background-attachment

- This property specifies whether the background image should be scrolled along with the text, when the user uses the scrollbars of the web page.
- If the value is "scroll", the background image will be scrolled along with the text.
- If the value is "fixed", the background image will not be scrolled along with the text; Only the text will be scrolled; background image will be constantly appears.

Syntax: background-attachment: scroll | fixed;

Example: background-attachment: scroll;

Example of "background-attachment" property

```
<html>
  <head>
    <title>CSS - Background-attachment</title>
    <style type="text/css">
      body
      {
        background-color: skyblue;
        background-image: url("trees.jpg");
        background-attachment: fixed;
      }
    </style>
  </head>
  <body>
```

<p>Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum. Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum. </p>

```
</body>  
</html>
```

Note: Place "trees.jpg" in the current folder.

Lists

list-style-type for

- This property specifies type of the bullet for the tag.
- tag is used to display a list of names. tag represents an item in the
- The default value is "disc", in case of tag.

Syntax: list-style-type: none | disc | square | circle;

Example: list-style-type: disc;

Example of "list-style-type" property for

```
<html>  
  <head>  
    <title>CSS - List-style-type - UL</title>  
    <style type="text/css">  
      #list1  
      {  
        list-style-type: disc;  
      }  
  
      #list2  
      {  
        list-style-type: square;  
      }  
    </style>  
  </head>  
  <body>  
    <ul id="list1">  
      <li>Item 1</li>  
      <li>Item 2</li>  
      <li>Item 3</li>  
    </ul>  
  
    <ul id="list2">  
      <li>Item 1</li>  
      <li>Item 2</li>  
      <li>Item 3</li>  
    </ul>  
  </body>  
</html>
```

```
#list3
{
    list-style-type: circle;
}

#list4
{
    list-style-type: none;
}

```

</style>

```
</head>
<body>
    <h2>UL - disc</h2>
    <ul id="list1">
        <li>India</li>
        <li>Japan</li>
        <li>China</li>
        <li>USA</li>
        <li>UK</li>
    </ul>

    <h2>UL - square</h2>
    <ul id="list2">
        <li>India</li>
        <li>Japan</li>
        <li>China</li>
        <li>USA</li>
        <li>UK</li>
    </ul>

    <h2>UL - circle</h2>
    <ul id="list3">
        <li>India</li>
        <li>Japan</li>
        <li>China</li>
        <li>USA</li>
        <li>UK</li>
    </ul>

    <h2>UL - none</h2>
    <ul id="list4">
        <li>India</li>
        <li>Japan</li>
        <li>China</li>
        <li>USA</li>
        <li>UK</li>
    </ul>

```

</body>

```
</html>
```

**list-style-type for **

- This property specifies type of numbering for the tag.
- If the value is "none", no numbering will be displayed.
- If the value is "decimal", the numbers will be "1, 2, 3 ...".
- If the value is "decimal-leading-zero", the numbers will be "01, 02, 03, ...".
- If the value is "lower-alpha", the numbers will be "a, b, c, ...".
- If the value is "upper-alpha", the numbers will be "A, B, C, ...".
- If the value is "lower-roman", the numbers will be "i, ii, iii, ...".
- If the value is "upper-roman", the numbers will be "I, II, III, ...".
- If the value is "lower-greek", the numbers will be Greek letters.

Syntax: list-style-type: none | decimal | decimal-leading-zero |
 lower-alpha | upper-alpha | lower-roman | upper-roman | lower-greek;

Example: list-style-type: decimal;

Example of “list-style-type” property for :

```
<html>
  <head>
    <title>CSS - List-style-type - OL</title>
    <style type="text/css">
      #list1
      {
        list-style-type: decimal;
      }

      #list2
      {
        list-style-type: decimal-leading-zero;
      }

      #list3
      {
        list-style-type: lower-alpha;
      }

      #list4
      {
        list-style-type: upper-alpha;
      }

      #list5
      {
        list-style-type: lower-roman;
      }
    </style>
  </head>
  <body>
    <ol id="list1">
      <li>Item 1</li>
      <li>Item 2</li>
      <li>Item 3</li>
    </ol>

    <ol id="list2">
      <li>Item 1</li>
      <li>Item 2</li>
      <li>Item 3</li>
    </ol>

    <ol id="list3">
      <li>Item 1</li>
      <li>Item 2</li>
      <li>Item 3</li>
    </ol>

    <ol id="list4">
      <li>Item 1</li>
      <li>Item 2</li>
      <li>Item 3</li>
    </ol>

    <ol id="list5">
      <li>Item 1</li>
      <li>Item 2</li>
      <li>Item 3</li>
    </ol>
  </body>
</html>
```

```
#list6
{
    list-style-type: upper-roman;
}

#list7
{
    list-style-type: lower-greek;
}

#list8
{
    list-style-type: none;
}
</style>
</head>
<body>
    <h2>OL - decimal</h2>
    <ol id="list1">
        <li>India</li>
        <li>Japan</li>
        <li>China</li>
        <li>USA</li>
        <li>UK</li>
    </ol>

    <h2>OL - decimal-leading-zero</h2>
    <ol id="list2">
        <li>India</li>
        <li>Japan</li>
        <li>China</li>
        <li>USA</li>
        <li>UK</li>
    </ol>

    <h2>OL - lower-alpha</h2>
    <ol id="list3">
        <li>India</li>
        <li>Japan</li>
        <li>China</li>
        <li>USA</li>
        <li>UK</li>
    </ol>

    <h2>OL - upper-alpha</h2>
    <ol id="list4">
        <li>India</li>
        <li>Japan</li>
        <li>China</li>
        <li>USA</li>
        <li>UK</li>
    </ol>
```

```
<h2>OL - lower-roman</h2>
<ol id="list5">
  <li>India</li>
  <li>Japan</li>
  <li>China</li>
  <li>USA</li>
  <li>UK</li>
</ol>

<h2>OL - upper-roman</h2>
<ol id="list6">
  <li>India</li>
  <li>Japan</li>
  <li>China</li>
  <li>USA</li>
  <li>UK</li>
</ol>

<h2>OL - lower-greek</h2>
<ol id="list7">
  <li>India</li>
  <li>Japan</li>
  <li>China</li>
  <li>USA</li>
  <li>UK</li>
</ol>

<h2>OL - none</h2>
<ol id="list8">
  <li>India</li>
  <li>Japan</li>
  <li>China</li>
  <li>USA</li>
  <li>UK</li>
</ol>
</body>
</html>
```

list-style-image

- This property specifies bullet image file path for the list.
- It is recommended to place the image file in the same folder, where the html file is present.

Syntax: list-style-image: url("filename.extension");

Example: list-style-image: url("tick.gif");

Example of “list-style-image” property:

```
<html>
  <head>
```

```

<title>CSS - List-style-image</title>
<style type="text/css">
  #list1
  {
    list-style-image: url("tick.gif");
  }
</style>
</head>
<body>
  Top most browsers:
  <ul id="list1">
    <li>Google Chrome</li>
    <li>Mozilla Firefox</li>
    <li>Internet Explorer</li>
    <li>Safari</li>
    <li>Opera</li>
  </ul>
</body>
</html>

```

Note: Place "tick.gif" in the current folder.

DIV

<div> tag

- <div> is the most important tag of html.
- <div> tag represents a division (part) of the page.
- <div> is a container, in which you can place any other elements.
- A web page can have any no. of <div> tags.
- A <div> tag can be placed in another <div> tag also.
- <div> is a paired tag.
- <div> is a block level element. That means it occupies 100% of the width, by default. So the content next to the <div> tag, appears in the next line.
- **Syntax:** <div> any content </div>
- **Example:** <div> Hello </div>

Example of <div> tag

```

<html>
  <head>
    <title>CSS - Div</title>
    <style type="text/css">
      #div1
      {
        background-color: #00ffcc;
      }

```

```
#div2
{
    background-color: #ff3366;
}
#div3
{
    background-color: #00ccff;
}

```

</style>

```
</head>
<body>
    <div id="div1">div 1</div>
    <div id="div2">div 2</div>
    <div id="div3">div 3</div>
</body>
</html>
```

“width” and “height” properties

“width” property

- This property specifies horizontal size of the element.
- You can specify the value in the form of pixels or percentages.

Syntax: width: pixels;

Example: width: 200px;

“height” property

- This property specifies vertical size of the element.
- You can specify the value in the form of pixels or percentages.

Syntax: height: pixels;

Example: height: 100px;

Example of “width” and “height” properties

```
<html>
    <head>
        <title>CSS - Width and Height</title>
        <style type="text/css">
            #div1
            {
                background-color: #00ffcc;
                width: 300px;
                height: 300px;
            }
            #div2
            {
                background-color: #ff3366;
                width: 300px;
            }
        
```

```

        height: 300px;
    }
    #div3
    {
        background-color: #00ccff;
        width: 300px;
        height: 300px;
    }

```

</style>

</head>

<body>

<div id="div1">div 1</div>

<div id="div2">div 2</div>

<div id="div3">div 3</div>

</body>

</html>

float

- This property displays the elements side-by-side.
- If the value is "left", the elements will be displayed side-by-side, starting from "left", towards "right".
- If the value is "right", the elements will be displayed side-by-side, starting from "right", towards "left".

Syntax: float: left | right;

Example: float: left;

Example of “float – left”

```

<html>
    <head>
        <title>CSS - Float=Left</title>
        <style type="text/css">
            #div1
            {
                background-color: #00ffcc;
                width: 300px;
                height: 300px;
                float: left;
            }
            #div2
            {
                background-color: #ff3366;
                width: 300px;
                height: 300px;
                float: left;
            }
            #div3
            {
                background-color: #00ccff;
                width: 300px;

```

```

        height: 300px;
        float: left;
    }

```

```

</style>
</head>
<body>
    <div id="div1">div 1</div>
    <div id="div2">div 2</div>
    <div id="div3">div 3</div>
</body>
</html>

```

Example of “float – right”

```

<html>
    <head>
        <title>CSS - Float=Right</title>
        <style type="text/css">
            #div1
            {
                background-color: #00ffcc;
                width: 300px;
                height: 300px;
                float: right;
            }
            #div2
            {
                background-color: #ff3366;
                width: 300px;
                height: 300px;
                float: right;
            }
            #div3
            {
                background-color: #00ccff;
                width: 300px;
                height: 300px;
                float: right;
            }
        </style>
    </head>
    <body>
        <div id="div1">div 1</div>
        <div id="div2">div 2</div>
        <div id="div3">div 3</div>
    </body>
</html>

```

clear

- This property cancels the effect of “float” and push the current element to next line.
- It stops the sequence of “float”.

- Top stop “float:left” sequence, we use “clear:left”.
- Top stop “float:right” sequence, we use “clear:right”.

Syntax: clear: left | right;

Example: clear: left;

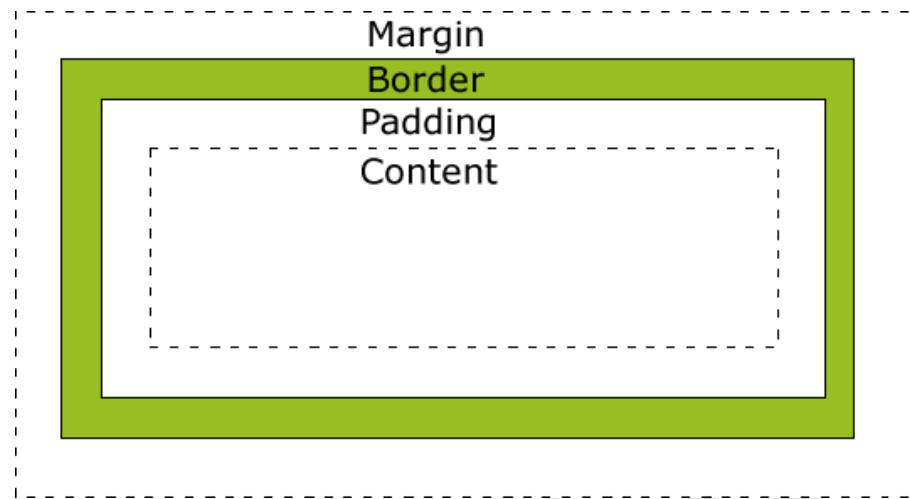
Example of “clear – left”

```
<html>
  <head>
    <title>CSS - Clear=left</title>
    <style type="text/css">
      #div1
      {
        background-color: #00ffcc;
        width: 300px;
        height: 300px;
        float: left;
      }
      #div2
      {
        background-color: #ff3366;
        width: 300px;
        height: 300px;
        float: left;
      }
      #div3
      {
        background-color: #00ccff;
        width: 300px;
        height: 300px;
        clear: left;
      }
    </style>
  </head>
  <body>
    <div id="div1">div 1</div>
    <div id="div2">div 2</div>
    <div id="div3">div 3</div>
  </body>
</html>
```

Box Model

Understanding Box Model

- Box model is combination of "padding, border and margin".
- All visible elements are displayed based on box model in the web page.



border-style

- This property specifies type of the border, around the element.
- The default value is "none".
- "Solid" is recommended.
- Depending on the requirement, you can use any of the other borders.

Syntax: border-style: none | solid | dotted | dashed | double | inset | outset | ridge | groove;

Example: border-style: solid;

border-width

- This property specifies thickness of the border.
- You can specify the border width in the form of pixels.

Syntax: border-width: pixels;

Example: border-width: 5px;

border-color

- This property specifies color of the border.
- You can specify any color.

Syntax: border-color: any color;

Example: border-color: red;

Example of “border-style”, “border-width”, “border-color”

```
<html>
  <head>
    <title>CSS - Border</title>
    <style type="text/css">
      #div1
```

```

{
    background-color: #00ffcc;
    width: 300px;
    height: 300px;
    float: left;
    border-style: solid; /* none | solid | double | dotted | dashed | groove | inset | outset */
    border-width: 5px;
    border-color: red;
}
#div2
{
    background-color: #cc33ff;
    width: 300px;
    height: 300px;
    float: left;
    border-style: dotted;
    border-width: 5px;
    border-color: green;
}
#div3
{
    background-color: #00ccff;
    width: 300px;
    height: 300px;
    float: left;
    border-style: dashed;
    border-width: 5px;
    border-color: blue;
}
</style>
</head>
<body>
    <div id="div1">Lorem Ipsum is simply dummy text of the printing and typesetting industry.</div>
    <div id="div2">Lorem Ipsum is simply dummy text of the printing and typesetting industry.</div>
    <div id="div3">Lorem Ipsum is simply dummy text of the printing and typesetting industry.</div>
</body>
</html>

```

border - shortcut

- This property specifies border width, border style and border color, at-a-time, in shortcut way.

Syntax: border: borderwidth borderstyle borderColor;

Example: border: 5px solid red;

Example of “border” property

```

<html>
    <head>
        <title>CSS - Border - shortcut</title>
        <style type="text/css">
            #div1

```

```

    {
        background-color: #00ffcc;
        width: 300px;
        height: 300px;
        float: left;
        border: 5px solid red;
    }
    #div2
    {
        background-color: #ccccff;
        width: 300px;
        height: 300px;
        float: left;
        border: 5px dotted green;
    }
    #div3
    {
        background-color: #00ccff;
        width: 300px;
        height: 300px;
        float: left;
        border: 5px dashed blue;
    }

```

</style>

</head>

<body>

<div id="div1">Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.</div>

<div id="div2">Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.</div>

<div id="div3">Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.</div>

</body>

</html>

border - sides

“border-top” property

- This property specifies border width, border style and border color for top side only.

Syntax: border-top: borderwidth borderstyle bordercolor;

Example: border-top: 5px solid red;

“border-right” property

- This property specifies border width, border style and border color for right side only.

Syntax: border-right: borderwidth borderstyle bordercolor;

Example: border-right: 5px solid red;

“border-bottom” property

- This property specifies border width, border style and border color for bottom side only.

Syntax: border-bottom: borderwidth borderstyle bordercolor;

Example: border-bottom: 5px solid red;

“border-left” property

- This property specifies border width, border style and border color for left side only.

Syntax: border-left: borderwidth borderstyle bordercolor;

Example: border-left: 5px solid red;

Example of “border - sides” property

```
<html>
  <head>
    <title>border-sides</title>
    <style type="text/css">
      #div1
      {
        background-color: #0099ff;
        width: 300px;
        height: 100px;
        border-left: 10px solid red;
        border-top: 10px solid red;
      }
      #div2
      {
        background-color: #ff6699;
        width: 300px;
        height: 100px;
        border-top: 10px solid green;
        border-right: 10px solid green;
      }
      #div3
      {
        background-color: #ccff99;
        width: 300px;
        height: 100px;
        border-top: 10px solid darkblue;
        border-bottom: 10px solid darkblue;
      }
    </style>
  </head>
  <body>
    <div id="div1">div 1</div>
    <div id="div2">div 2</div>
    <div id="div3">div 3</div>
```

```
</body>
</html>
```

margin

- This property specifies the margin (gap) between element to element, surrounding the element.
- For example, if two <div> tags are display side-by-side, the gap between them is called as "margin".
- You can specify the value in the form of pixels.

Syntax: margin: pixels;

Example: margin: 10px;

Example of “margin” property

```
<html>
  <head>
    <title>CSS - Margin</title>
    <style type="text/css">
      body
      {
        text-align: justify;
      }
      #div1
      {
        background-color: #00ffcc;
        width: 300px;
        height: 300px;
        float: left;
        border: 5px solid red;
        margin: 10px;
      }
      #div2
      {
        background-color: #ff3366;
        width: 300px;
        height: 300px;
        float: left;
        border: 5px solid green;
        margin: 10px;
      }
      #div3
      {
        background-color: #00ccff;
        width: 300px;
        height: 300px;
        float: left;
        border: 5px solid blue;
        margin: 10px;
      }
    </style>
  </head>
```

```

<body>
  <div id="div1">div 1</div>
  <div id="div2">div 2</div>
  <div id="div3">div 3</div>
</body>
</html>

```

margin - sides

“margin-top” property

- This property specifies the top margin (gap) between element to element.

Syntax: margin-top: pixels;

Example: margin-top: 10px;

“margin-right” property

- This property specifies the right margin (gap) between element to element.

Syntax: margin-right: pixels;

Example: margin-right: 10px;

“margin-bottom” property

- This property specifies the bottom margin (gap) between element to element.

Syntax: margin-bottom: pixels;

Example: margin-bottom: 10px;

“margin-left” property

- This property specifies the left margin (gap) between element to element.

Syntax: margin-left: pixels;

Example: margin-left: 10px;

Example of “margin” property - sides

```

<html>
  <head>
    <title>CSS - Margin - separate</title>
    <style type="text/css">
      body
      {
        text-align: justify;
      }
      #div1
      {
        background-color: #00ffcc;
        width: 300px;
      }
    </style>
  </head>
  <body>
    <div id="div1">div 1</div>
    <div id="div2">div 2</div>
    <div id="div3">div 3</div>
  </body>
</html>

```

```

height: 300px;
float: left;
border: 5px solid red;
margin-top: 10px;
margin-right: 20px;
margin-bottom: 20px;
margin-left: 5px;
}
#div2
{
background-color: #ff3366;
width: 300px;
height: 300px;
float: left;
border: 5px solid green;
margin-top: 10px;
margin-right: 40px;
margin-bottom: 20px;
margin-left: 5px;
}
#div3
{
background-color: #00ccff;
width: 300px;
height: 300px;
float: left;
border: 5px solid blue;
margin-top: 10px;
margin-right: 20px;
margin-bottom: 20px;
margin-left: 5px;
}

```

</style>

</head>

<body>

<div id="div1">Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.</div>

<div id="div2">Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.</div>

<div id="div3">Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.</div>

</body>

</html>

margin - shortcut

- This property specifies the margin (gap) between element to element, all sides independently at-a-time.

Syntax: margin: topmargin rightmargin bottommargin leftmargin;

Example: margin: 10px 5px 15px 30px;

Example of “margin” property - shortcut

```

<html>
  <head>
    <title>CSS - Margin - shortcut</title>
    <style type="text/css">
      body
      {
        text-align: justify;
      }
      #div1
      {
        background-color: #00ffcc;
        width: 300px;
        height: 300px;
        float: left;
        border: 5px solid red;
        margin: 10px 20px 20px 5px;
      }
      #div2
      {
        background-color: #ff3366;
        width: 300px;
        height: 300px;
        float: left;
        border: 5px solid green;
        margin: 10px 40px 20px 5px;
      }
      #div3
      {
        background-color: #00ccff;
        width: 300px;
        height: 300px;
        float: left;
        border: 5px solid blue;
        margin: 10px 20px 20px 5px;
      }
    </style>
  </head>
  <body>
    <div id="div1">Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.</div>
    <div id="div2">Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.</div>
    <div id="div3">Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.</div>
  </body>
</html>

```

```
</body>
</html>
```

padding

- This property specifies the padding (gap) between border and content of the element.
- You can specify the value in the form of pixels.
- Inner margin is called as "padding".
- Outer margin is called as "margin".

Syntax: padding: pixels;

Example: padding: 10px;

Example of “padding” property

```
<html>
  <head>
    <title>CSS - Padding</title>
    <style type="text/css">
      body
      {
        text-align: justify;
      }
      #div1
      {
        background-color: #00ffcc;
        width: 300px;
        height: 300px;
        float: left;
        border: 5px solid red;
        margin: 10px;
        padding: 20px;
      }
      #div2
      {
        background-color: #ff3366;
        width: 300px;
        height: 300px;
        float: left;
        border: 5px solid green;
        margin: 10px;
        padding: 20px;
      }
      #div3
      {
        background-color: #00ccff;
        width: 300px;
        height: 300px;
        float: left;
        border: 5px solid blue;
      }
    </style>
  </head>
  <body>
    <div id="div1"></div>
    <div id="div2"></div>
    <div id="div3"></div>
  </body>
</html>
```

```

        margin: 10px;
        padding: 20px;
    }

```

</style>

</head>

<body>

<div id="div1">Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.</div>

<div id="div2">Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.</div>

<div id="div3">Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.</div>

</body>

</html>

padding - sides

“padding-top” property

- This property specifies the top padding.

Syntax: padding-top: pixels;

Example: padding-top: 10px;

“padding-right” property

- This property specifies the right padding.

Syntax: padding-right: pixels;

Example: padding-right: 10px;

“padding-bottom” property

- This property specifies the bottom padding.

Syntax: padding-bottom: pixels;

Example: padding-bottom: 10px;

“padding-left” property

- This property specifies the left padding.

Syntax: padding-left: pixels;

Example: padding-left: 10px;

padding - shortcut

- This property specifies the padding for all sides independently at-a-time.

Syntax: padding: toppadding rightpadding bottompadding leftpadding;

Example: padding: 10px 5px 15px 30px;

Advanced CSS Properties

“opacity” property

- This property makes the element transparent (background information is visible through the element).
- You can specify any number between 0 to 1.
- Any middle number between 0 and 1 is recommended. For example, "0.6".

Syntax: opacity: 0 to 1;

Example: opacity: 0.6;

1 : fully visible

0.9, ..., 0.1 : transparent

0 : fully transparent / invisible

Example of “opacity” property:

```
<html>
  <head>
    <title>CSS - Opacity</title>
    <style type="text/css">
      body
      {
        background-image: url('img1.jpg');
      }
      #div1
      {
        font-size: 40px;
        font-family: 'Tahoma';
        width: 300px;
        height: 200px;
        background-color: #009966;
        opacity: 0.9; /* 0 to 1 */
      }
    </style>
  </head>
  <body>
    <div id="div1">div1</div>
  </body>
</html>
```

Note: Place “img1.jpg” in the current folder.

display

- This property specifies display mode of the element.

Syntax: display: block | inline | none;

Example: display: none;

- “display: block” is default for all the block level elements.
- “display: inline” is default for all the inline elements.
- “display: none” hides the element and its space will be reclaimed by other elements automatically.

Example of “display” property

```
<html>
  <head>
    <title>CSS - display</title>
    <style type="text/css">
      #div1
      {
        background-color: #00ccff;
        display: block;
      }
      #div2
      {
        background-color: #ff6666;
        display: none;
      }
      #div3
      {
        background-color: #00cc99;
        display: block;
      }
    </style>
  </head>
  <body>
    <div id="div1">div 1</div>
    <div id="div2">div 2</div>
    <div id="div3">div 3</div>
  </body>
</html>
```

visibility

- This property specifies whether the element is visible or invisible in the web page.

Syntax: visibility: visible | hidden;

Example: visibility: hidden;

- “visibility: visible” shows the element.
- “visibility: hidden” hides the element and its space will be reserved as-it-is.

Example of “visibility” property

```
<html>
```

```

<head>
  <title>CSS - display</title>
  <style type="text/css">
    #div1
    {
      background-color: #00ccff;
      visibility: visible;
    }
    #div2
    {
      background-color: #00ff99;
      visibility: hidden;
    }
    #div3
    {
      background-color: #ff0099;
      visibility: visible;
    }
  </style>
</head>
<body>
  <div id="div1">div 1</div>
  <div id="div2">div 2</div>
  <div id="div3">div 3</div>
</body>
</html>

```

overflow

- This property specifies how the text should appear, which is outside the boundaries of the element.

Syntax: overflow: visible | hidden | auto;

Example: overflow: auto;

- “overflow: visible” shows the additional content outside the element, which doesn’t fit within the element.
- “overflow: hidden” hides the additional content, which doesn’t fit within the element.
- “overflow: auto” shows scrollbars automatically if necessary.

Example of “overflow:visible” property

```

<html>
  <head>
    <title>CSS - overflow - visible</title>
    <style type="text/css">
      #div1
      {
        background-color: #00ccff;
        font-size: 25px;
        width: 300px;
      }
    </style>
  </head>
  <body>
    <div id="div1">Div 1</div>
  </body>
</html>

```

```
height: 200px;
text-align: justify;
overflow: visible;
}
</style>
</head>
<body>
<div id="div1">Our Services are very diverse, so sometimes additional terms or product
requirements (including age requirements) may apply. Additional terms will be available with the
relevant Services, and those additional terms become part of your agreement with us if you use those
Services.</div>
</body>
</html>
```

Example of “overflow:hidden” property

```
<html>
<head>
<title>CSS - overflow - hidden</title>
<style type="text/css">
#div1
{
background-color: #00ccff;
font-size: 25px;
width: 300px;
height: 200px;
text-align: justify;
overflow: hidden;
}
</style>
</head>
<body>
<div id="div1">Our Services are very diverse, so sometimes additional terms or product
requirements (including age requirements) may apply. Additional terms will be available with the
relevant Services, and those additional terms become part of your agreement with us if you use those
Services.</div>
</body>
</html>
```

Example of “overflow:auto” property

```
<html>
<head>
<title>CSS - overflow - auto</title>
<style type="text/css">
#div1
{
background-color: #00ccff;
font-size: 25px;
width: 300px;
height: 200px;
text-align: justify;
overflow: auto;
```

```

        }
    </style>
</head>
<body>
    <div id="div1">Our Services are very diverse, so sometimes additional terms or product
    requirements (including age requirements) may apply. Additional terms will be available with the
    relevant Services, and those additional terms become part of your agreement with us if you use those
    Services.</div>
</body>
</html>

```

position

- This property specifies position of the element in the web page.
- It specifies where exactly the element has to be appear.
- By default, all the elements appear in sequence, how they have written in the program.

Syntax: position: static | absolute | relative | fixed;

Example: position: absolute;

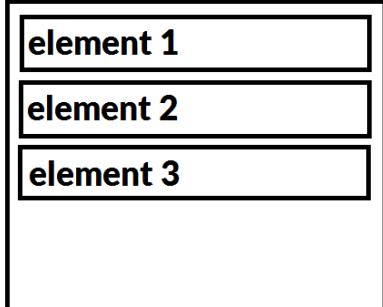
position: static

- The block level elements appear line-by-line; inline elements appear side-by-side.
- It is the default.

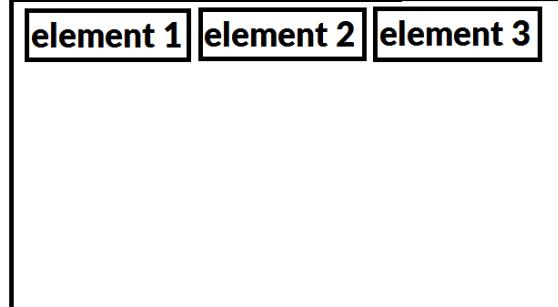
Syntax: position: static;

Example: position: static;

block level elements



inline elements



Example of “position:static”

```

<html>
    <head>
        <title>CSS - position: static</title>
        <style type="text/css">
            #div1
            {
                background-color: #ff66ff;

```

```

        position: static;
    }
    #div2
    {
        background-color: #00cccc;
        position: static;
    }

```

</style>

</head>

<body>

<div id="div1">div1</div>

<div id="div2">div2</div>

span 1

span 2

</body>

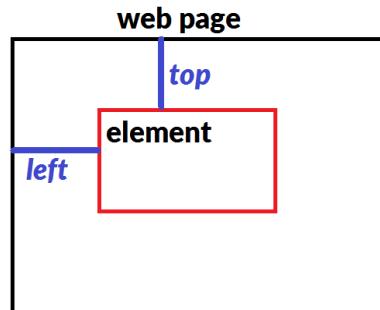
</html>

position: absolute

- It displays the element exactly in the specified position.
- It requires “left” and “top” properties.

Syntax: position: absolute; left: x; top: y;

Example: position: absolute; left:50px; top:50px;



Example of “position:absolute”

```

<html>
  <head>
    <title>CSS - position: absolute</title>
    <style type="text/css">
      #div1
      {
        background-color: #ff66ff,
        width: 100px;
        height: 100px;
        font-size: 25px;
        position: absolute;
        left: 200px;
        top: 250px;
      }

```

```

</style>
</head>
<body>
  <div id="div1">div1</div>
</body>
</html>

```

z-index

- This property specifies the display order (front / back side) of the element. If the z-index value is higher, it appears to the front to the user. If the z-index value is lower, it appears at backside to the user.

Syntax: z-index: n;

Example: z-index: 1;

Example of “z-index”

```

<html>
  <head>
    <title>CSS - z-index</title>
    <style type="text/css">
      #div1
      {
        background-color: #ff66ff;
        width: 100px;
        height: 100px;
        font-size: 25px;
        position: absolute;
        left: 200px;
        top: 250px;
        z-index: 3;
      }
      #div2
      {
        background-color: #00cccc;
        width: 120px;
        height: 120px;
        font-size: 25px;
        position: absolute;
        left: 250px;
        top: 170px;
        z-index: 2;
      }
      #div3
      {
        background-color: #00ff33;
        width: 120px;
        height: 120px;
        font-size: 25px;
        position: absolute;
        left: 280px;
        top: 150px;
        z-index: 1;
      }
    </style>
  </head>
  <body>
    <div id="div1">div1</div>
    <div id="div2">div2</div>
    <div id="div3">div3</div>
  </body>
</html>

```

```

        top: 190px;
        z-index: 1;
    }

```

</style>

</head>

<body>

```

<div id="div1">div1</div>
<div id="div2">div2</div>
<div id="div3">div3</div>
```

</body>

</html>

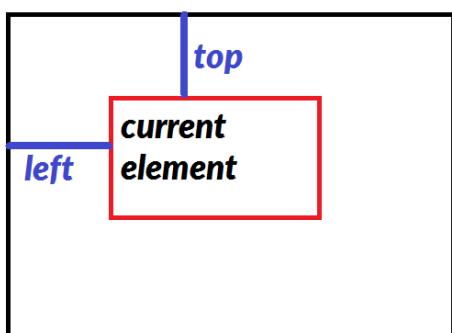
position: relative

- It also displays the element based on “x” and “y” co-ordinates (just like absolute).
- **Absolute:** x and y co-ordinates will be calculated from the browser.
- **Relative:** x and y co-ordinates will be calculated from the previous element.

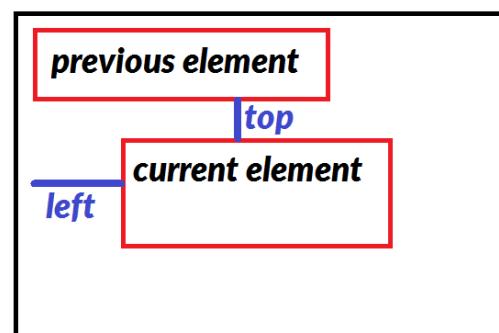
Syntax: position: relative; left: x; top: y;

Example: position: relative; left: 50px; top: 50px;

absolute



relative



Example of “position:relative”

```

<html>
  <head>
    <title>CSS - position: relative</title>
    <style type="text/css">
      #div1
      {
        background-color: #33ff99;
        height: 400px;
        font-size: 25px;
        margin: 50px;
        padding: 30px;
      }
      #div2
      {
        background-color: #00cccc;
      }
    </style>
  </head>
  <body>
    <div id="div1">div1</div>
    <div id="div2">div2</div>
  </body>
</html>

```

```

        width: 220px;
        height: 120px;
        font-size: 25px;
    }
    #div3
    {
        background-color: #ff3333;
        width: 120px;
        height: 120px;
        font-size: 25px;
        position: relative;
        left: 30px;
        top: 30px;
    }

```

</style>

</head>

<body>

<div id="div1">

<div id="div2">div2</div>

<div id="div3">div3</div>

</div>

</body>

</html>

position: fixed

- It is same as “absolute”. That means the “x” and “y” co-ordinates will be calculated from the browser.
- When we scroll the web page, the fixed element will not be scrolled; appears in the fixed position.

Syntax: position: fixed; left: x; top: y;

Example: position: fixed; left: 50px; top: 50px;

Example of “position:fixed”

```

<html>
    <head>
        <title>CSS - position: fixed</title>
        <style type="text/css">
            #div1
            {
                background-color: #0066ff;
                width: 300px;
                height: 100px;
                font-size: 25px;
                position: fixed;
                left: 300px;
                top: 150px;
            }

```

</style>

</head>

<body>

```

<div id="div1">div1</div>
<p>Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum.</p> <p>Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum.</p>
</body>
</html>

```

Types of Style Sheets

- CSS style sheets are 3 types:
 1. Internal Style Sheet / Embedded Style Sheet
 2. External Style Sheet
 3. Inline Style Sheet

1. Internal Style Sheet / Embedded Style Sheet

- The css styles are defined inside the “.html” file itself.
- **Advantage:** Easy-to-understand.
- **Disadvantage:** No re-usability. That means, the styles defined in one html file, can't be accessed in another html file.

Syntax:

```

<style type="text/css">
  css code
</style>

```

2. External Style Sheet

- The css styles are defined in a separate “.css” file and html tags are defined in the “.html” file.
- We can link (connect) the css file with html file.
- **Advantage:** It supports re-usability. That means, the css file can be called in many html files.

Syntax to import css file:

```
<link href="filename.css" rel="stylesheet">
```

Example of External Style Sheet

StyleSheet.css

```

h1
{
    font-family: 'Tahoma';
    font-size: 25px;
    color: green;
    background-color: darkgreen;
    color: yellow;
}

```

Page1.html

```

<html>
    <head>
        <title>CSS - External stylesheet - page 1</title>
        <link href="StyleSheet.css" rel="stylesheet">
    </head>
    <body>
        <h1>hello</h1>
    </body>
</html>

```

Page2.html

```

<html>
    <head>
        <title>CSS - External stylesheet - page 2</title>
        <link href="StyleSheet.css" rel="stylesheet">
    </head>
    <body>
        <h1>hai</h1>
    </body>
</html>

```

3. Inline Style Sheet

- The css styles will be defined inside the html tag itself.
- This is NOT recommended in realtime.

Drawbacks:

- a) HTML code will be cumbersome (confusing).
- b) No style re-usability.

Syntax:

<tag style="property:value; property:value; ...>

```
</tag>
```

Example of Inline Style Sheet

```
<html>
  <head>
    <title>CSS - Inline CSS</title>
  </head>
  <body>
    <p style="background-color:cyan; font-size:40px">para 1</p>
    <p style="background-color:cyan; font-size:40px">para 2</p>
  </body>
</html>
```

CSS Selectors

- First we have to select the element / elements, and then only we can apply some styles to it.
- “Selector” is a “syntax to select”. It is used to select the desired elements in the web page.
- When we use a selector, the browser searches the entire web page for the matching elements and returns the matching elements; and we apply styles only for those matching elements.

- **List of CSS Selectors**

1. Tag Selector
2. ID Selector
3. Class Selector
4. Compound Selector
5. Grouping Selector
6. Child Selector
7. Direct Child Selector
8. Adjacent Siblings Selector
9. Adjacent One Sibling Selector
10. Attribute Selector
11. Hover Selector
12. Focus Selector
13. Universal Selector
14. First-Child Selector
15. Last-Child Selector
16. Nth-Child Selector
17. Nth-Child Even Selector
18. Nth-Child Odd Selector
19. Before Selector
20. After Selector
21. Selection Selector

Tag Selector

- It selects all the instances of the specified tag.
- You can specify any tag name.

Syntax: tag

Example: p

Example on Tag Selector

```
<html>
  <head>
    <title>CSS - Tag Selector</title>
    <style type="text/css">
      p
      {
        background-color: skyblue;
      }
    </style>
  </head>
  <body>
    <h1>Tag Selector</h1>
    <p>para 1</p>
    <p>para 2</p>
    <p>para 3</p>
    <p>para 4</p>
    <p>para 5</p>
  </body>
</html>
```

ID Selector

- It selects a single instance of the tag, based on the id.
- “ID” is “identification name”.
- “ID” should be unique (can’t be duplicate) in the web page.
- # is symbol of ID selector.

Syntax: #id

Example: #p1

Example on ID Selector

```
<html>
  <head>
    <title>CSS - ID Selector</title>
    <style type="text/css">
      #p2
      {
        background-color: skyblue;
      }
    </style>
```

```

</head>
<body>
    <h1>ID Selector</h1>
    <p>para 1</p>
    <p id="p2">para 2</p>
    <p>para 3</p>
    <p>para 4</p>
</body>
</html>

```

Class Selector

- It selects one or more elements, based on the class name.
- We use same class for similar elements.
- "." is the symbol of class selector.

Syntax: .class

Example: .c1

Example on Class Selector

```

<html>
    <head>
        <title>CSS - Class Selector</title>
        <style type="text/css">
            .c1
            {
                background-color: skyblue;
            }
        </style>
    </head>
    <body>
        <h1>Class Selector</h1>
        <p>para 1</p>
        <p class="c1">para 2</p>
        <p>para 3</p>
        <p class="c1">para 4</p>
        <p>para 5</p>
        <p class="c1">para 6</p>
        <p class="c1">para 7</p>
    </body>
</html>

```

Compound Selector

- It selects the instances of specific tag, which have specified class.

Syntax: tag.class

Example: p.c1

Example on Compound Selector

```
<html>
  <head>
    <title>CSS - Compound Selector</title>
    <style type="text/css">
      /* selecting only <p> tags that have class="class1" */
      p.class1
      {
        background-color: skyblue;
      }
    </style>
  </head>
  <body>
    <h1>Compound Selector</h1>
    <p>para 1</p>
    <p class="class1">para 2</p>
    <p>para 3</p>
    <p class="class1">para 4</p>
    <p>para 5</p>
    <p class="class1">para 6</p>
    <input type="text">
    <input type="text" class="class1">
    <input type="text">
    <input type="text" class="class1">
  </body>
</html>
```

Grouping Selector

- It selects the specified group of tags.
- "," is the symbol of grouping selector.

Syntax: tag1,tag2,tag3,...

Example: div,p,h2

Example on Grouping Selector

```
<html>
  <head>
    <title>CSS - Grouping Selector</title>
    <style type="text/css">
      /* Selecting all <h1> and all <p> tags */
      h1,p,input,span
      {
        background-color: skyblue;
      }
    </style>
  </head>
  <body>
    <h1>Grouping Selector</h1>
    <p>para 1</p>
```

```

<p class="class1">para 2</p>
<p>para 3</p>
<p class="class1">para 4</p>
<p>para 5</p>
<p class="class1">para 6</p>
<input type="text" value="hello">
<input type="text" value="hello" class="class1">
<input type="text" value="hello" class="class1">
<span>span 1</span>
<span>span 2</span>
</body>
</html>

```

Child Selector

- It selects all the child tags (including grand children) of the specified parent tag.
- "space" is the symbol of child selector.

Syntax: parenttag childtag

Example: div p

Example on Child Selector

```

<html>
  <head>
    <title>CSS - Child Selector</title>
    <style type="text/css">
      /* Selecting <p> which are children of <div> */
      div p
      {
        background-color: skyblue;
      }
    </style>
  </head>
  <body>
    <h1>Child Selector</h1>
    <div id="div1">
      <p>para 1</p>
      <p>para 2</p>
      <p>para 3</p>
      <p>para 4</p>
    </div>
    <p>para 5</p>
    <p>para 6</p>
  </body>
</html>

```

Direct Child Selector

- It selects only the direct child tags (excluding the grand children) of the specified parent tag.
- ">" is the symbol of direct child selector.

- **Syntax:** parenttag>childtag
- **Example:** div>p

Example on Direct Child Selector

```
<html>
  <head>
    <title>CSS - Direct Child selector</title>
    <style type="text/css">
      div>p
      {
        background-color: skyblue;
      }
    </style>
  </head>
  <body>
    <h1>Direct Child Selector</h1>
    <div id="div1">
      <p>para 1</p>
      <p>para 2</p>
      <p>para 3</p>
      <p>para 4</p>
      <b>
        <p>para 5</p>
        <p>para 6</p>
      </b>
    </div>
    <p>para 7</p>
  </body>
</html>
```

Adjacent Siblings Selector

- It selects all the adjacent (next) sibling tags of current tag.
- Siblings are the elements that have a common parent.
- "~" is the symbol of adjacent siblings selector.

Syntax: parenttag~childtag

Example: #p2~p

Example on Adjacent Siblings Selector

```
<html>
  <head>
    <title>CSS - Adjacent Siblings Selector</title>
    <style type="text/css">
      div~p
      {
        background-color: skyblue;
      }
    </style>
```

```

</head>
<body>
  <h1>Adjacent Siblings Selector</h1>
  <div id="div1">
    <p>para 1</p>
    <p>para 2</p>
    <p>para 3</p>
    <p>para 4</p>
  </div>
  <p>para 5</p>
  <p>para 6</p>
  <p>para 7</p>
  <p>para 8</p>
  <p>para 9</p>
  <p>para 10</p>
</body>
</html>

```

Adjacent One Sibling Selector

- It selects the immediate next sibling tag of current tag.
- "+" is the symbol of adjacent one sibling selector.

Syntax: currenttag+Siblingtag

Example: div+p

Example on Adjacent One Sibling Selector

```

<html>
  <head>
    <title>CSS - Adjacent One Sibling Selector</title>
    <style type="text/css">
      /*Selecting next <p> tag after </div> */
      div+p
      {
        background-color: skyblue;
      }
    </style>
  </head>
  <body>
    <h1>Adjacent One Sibling Selector</h1>
    <div id="div1">
      <p>para 1</p>
      <p>para 2</p>
      <p>para 3</p>
      <p>para 4</p>
    </div>
    <p>para 5</p>
    <p>para 6</p>
    <p>para 7</p>
    <p>para 8</p>
    <p>para 9</p>
  </body>

```

```

<p>para 10</p>
</body>
</html>

```

Attribute Selector

- It selects all the tags that are having specified attribute.
- "[]" are the symbols of attribute selector.
- We can use any attribute of any html tag.

Syntax: tag[attribute="value"]

Example: img[width="120px"]

Example on Attribute Selector

```

<html>
  <head>
    <title>CSS - Attribute selector</title>
    <style type="text/css">
      /* selecting element based on the attribute value */
      img[width='120px']
      {
        border: 4px solid red;
      }
    </style>
  </head>
  <body>
    <h1>Attribute Selector</h1>
    
    
    
    
    
    
    
    
    
  </body>
</html>

```

Note: Place "img1.jpg", "img2.jpg", "img3.jpg", "img4.jpg", "img5.jpg", "img6.jpg", "img7.jpg", "img8.jpg", "img9.jpg" in the current folder.

Hover Selector

- It applies the style only when the user places the mouse pointer on the element, at run time.
- It automatically removes the style, if the mouse pointer is moved outside the element.
- It is also called as “pseudo class”. Whenever the selector starts with “:”, it is called as “pseudo class”.
- Pseudo = unrealistic

Syntax: tag:hover

Example: p:hover

Example on Hover Selector

```
<html>
  <head>
    <title>CSS - Hover</title>
    <style type="text/css">
      p
      {
        background-color: skyblue;
      }
      p:hover
      {
        background-color: hotpink;
      }
    </style>
  </head>
  <body>
    <h1>hover</h1>
    <p>para 1</p>
    <p>para 2</p>
    <p>para 3</p>
    <p>para 4</p>
  </body>
</html>
```

Focus Selector

- It applies the style only when the focus (cursor) is inside the element.
- It automatically removes the style when the cursor gets out of the element.
- It is also called as “pseudo class”.

Syntax: tag:focus

Example: input:focus

Example on Focus Selector

```
<html>
  <head>
    <title>CSS - Focus psuedo class</title>
    <style type="text/css">
      input:focus
      {
        border: 4px solid red;
      }
    </style>
  </head>
  <body>
    <h1>focus psuedo class</h1>
  </body>
</html>
```

```

<input type="text"><br>
</body>
</html>

```

Universal Selector

- It selects all the tags in the web page (including <html>, <head>, <body> etc.).
- It is used to apply global styles.

Syntax: *

Example: *

Example on Universal Selector

```

<html>
  <head>
    <title>CSS - Universal selector</title>
    <style type="text/css">
      /* selects all tags in the web page */
      *
    {
      font-family: 'Segoe UI';
    }
  </style>
</head>
<body>
  <h1>Universal Selector</h1>
  <p>para 1</p>
  <input type="text"><br>
  <input type="text"><br>
  <input type="text"><br>
  <input type="text"><br>
</body>
</html>

```

First-child selector

- It selects the child tag, which is the first child of its parent tag.
- It is also called as “pseudo class”.

Note: Index starts from “1”.

Syntax: childtag:first-child

Example: p:first-child

Example on First-child selector

```

<html>
  <head>
    <title>CSS - First-child</title>
    <style type="text/css">
      /* selects first <p> in its parent */
      p:first-child
      {
        background-color: #33cc99;
      }
    </style>
  </head>
  <body>
    <div>
      <p>para 1</p>
      <p>para 2</p>
      <p>para 3</p>
      <p>para 4</p>
      <p>para 5</p>
    </div>
    <div>
      <p>para 6</p>
      <p>para 7</p>
      <p>para 8</p>
      <p>para 9</p>
      <p>para 10</p>
    </div>
    <div>
      <p>para 11</p>
      <p>para 12</p>
      <p>para 13</p>
      <p>para 14</p>
      <p>para 15</p>
    </div>
  </body>
</html>

```

Last-child selector

- It selects the child tag, which is the last child of its parent tag.
- It is also called as “pseudo class”.

Note: Index starts from “1”.

Syntax: childtag:last-child

Example: p:last-child

Example on Last-child selector

```

<html>
  <head>
    <title>CSS - Last-child</title>

```

```

<style type="text/css">
    /* selects last <p> in <div> */
    p:last-child
    {
        background-color: #33cc99;
    }
</style>
</head>
<body>
    <div>
        <p>para 1</p>
        <p>para 2</p>
        <p>para 3</p>
        <p>para 4</p>
        <p>para 5</p>
    </div>
    <div>
        <p>para 6</p>
        <p>para 7</p>
        <p>para 8</p>
        <p>para 9</p>
        <p>para 10</p>
    </div>
    <div>
        <p>para 11</p>
        <p>para 12</p>
        <p>para 13</p>
        <p>para 14</p>
        <p>para 15</p>
    </div>
</body>
</html>

```

Nth-child selector

- It selects the child tag, which is the n^{th} child tag of its parent tag.

Note: Index starts from “1”.

Syntax: childtag:nth-child(n)

Example: p:nth-child(2)

Example on Nth-child selector

```

<html>
    <head>
        <title>CSS - Nth-child</title>
        <style type="text/css">
            p:nth-child(2)
            {
                background-color: #33cc99;
            }
        </style>

```

```

</head>
<body>
  <div>
    <p>para 1</p>
    <p>para 2</p>
    <p>para 3</p>
    <p>para 4</p>
    <p>para 5</p>
  </div>
  <div>
    <p>para 6</p>
    <p>para 7</p>
    <p>para 8</p>
    <p>para 9</p>
    <p>para 10</p>
  </div>
  <div>
    <p>para 11</p>
    <p>para 12</p>
    <p>para 13</p>
    <p>para 14</p>
    <p>para 15</p>
  </div>
</body>
</html>

```

Nth-child(even) selector

- It selects all the even child tags. Ex: 2, 4, 6, ...

Note: Index starts from “1”.

Syntax: childtag:nth-child(even)

Example: p:nth-child(even)

Example on Nth-child(even) selector

```

<html>
  <head>
    <title>CSS - Even</title>
    <style type="text/css">
      /* selects all even <p>. Means 2, 4, 6 */
      p:nth-child(even)
      {
        background-color: #0099cc;
      }
    </style>
  </head>
  <body>
    <div>
      <p>para 1</p>
      <p>para 2</p>
      <p>para 3</p>
    </div>
  </body>
</html>

```

```

<p>para 4</p>
<p>para 5</p>
<p>para 6</p>
<p>para 7</p>
<p>para 8</p>
<p>para 9</p>
<p>para 10</p>
</div>
</body>
</html>

```

Nth-child(odd) selector

- It selects all the odd child tags. Ex: 1, 3, 5, ...

Note: Index starts from “1”.

Syntax: childtag:nth-child(odd)

Example: p:nth-child(odd)

Example on Nth-child(odd) selector

```

<html>
  <head>
    <title>CSS - Odd</title>
    <style type="text/css">
      /* selects all odd <p>. Means 1, 3, 5 */
      p:nth-child(odd)
      {
        background-color: #0099cc;
      }
    </style>
  </head>
  <body>
    <div>
      <p>para 1</p>
      <p>para 2</p>
      <p>para 3</p>
      <p>para 4</p>
      <p>para 5</p>
      <p>para 6</p>
      <p>para 7</p>
      <p>para 8</p>
      <p>para 9</p>
      <p>para 10</p>
    </div>
  </body>
</html>

```

Before selector

- It inserts an image before (at left side of) the current element.
- It is also called as “pseudo element”.

Syntax: tag::before

Example: h1::before

Example on Before selector

```
<html>
  <head>
    <title>CSS - Before</title>
    <style type="text/css">
      /* :: means psuedo element */
      h1::before
      {
        content: url('home.jpg');
      }
    </style>
  </head>
  <body>
    <h1>heading</h1>
    <h1>heading</h1>
    <h1>heading</h1>
    <h1>heading</h1>
  </body>
</html>
```

Note: Place "home.jpg" in the current folder.

After selector

- It inserts an image after (at right side of) the current element.
- It is also called as "pseudo element".

Syntax: tag::after

Example: h1::after

Example on After selector

```
<html>
  <head>
    <title>CSS - After</title>
    <style type="text/css">
      /* :: means psuedo element */
      h1::after
      {
        content: url('home.jpg');
      }
    </style>
  </head>
  <body>
    <h1>heading</h1>
    <h1>heading</h1>
    <h1>heading</h1>
```

```

<h1>heading</h1>
<h1>heading</h1>
</body>
</html>

```

Note: Place "home.jpg" in the current folder.

Selection selector

- It applies the style for the selected text of the web page.
- It is also called as "pseudo element".
- "moz" stands for "Mozilla Firefox".

Syntax for Mozilla Firefox: ::-moz-selection

Syntax for Other Browsers: ::selection

Example on Selection selector

```

<html>
  <head>
    <title>CSS - Selection</title>
    <style type="text/css">
      /* Code for Mozilla Firefox */
      ::-moz-selection
      {
        color: red;
        background-color: yellow;
      }
      /* for all remaining browsers */
      ::selection
      {
        color: red;
        background: yellow;
      }
    </style>
  </head>
  <body>
    <h1>Select some text on this page:</h1>
    <p>This is a paragraph.</p>
    <div>This is some text in a div element.</div>
  </body>
</html>

```

CSS Style Precedence

- The css styles are applied in the following order (lowest priority to highest priority).
- The higher priority style overrides the same property's value of the lower priority.
 1. Browser default style
 2. Tag Selector
 3. Direct Child Selector

4. Adjacent Sibling Selector
5. Child Selector
6. Class Selector
7. Attribute Selector
8. ID Selector

Note: “!important” is used to override the “style precedence”.

Example on Style Precedence

```
<html>
  <head>
    <title>Style Precedence</title>
    <style type="text/css">
      p
      {
        color: blue;
      }
      div>p
      {
        color: red;
      }
      .c1
      {
        color: green;
      }
      #p1
      {
        color: pink;
      }
    </style>
  </head>
  <body>
    <div>
      <p id="p1" class="c1">para 1</p>
    </div>
  </body>
</html>
```

Example on !important:

```
<html>
  <head>
    <title>important</title>
    <style type="text/css">
      p
      {
        color: blue !important;
      }
      div>p
```

```

        {
            color: red;
        }
.c1
{
    color: green;
}
#p1
{
    color: pink;
}
</style>
</head>
<body>
<div>
    <p id="p1" class="c1">para 1</p>
</div>
</body>
</html>

```

CSS Realtime Examples

Table Styles

```

<html>
<head>
<title>CSS - Table Styles</title>
<style type="text/css">
#table1
{
    background-color: #003399;
    font-size: 30px;
    font-family: 'Tahoma';
}
#table1 tr
{
    background-color: #33ccff;
}
#table1 tr:nth-child(1)
{
    background-color: #ff0099;
}
#table1 tr td
{
    padding: 5px;
}
#table1 tr th
{
    padding: 10px;
}
#table1 tr:hover
{

```

```

        background-color: #00ffcc;
        cursor: pointer;
    }

```

```

</style>
</head>
<body>
    <table id="table1">
        <tr>
            <th>Name</th>
            <th>Email</th>
        </tr>
        <tr>
            <td>Scott</td>
            <td>scott@gmail.com</td>
        </tr>
        <tr>
            <td>Allen</td>
            <td>allen@gmail.com</td>
        </tr>
        <tr>
            <td>Jones</td>
            <td>jones@gmail.com</td>
        </tr>
    </table>
</body>
</html>

```

Hyperlink Styles

- It is used to apply styles to hyperlinks.

a:link:	Applies styles to unvisited hyperlinks.
a:hover:	Applies styles to hyperlinks, when we place mouse pointer on it.
a:active:	Applies styles to hyperlinks, when we click and hold it.
a:visited:	Applies styles to visited hyperlinks.

Example on Hyperlink Styles

```

<html>
    <head>
        <title>CSS - Links</title>
        <style>
            /* unvisited link */
            a:link
            {
                background-color: darkgreen;
                font-size: 20px;
                color: white;
                padding: 2px;
                text-decoration: none;
                font-weight: bold;
            }

```

```

        }

/* mouse over link */
a:hover
{
    background-color: yellow;
    color: darkgreen;
    text-decoration: underline;
}

/* selected link */
a:active
{
    background-color: darkred;
    color: cyan;
}

/* visited link */
a:visited
{
    background-color: black;
    color: yellow;
}
</style>
</head>
<body>
    <a href="http://www.google.com">Google</a>
    <a href="http://www.facebook.com">Facebook</a>
    <a href="http://www.twitter.com">Twitter</a>
</body>
</html>

```

Menubar

- Menubar is a collection of hyperlinks arranged vertically / horizontally.

```

<html>
    <head>
        <title>CSS - Menu Bar</title>
        <style type="text/css">
            .menubar
            {
                background-color: #00ffcc;
                height: 40px;
                font-size: 24px;
                font-family: 'Tahoma';
                width: 800px;
                margin: auto;
            }
            .menubar ul
            {
                list-style-type: none;

```

```

        padding: 0px;
    }
    .menubar ul li
    {
        display: inline;
        width: 200px;
        float: left;
        height: 40px;
        text-align: center;
    }
    .menubar ul li a
    {
        line-height: 40px;
        text-decoration: none;
    }
    .menubar ul li:hover
    {
        background-color: #33cc99;
        cursor: pointer;
        text-decoration: underline;
    }

```

</style>

</head>

<body>

<div class="menubar">

- Home
- About
- Contact
- Services

</div>

</body>

</html>

Header

- Header is the top content of the web page, which includes website logo, website name, main options for navigation.

```

<html>
  <head>
    <title>Header</title>
    <style type="text/css">
      body,input
      {
        font-family: Tahoma;
        font-size: 25px;
      }
      *
      {
        padding: 0px;
      }

```

```
margin: 0px;
}
#header
{
    background-color: #4867AA;
    height: 200px;
}
#leftdiv
{
    /*background-color: #00ccff;*/
    width: 30%;
    float: left;
    height: 200px;
}
#rightdiv
{
    /*background-color: #00cc99;*/
    width: 70%;
    float: left;
    height: 200px;
    color: white;
}
#logoimage
{
    margin-left: 40px;
    margin-top: 20px;
    width: 200px;
}
#rightdiv1
{
    /*background-color: #66ff66;*/
    width: 30%;
    height: 200px;
    float: left;
}
#rightdiv2
{
    /*background-color: #ff6699;*/
    width: 30%;
    height: 200px;
    float: left;
}
#rightdiv3
{
    /*background-color: #cccccc;*/
    width: 30%;
    height: 200px;
    float: left;
}
#cleardiv
{
    clear: left;
```

```
        }
    .part1,.part2,.part3
    {
        margin-top: 10px;
        margin-bottom: 10px;
    }
    #submitbutton
    {
        background-color: #4867AA;
        border-style: ridge;
        color: white;
        padding: 2px;
    }
    #forgotlink
    {
        color: #8CB4C4;
        text-decoration: none;
    }
</style>
</head>
<body>
    <div id="header">
        <div id="leftdiv">
            
        </div>
        <div id="rightdiv">

            <div id="rightdiv1">
                <div class="part1">
                    Email or phone
                </div>
                <div class="part2">
                    <input type="text">
                </div>
                <div class="part3">
                    &nbsp;
                </div>
            </div>

            <div id="rightdiv2">
                <div class="part1">
                    Password
                </div>
                <div class="part2">
                    <input type="password">
                </div>
                <div class="part3">
                    <a href="#" id="forgotlink">Forgotten account?</a>
                </div>
            </div>

            <div id="rightdiv3">
```

```

<div class="part1">
  &nbsp;
</div>
<div class="part2">
  <input type="submit" value="Login" id="submitbutton">
</div>
<div class="part3">
  &nbsp;
</div>
</div>

<div id="cleardiv">
</div>
</div>

</div>
</body>
</html>

```

Note: Place "fb.png" in the current folder.

Advanced CSS

Resize

- It is used to make an html element, resizable in the browser.
- **Syntax:** resize: horizontal | vertical | both;
- **Example:** resize: both;

Example on Resize

```

<!DOCTYPE html>
<html>
  <head>
    <title>CSS 3 - Resize</title>
    <style type="text/css">
      #div1
      {
        border: 2px solid;
        padding: 10px 40px;
        width: 500px;
        resize: both; /*Options: none | both | horizontal | vertical */
        overflow: auto;
      }
    </style>
  </head>
  <body>
    <div id="div1">Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.</div>
  </body>
</html>

```

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum.

```
</body>
</html>
```

Word Wrap

- It is used to split the long words into next line.
- **Syntax:** word-wrap: break-word;
- **Example:** word-wrap: break-word;

Example on Word Wrap

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS 3 - Word Wrap</title>
    <style type="text/css">
        p.test1
        {
            width: 270px;
            border: 1px solid #000000;
        }
        p.test2
        {
            width: 270px;
            border: 1px solid #000000;
            word-wrap: break-word;
        }
    </style>
</head>
<body>
    <p class="test1">This paragraph contains a very long word: thisisaveryveryveryveryverylongword. The long word will break and wrap to the next line.</p>
    <p class="test2">This paragraph contains a very long word: thisisaveryveryveryveryverylongword. The long word will break and wrap to the next line.</p>
</body>
</html>
```

RGBA

- It is used to apply transparency to the background color only, instead of applying transparency for the content.
- **Syntax:** rgba(red, green, blue, alpha)

Red = 0 to 255

Green = 0 to 255
Blue = 0 to 255
Alpha = 0 to 1

Example on RGBA

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS 3 - RGBA</title>
    <style type="text/css">
        body
        {
            background-image: url('sample.png');
        }

        #div1
        {
            border: 2px solid #a1a1a1;
            padding: 10px 40px;
            width: 300px;
            background-color: rgba(50, 180, 110, 0.6); /*Syntax: rgba(red, green, blue, opacity) */
        }
    </style>
</head>
<body>
    <div id="div1">Hello how are you!!</div>
</body>
</html>
```

Note: Place "sample.png" in the current folder.

Border Radius

- It is used to apply rounded corners for any html element.
- **Syntax:** border-radius: pixels;
- **Example:** border-radius: 10px;

Border Radius – Cornerwise

- **Syntax:** border-radius: topleft topright bottomright bottomleft;
- **Example:** border-radius: 10px 20px 15px 5px;

Example on Border Radius

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS 3 - Border Radius</title>
    <style type="text/css">
```

```
#div1
{
    border: 2px solid #a1a1a1;
    padding: 10px 40px;
    background-color: pink;
    width: 300px;
    border-radius: 40px;
}
</style>
</head>
<body>
    <div id="div1">The border-radius property allows you to add rounded corners to elements.</div>
</body>
</html>
```

Example 2 on Border Radius

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS 3 - Border Radius</title>
    <style>
        input
        {
            border: 2px solid #a1a1a1;
            padding: 5px;
            background-color: green;
            color: white;
            border-radius: 25px;
        }
    </style>
</head>
<body>
    <input type="text">
    <input type="text">
</body>
</html>
```

Example 3 on Border Radius

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS 3 - Border Radius</title>
    <style type="text/css">
        body
        {
            font-family: 'Tahoma';
            font-size: 30px;
        }
        #p1
        {
            border: 2px solid #a1a1a1;
```

```

padding-left: 25px;
background-color: green;
color: white;
width: 300px;
/* Syntax: border-radius: topLeft topRight bottomRight bottomLeft */
border-radius: 5px 45px 5px 45px;
}
</style>
</head>
<body>
<p id="p1">
The border-radius property allows you to add rounded corners to elements.
</p>
</body>
</html>

```

Shadow

Box-Shadow

- It is used to apply shadow for the element.
- **Syntax:** box-shadow: HorizontalPosition VerticalPosition BlurRadius Spread ShadowColor;
- **Example:** box-shadow: 5px 5px 5px 2px red;

Text-Shadow

- It is used to apply shadow for the text of the element.
- **Syntax:** text-shadow: HorizontalPosition VerticalPosition BlurRadius ShadowColor;
- **Example:** text-shadow: 2px 2px 5px 1px red;

Example on Shadow

```

<!DOCTYPE html>
<html>
<head>
<title>CSS 3 - Shadow</title>
<style type="text/css">
#div1
{
width: 300px;
height: 100px;
background-color: yellow;
box-shadow: 15px 15px 10px 5px darkgreen;
text-shadow: 5px 5px 5px red;
}
#txt1
{
box-shadow: 15px 15px 10px 5px darkgreen;

```

```
text-shadow: 5px 5px 5px red;
font-size: 30px;
}
</style>
</head>
<body>
<div id="div1">CSS 3 shadow example</div><br><br>
<input type="text" id="txt1">
</body>
</html>
```

Multiple Columns

- It is used to divide the text of the element into multiple columns.

- **Set no. of columns:**

column-count: no. of columns;
-moz-column-count: no. of columns;
-webkit-column-count: no. of columns;

- **Set column gap – distance between columns:**

Column-gap: pixels;
-moz-column-gap: pixels;
-webkit-column-gap: pixels;

- **Set column rule – divider line between the columns:**

column-rule: width style color;
-moz-column-rule: width style color;
-webkit-column-rule: width style color;

-moz- : Mozilla Firefox

-webkit- : Chrome and Safari

Example on Multiple Columns

```
<!DOCTYPE html>
<html>
<head>
<title>CSS 3 - Multiple Columns</title>
<style type="text/css">
.newspaper
{
    text-align: justify;
    border: 1px solid gray;
```

```

    column-count: 4;
    -moz-column-count: 4;
    -webkit-column-count: 4;
    column-gap: 40px;
    -moz-column-gap: 40px;
    -webkit-column-gap: 40px;
}
</style>
</head>
<body>
    <div class="newspaper">Contrary to popular belief, Lorem Ipsum is not simply random text. It has roots in a piece of classical Latin literature from 45 BC, making it over 2000 years old. Richard McClintock, a Latin professor at Hampden-Sydney College in Virginia, looked up one of the more obscure Latin words, consectetur, from a Lorem Ipsum passage, and going through the cites of the word in classical literature, discovered the undoubtable source. Lorem Ipsum comes from sections 1.10.32 and 1.10.33 of "de Finibus Bonorum et Malorum" (The Extremes of Good and Evil) by Cicero, written in 45 BC. This book is a treatise on the theory of ethics, very popular during the Renaissance. The first line of Lorem Ipsum, "Lorem ipsum dolor sit amet..", comes from a line in section 1.10.32. The standard chunk of Lorem Ipsum used since the 1500s is reproduced below for those interested. Sections 1.10.32 and 1.10.33 from "de Finibus Bonorum et Malorum" by Cicero are also reproduced in their exact original form, accompanied by English versions from the 1914 translation by H. Rackham.</div>
</body>
</html>

```

Transitions

- Transition is a process of changing a CSS property's value gradually, based on the specified no. of seconds.
- Transitions support only pixels based color based properties. Ex: width, height, opacity, font-size, border-width, background-color, color, border-color etc.
- **Syntax:**

```

        selector
        {
            property: startvalue;
            transition: property seconds;
        }
        selector:hover
        {
            property: endvalue;
        }
    
```

Example:

font-size

20px 40px
—o—
5 sec = 5000 milli sec

Example on Transitions - Width

```
<!DOCTYPE html>
<html>
<head>
<title>CSS 3 - Transitions - Width</title>
<style type="text/css">
#div1
{
    width: 300px;
    height: 100px;
    background-color: darkred;
    color: yellow;
    transition: width 2s;
}
#div1:hover
{
    width: 600px;
}
</style>
</head>
<body>
<div id="div1">hover me</div>
</body>
</html>
```

Example on Transitions - Height

```
<!DOCTYPE html>
<html>
<head>
<title>CSS 3 - Transitions - Height</title>
<style type="text/css">
#div1
{
    width: 300px;
    height: 100px;
    background-color: darkred;
    color: yellow;
    transition: height 2s;
}
#div1:hover
```

```
{  
    height: 300px;  
}  
</style>  
</head>  
<body>  
    <div id="div1">hover me</div>  
</body>  
</html>
```

Example on Transitions – Font-size

```
<!DOCTYPE html>  
<html>  
<head>  
    <title>CSS 3 - Transitions - Font-Size</title>  
    <style type="text/css">  
        #div1  
        {  
            width: 200px;  
            height: 200px;  
            background-color: darkgreen;  
            position: relative;  
            color: yellow;  
            font-size: 30px;  
            transition: font-size 3s;  
        }  
        #div1:hover  
        {  
            font-size: 60px;  
        }  
    </style>  
</head>  
<body>  
    <div id="div1">hover me</div>  
</body>  
</html>
```

Example on Transitions – Multiple Properties

```
<!DOCTYPE html>  
<html>  
<head>  
    <title>CSS 3 - Transitions - Multiple Properties</title>  
    <style type="text/css">  
        #div1  
        {  
            width: 100px;  
            height: 100px;  
            background-color: darkgreen;  
            position: relative;  
            color: yellow;  
            font-size: 25px;  
        }  
    </style>
```

```
        transition: background-color 2s, font-size 1s, width 2s;
    }
    #div1:hover
    {
        background-color: blue;
        font-size: 50px;
        width: 400px;
    }
</style>
</head>
<body>
    <div id="div1">hover me</div>
</body>
</html>
```

Example on Transitions – Opacity

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS 3 - Transitions - Opacity</title>
    <style type="text/css">
        #div1
        {
            width: 300px;
            height: 300px;
            background-color: darkgreen;
            position: relative;
            color: yellow;
            opacity: 1;
            transition: opacity 1.5s;
        }
        #div1:hover
        {
            opacity: 0;
        }
    </style>
</head>
<body>
    <div id="div1">hover me</div>
</body>
</html>
```

Example on Transitions – Position

```
<!DOCTYPE html>
<html>
<head>
    <title>CSS 3 - Transitions - Position</title>
    <style type="text/css">
        #div1
        {
            width: 200px;

```

```

height: 200px;
background-color: darkgreen;
color: yellow;
position: relative;
left: 0px;
top: 0px;
transition: left 1.5s, top 1.5s;
}
#div1:hover
{
    left: 50px;
    top: 50px;
}
</style>
</head>
<body>
    <div id="div1">hover me</div>
</body>
</html>

```

Transformations

- Transformations are used to display the element in a different visual dimension.
- Types of transformations:
 1. Rotate Transformation
 2. Skew Transformation
 3. Scale Transformation
 4. Translate Transformation

1. Rotate Transformation

- It is used to rotate the element, based on the specified no. of degrees. Ex: 45deg.

Syntax: transform: rotate(degrees);

Example: transform: rotate(45deg);

Example on Rotate Transformation

```

<html>
<head>
    <title>CSS 3 - Transformations - Rotate Transformation</title>
    <style type="text/css">
        #div1
        {
            width: 200px;
            height: 200px;
            background-color: #00CCFF;
            margin-left: 150px;
            cursor: pointer;
        }
    </style>
</head>
<body>
    <div id="div1"></div>
</body>
</html>

```

```

        box-shadow: 10px 10px 10px 10px #ff0000;
    }
    #div1:hover
    {
        transform: rotate(45deg); /* 0 to 360 deg */
    }

```

</style>

</head>

<body>

<h3>CSS 3 Transformations - Rotate Transformation</h3>

<div id="div1">Hello</div>

</body>

</html>

2. Skew Transformation

- It warps the element.

Syntax: transform: skew(degrees);

Example: transform: skew(30deg);

Example on Skew Transformation

```

<html>
<head>
    <title>CSS 3 - Transformations - Skew Transformation</title>
    <style type="text/css">
        #div1
        {
            width: 200px;
            height: 200px;
            background-color: #00CCFF;
            margin-left: 150px;
            cursor: pointer;
            box-shadow: 10px 10px 10px 10px #ff0000;
        }
        #div1:hover
        {
            background-color: #0099FF;
            transform: skew(30deg); /* 0 to 360 deg */
        }
    </style>
</head>
<body>
    <h3>CSS 3 Transformations - Skew Transformation</h3>
    <div id="div1">Hello</div>
</body>
</html>

```

3. Scale Transformation

- It shows the element in large size / small size, visually.

Syntax: transform: scale(number);

Example: transform: scale(2);

1 = 100% size

2 = 200% size

0.5 = 50% size

1.5 = 150% size

...

Example on Scale Transformation

```
<html>
<head>
    <title>CSS 3 - Transformations - Scale Transformation</title>
    <style type="text/css">
        #div1
        {
            width: 200px;
            height: 200px;
            background-color: #00CCFF;
            margin-left: 150px;
            cursor: pointer;
            box-shadow: 10px 10px 10px 10px #ff0000;
        }
        #div1:hover
        {
            background-color: #0099FF;
            transform: scale(1.5); /*0 to n*/
        }
    </style>
</head>
<body>
    <h3>CSS 3 Transformations - Scale Transformation</h3>
    <div id="div1">Hello</div>
</body>
</html>
```

4. Translate Transformation

- It changes the visual position of the element.

Syntax: transform: translate(x, y);

Example: transform: translate(30px, 30px);

Example on Translate Transformation

```
<html>
<head>
```

```

<title>CSS 3 - Transformations - Translate Transformation</title>
<style type="text/css">
#div1
{
    width: 200px;
    height: 200px;
    background-color: #00CCFF;
    margin-left: 150px;
    cursor: pointer;
    box-shadow: 10px 10px 10px 10px #ff0000;
}
#div1:hover
{
    background-color: #0099FF;
    transform: translate(30px,30px); /* (x, y) */
}
</style>
</head>
<body>
    <h3>CSS 3 Transformations - Translate Transformation</h3>
    <div id="div1">Hello</div>
</body>
</html>

```

Multiple Transformations

- We can apply more than one transformation at-a-time.

Syntax: transform: rotate(degrees) scale(n) translate(x, y) skew(degrees);

Example: transform: rotate(40deg) scale(1.5) translate(30px, 30px) skew(20deg);

Example on Multiple Transformations

```

<html>
<head>
    <title>CSS 3 - Transformations - Multiple Transformations</title>
    <style type="text/css">
#div1
{
    width: 200px;
    height: 200px;
    background-color: #00CCFF;
    margin-left: 150px;
    margin-top: 100px;
    cursor: pointer;
    box-shadow: 10px 10px 10px 10px #ff0000;
}
#div1:hover
{
    background-color: #0099FF;
    transform: rotate(30deg) scale(1.5);
}
</style>

```

```
</head>
<body>
  <h3>CSS 3 Transformations - Multiple Transformations</h3>
  <div id="div1">Hello</div>
</body>
</html>
```

transform-origin

- This property specifies the fixed point for rotate transformation and scale transformation etc.
- **Syntax:** transform-origin: top left | top center | top right | center left | center center | center right | bottom left | bottom center | bottom right;
- **Example:** transform-origin: top left;

Example on Transform Origin

```
<html>
<head>
  <title>CSS 3 - Transformations - Transform Origin</title>
  <style type="text/css">
    #div1
    {
      width: 200px;
      height: 200px;
      background-color: #00CCFF;
      margin-left: 150px;
      margin-top: 100px;
      cursor: pointer;
      box-shadow: 10px 10px 10px 10px #ff0000;
    }
    #div1:hover
    {
      background-color: #0099FF;
      transform: rotate(30deg);
      transform-origin: top left;
    }
  </style>
</head>
<body>
  <h3>CSS 3 Transformations - Transform Origin</h3>
  <div id="div1">Hello</div>
</body>
</html>
```

Example on Transformation with Transition

```
<html>
<head>
  <title>CSS 3 - Transformations - with Transition</title>
  <style type="text/css">
```

```
#div1
{
    width: 200px;
    height: 200px;
    background-color: #00CCFF;
    margin-left: 150px;
    cursor: pointer;
    box-shadow: 10px 10px 10px 10px #ff0000;
    transition: transform 0.8s;
}
#div1:hover
{
    background-color: #0099FF;
    transform: scale(1.5) skew(30deg);
}
</style>
</head>
<body>
    <h3>CSS 3 Transformations - Transformation with Transition</h3>
    <div id="div1">Hello</div>
</body>
</html>
```

Example on Image Gallery

```
<html>
<head>
    <title>CSS 3 - Transformations - Image Gallery</title>
    <style type="text/css">
        .photogallery
        {
            width: 200px;
            height: 190px;
            background-color: #00CCFF;
            margin: 50px;
            float: left;
            cursor: pointer;
            box-shadow: 10px 10px 10px 10px #ff0000;
            transition: transform 0.8s;
        }
        .photogallery:hover
        {
            background-color: #0099FF;
            transform: rotate(360deg) scale(1.2);
        }
        .photogallery img
        {
            width: 100%;
        }
    </style>
</head>
<body>
```

```

<div class="photogallery">
  
  <span>image 1</span>
</div>

<div class="photogallery">
  
  <span>image 2</span>
</div>

<div class="photogallery">
  
  <span>image 3</span>
</div>

<div class="photogallery">
  
  <span>image 4</span>
</div>

<div class="photogallery">
  
  <span>image 5</span>
</div>

<div class="photogallery">
  
  <span>image 6</span>
</div>
</body>
</html>

```

Animations

- Animations are “group of transitions”, which will be performed one after another.
- Transition contains two points only (starting point + ending point).
- Animation contains multiple points of milestones.

Syntax:

```

selector
{
  animation: animationname seconds;
}

@keyframes animationname
{
  0% { property:value; property:value; ... },
  25% { property:value; property:value; ... },
  50% { property:value; property:value; ... },
  75% { property:value; property:value; ... },
}

```

```
100% { property:value; property:value; ... }  
}
```

Example:

font-size



10px 50px 20px 100px 15px 40px

10s

Example on Animations

```
<!DOCTYPE html>  
<html>  
<head>  
  <title>Animations</title>  
  <style>  
    #div1  
    {  
      background-color: #2eda59;  
      font-size: 35px;  
      width: 300px;  
      height: 220px;  
      margin: 60px;  
    }  
    #div1:hover  
    {  
      cursor: pointer;  
      animation: myanimation 10s;  
    }  
    @keyframes myanimation  
    {  
      0% { transform: translate(0px, 0px); }  
      25% { transform: translate(50px, 0px); }  
      50% { transform: translate(50px, 100px); }  
      75% { transform: translate(0px, 100px); }  
      100% { transform: translate(0px, 0px); }  
    }  
  </style>  
</head>  
<body>  
  <div id="div1">  
      
    Hyderabad  
  </div>  
</body>  
</html>
```

Gradient Colors

- It is used to apply multiple colors to the element.
- Go to <http://www.colorzilla.com/gradient-editor>
- Generate the colors.
- Copy and paste the code into the program.

Example on Gradient Colors

```
<html>
<head>
    <title>CSS 3 - Gradient Colors</title>
    <style type="text/css">
        #div1
        {
            width: 300px;
            height: 300px;
            background: #03bc09;
            background: -moz-linear-gradient(top, #03bc09 0%, #477c02 38%, #073f00 100%);
            background: -webkit-linear-gradient(top, #03bc09 0%,#477c02 38%,#073f00 100%);
            background: linear-gradient(to bottom, #03bc09 0%,#477c02 38%,#073f00 100%);
            filter: progid:DXImageTransform.Microsoft.gradient( startColorstr='#03bc09',
endColorstr='#073f00',GradientType=0);
        }
    </style>
</head>
<body>
    <div id="div1">div 1</div>
</body>
</html>
```

Font Face

- It is used to apply third party fonts in the web page.
- **Steps:**
 - Go to "<https://www.fontsquirrel.com>".
 - Click on "Web Font" in "Licenses".
 - Click on the desired font.
 - Click on "Webfont Kit".
 - Select all the checkboxes (TTF, EOT, WOFF, SVG).
 - TTF: Works in most browsers except IE and iPhone
 - EOT: IE only
 - WOFF: Compressed, emerging standard
 - SVG: iPhone/iPad.

- Click on “Download @Fontface Kit”.
- Download the font zip file.
- After downloading, extract the zip file. It creates a folder and extracts the files into it. Go to the extracted folder.
- Copy and paste the following files from the “extracted folder” into “application folder (c:\css)”.
- Copy and paste the following files from the “extracted folder” into “application folder (c:\css)”.

Extracted folder:

- fontname.eot
- fontname.svg
- fontname.ttf
- fontname.woff
- fontname.css

Application folder (c:\css):

- fontname.eot
- fontname.svg
- fontname.ttf
- fontname.woff
- fontname.css
- filename.html

Step 1: Import the css file into the web page:

```
<link href="filename.css" rel="stylesheet">
```

Step 2: Create @font-face rule:

```
@font-face
{
    font-family: "fontname";
    src: url("filename.eot");
    src: url("filename.eot?#iefix") format("embedded-opentype"),
         url("filename.woff") format("woff"),
         url("filename.ttf") format("truetype"),
         url("filename.svg@fontname") format("svg");
```

```
font-weight: normal;  
font-style: normal;  
}
```

Step 3: Set the font-family:

```
selector  
{  
    font-family: "fontname";  
}
```

Example on Font Face

c:\css\Stylesheet.css

```
@font-face  
{  
    font-family: 'amadeus_regulararamadeusRg';  
    src: url('Amadeus-webfont.eot');  
    src: url('Amadeus-webfont.eot?#iefix') format('embedded-opentype'),  
        url('Amadeus-webfont.woff') format('woff'),  
        url('Amadeus-webfont.ttf') format('truetype'),  
        url('Amadeus-webfont.svg#amadeus_regulararamadeusRg') format('svg');  
    font-weight: normal;  
    font-style: normal;  
}
```

c:\css\Fontexample.html

```
<html>  
<head>  
    <title>Font example</title>  
    <link href="stylesheet.css" rel="stylesheet">  
    <style type="text/css">  
        #div1  
        {  
            font-family: amadeus_regulararamadeusRg;  
            font-size: 40px;  
        }  
    </style>  
</head>  
<body>  
    <div id="div1">Hello</div>  
</body>  
</html>
```

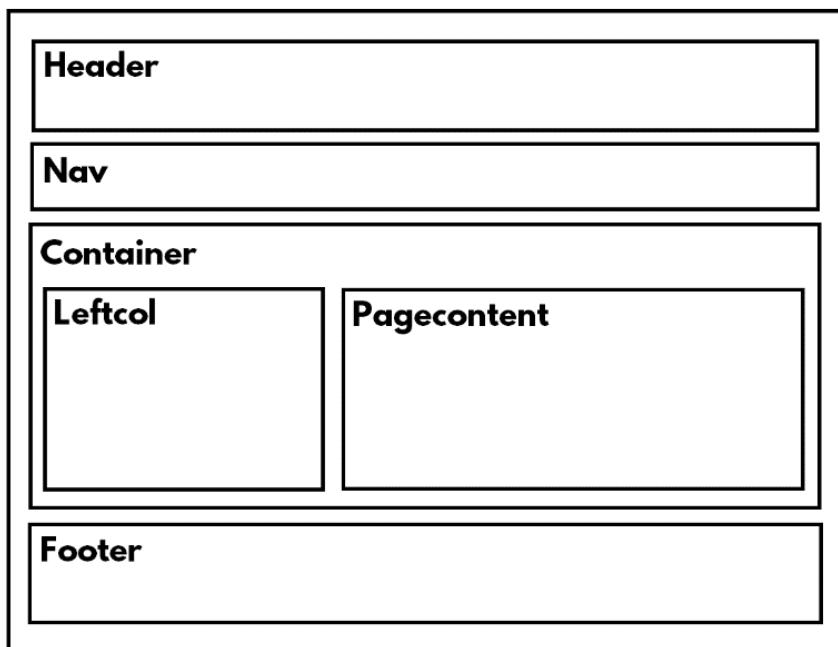
Note: Place “Amadeus-webfont.eot”, “Amadeus-webfont.svg”, “Amadeus-webfont.ttf”, “Amadeus-webfont.woff” in the current folder (c:\css).

Static Page Template

- It is used to create page template (layout).
- **Header:** Contains company logo, website name, login, logout, search etc.
- **Nav:** Contains menubar.
- **Container:** Contains left column and page content.
- **Leftcol:** Contains left side menu.
- **PageContent:** Contains actual content of the page.
- **Footer:** Contains bottom information and links for other related sites.

Static Page Template

OuterContainer



Example on Static Page Template

home.html

```
<html>
  <head>
    <title>Home Page</title>
    <style>
      body
    {
```

```
    font-size: 20px;  
}  
  
*  
{  
    margin: 0px;  
    padding: 0px;  
}  
  
#outercontainer  
{  
    background-color: #ffccff;  
    width: 100%;  
    margin: auto;  
}  
  
#header  
{  
    background-color: #00ff99;  
    height: 200px;  
    width: 100%;  
}  
  
#nav  
{  
    background-color: #ccccff;  
    height: 80px;  
    width: 100%;  
}  
  
#container  
{  
    height: 500px;  
    width: 100%;  
}  
  
#leftcol  
{  
    height: 500px;  
    background-color: #66ccff;  
    width: 20%;  
    float: left;  
}  
  
#pagecontent  
{  
    height: 500px;  
    background-color: #ccffcc;  
    width: 80%;  
    float: left;  
}
```

```

#footer
{
    height: 50px;
    background-color: #ff0099;
    width: 100%;
    clear: left;
}
</style>
</head>
<body>
    <div id="outercontainer">
        <div id="header">
            Header
        </div>

        <div id="nav">
            Nav
        </div>

        <div id="container">
            <div id="leftcol">
                Leftcol
            </div>
            <div id="pagecontent">
                Page content
            </div>
        </div>

        <div id="footer">
            Footer
        </div>
    </div>
</body>
</html>

```

Example on Page Navigation using Static Page Template

home.html

```

<html>
    <head>
        <title>Home</title>
        <link href="StyleSheet.css" rel="stylesheet">
    </head>
    <body>
        <div id="outercontainer">
            <div id="header">
                Header
            </div>

            <div id="nav">
                <a href="home.html">Home</a>
            </div>
        </div>
    </body>
</html>

```

```
<a href="about.html">About</a>
<a href="contact.html">Contact</a>
</div>

<div id="container">
<div id="leftcol">
    Leftcol
</div>
<div id="pagecontent">
    Home Page content
</div>
</div>

<div id="footer">
    Footer
</div>
</div>
</body>
</html>
```

about.html

```
<html>
<head>
    <title>About</title>
    <link href="StyleSheet.css" rel="stylesheet">
</head>
<body>
    <div id="outercontainer">
        <div id="header">
            Header
        </div>

        <div id="nav">
            <a href="home.html">Home</a>
            <a href="about.html">About</a>
            <a href="contact.html">Contact</a>
        </div>

        <div id="container">
            <div id="leftcol">
                Leftcol
            </div>
            <div id="pagecontent">
                About Page content
            </div>
        </div>

        <div id="footer">
            Footer
        </div>
    </div>
</body>
</html>
```

```
</div>  
  </body>  
</html>
```

contact.html

```
<html>  
  <head>  
    <title>Contact</title>  
    <link href="StyleSheet.css" rel="stylesheet">  
  </head>  
  <body>  
    <div id="outercontainer">  
      <div id="header">  
        Header  
      </div>  
  
      <div id="nav">  
        <a href="home.html">Home</a>  
        <a href="about.html">About</a>  
        <a href="contact.html">Contact</a>  
      </div>  
  
      <div id="container">  
        <div id="leftcol">  
          Leftcol  
        </div>  
        <div id="pagecontent">  
          Contact Page content  
        </div>  
      </div>  
  
      <div id="footer">  
        Footer  
      </div>  
    </div>  
  </body>  
</html>
```

StyleSheet.css

```
body  
{  
  font: 20px 'Tahoma';  
}  
  
*  
{  
  margin: 0px;
```

```
padding: 0px;  
}  
  
#outercontainer  
{  
background-color: #ffccff;  
width: 100%;  
margin: auto;  
}  
  
#header  
{  
background-color: #00ff99;  
height: 200px;  
width: 100%;  
}  
  
#nav  
{  
background-color: #ccccff;  
height: 80px;  
width: 100%;  
}  
  
#container  
{  
height: 500px;  
width: 100%;  
}  
  
#leftcol  
{  
height: 500px;  
background-color: #66ccff;  
width: 20%;  
float: left;  
}  
  
#pagecontent  
{  
height: 500px;  
background-color: #ccffcc;  
width: 80%;  
float: left;  
}  
  
#footer  
{  
height: 50px;  
background-color: #ff0099;  
width: 100%;  
clear: left;
```

}

Responsive Web Design

What is Responsive Web Design

- “Responsive Web Design” (RWD) is used to make the web page automatically fit based on the current device resolution.
- We divide the devices into 4 types, based on the browser width:
 1. **Large devices:** 1200px to unlimited
 2. **Medium devices:** 1024px to 1199px
 3. **Small devices:** 768px to 1023px
 4. **Extra Small devices:** 300px to 767px

Media Queries

- We use “Media Queries” to create responsive web design. The media queries apply the styles based on the specified resolution.

1. Large devices (1200px to unlimited):

```
@media (min-width: 1200px){  
}
```

2. Medium devices (1024px to 1199px):

```
@media (min-width: 1024px) and (max-width: 1199px){  
}
```

3. Small devices (68px to 1023px):

```
@media (min-width: 768px) and (max-width: 1023px){  
}
```

4. Extra Small devices (300px to 767px):

@media (min-width: 300px) and (max-width: 767px)

```
{  
}
```

View port meta tag

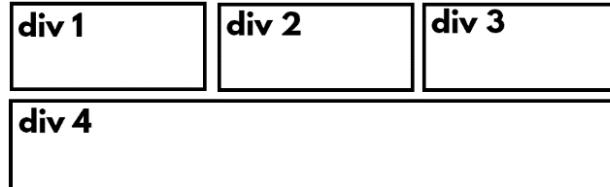
- This tag tells to the mobile browsers that we are using “responsive web design”, and don’t treat it as pc-based web page.
- Without viewport meta tag, the mobile browsers treat the web page as pc-based web page and apply the pc-based media query.
- With viewport meta tag, the mobile browsers apply the appropriate “mobile-based media query” to the web page.

Responsive Web Design - Example

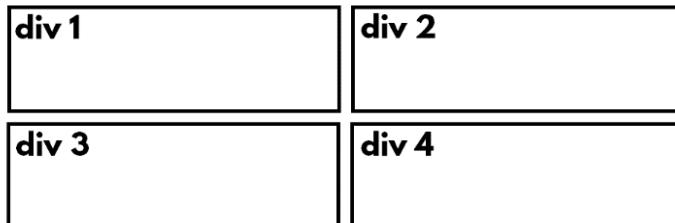
Large Devices



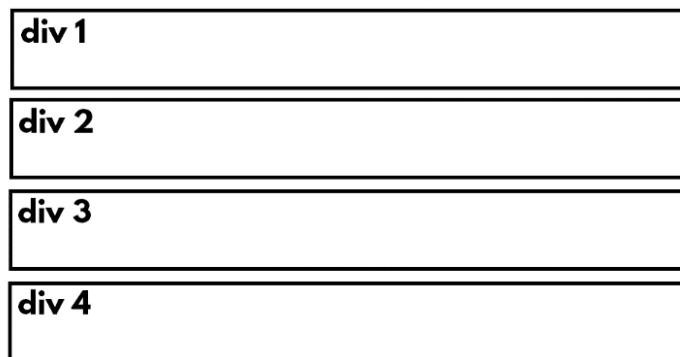
Medium Devices



Small Devices



Extra Small Devices



Example on Responsive Web Design

home.html

```
<html>
  <head>
    <title>Home page</title>
    <link href="StyleSheet.css" rel="stylesheet">
```

```
<meta name="viewport" content="width=device-width">
</head>
<body>

    <!-- outercontainer starts -->
    <div id="outercontainer">

        <!-- header starts -->
        <div id="header">
            header content here
        </div>
        <!-- header ends -->

        <!-- nav starts -->
        <div id="nav">
            nav content here
        </div>
        <!-- nav ends -->

        <!-- container starts -->
        <div id="container">

            <!-- leftcol starts -->
            <div id="leftcol">
                leftcol content here
            </div>
            <!-- leftcol ends -->

            <!-- pagecontent starts -->
            <div id="pagecontent">
                <h2>page content here</h2>
                <div id="div1">div 1</div>
                <div id="div2">div 2</div>
                <div id="div3">div 3</div>
                <div id="div4">div 4</div>
            </div>
            <!-- pagecontent ends -->

        </div>
        <!-- container ends -->

        <!-- footer starts -->
        <div id="footer">
            footer content here
        </div>
        <!-- footer ends -->

    </div>
    <!-- outercontainer ends -->

</body>
</html>
```

StyleSheet.css

```
@media (min-width: 1200px)
{
    body,input
    {
        font-family: Tahoma;
        font-size: 28px;
    }

    *
    {
        margin: 0px;
        padding: 0px;
    }

    #outercontainer
    {
        background-color: #00ffcc;
        width: 98%;
        margin: auto;
    }

    #header
    {
        background-color: #0066cc;
        height: 200px;
    }

    #nav
    {
        background-color: #33ccff;
        height: 120px;
    }

    #container
    {
        background-color: #ccffcc;
    }

    #leftcol
    {
        background-color: #ffcccc;
        height: 700px;
        width: 30%;
        float: left;
    }

    #pagecontent
    {
        background-color: #99ccff;
```

```
height: 700px;
width: 70%;
float: left;
}

#footer
{
background-color: #ff0099;
height: 100px;
clear: left;
}

#div1
{
background-color: #ccffcc;
width: 25%;
height: 200px;
float: left;
}

#div2
{
background-color: #cccc99;
width: 25%;
height: 200px;
float: left;
}

#div3
{
background-color: #00ff33;
width: 25%;
height: 200px;
float: left;
}

#div4
{
background-color: #ffff99;
width: 25%;
height: 200px;
float: left;
}

}

@media (min-width: 1024px) and (max-width: 1199px)
{
body, input
{
font-family: Tahoma;
```

```
    font-size: 28px;  
}  
  
*  
{  
    margin: 0px;  
    padding: 0px;  
}  
  
#outercontainer  
{  
    background-color: #00ffcc;  
    width: 98%;  
    margin: auto;  
}  
  
#header  
{  
    background-color: #0066cc;  
    height: 200px;  
}  
  
#nav  
{  
    background-color: #33ccff;  
    height: 120px;  
}  
  
#container  
{  
    background-color: #ccffcc;  
}  
  
#leftcol  
{  
    background-color: #ffcccc;  
    height: 700px;  
    width: 30%;  
    float: left;  
}  
  
#pagecontent  
{  
    background-color: #99ccff;  
    height: 700px;  
    width: 70%;  
    float: left;  
}  
  
#footer  
{  
    background-color: #ff0099;
```

```
height: 100px;
clear: left;
}

#div1
{
background-color: #ccffcc;
width: 33%;
height: 200px;
float: left;
}

#div2
{
background-color: #cccc99;
width: 33%;
height: 200px;
float: left;
}

#div3
{
background-color: #00ff33;
width: 34%;
height: 200px;
float: left;
}

#div4
{
background-color: #ffff99;
width: 100%;
height: 200px;
clear: left;
}

}

@media (min-width: 768px) and (max-width: 1023px)
{
body, input
{
font-family: Tahoma;
font-size: 28px;
}

*
{
margin: 0px;
padding: 0px;
}
```

```
}

#outercontainer
{
    background-color: #00ffcc;
    width: 98%;
    margin: auto;
}

#header
{
    background-color: #0066cc;
    height: 200px;
}

#nav
{
    background-color: #33ccff;
    height: 120px;
}

#container
{
    background-color: #ccffcc;
}

#leftcol
{
    background-color: #ffcccc;
    height: 150px;
    width: 100%;
}

#pagecontent
{
    background-color: #99ccff;
    height: 500px;
    width: 100%;
}

#footer
{
    background-color: #ff0099;
    height: 100px;
    clear: left;
}

#div1
{
    background-color: #ccffcc;
    width: 50%;
    height: 200px;
```

```
        float: left;
    }

#div2
{
    background-color: #cccc99;
    width: 50%;
    height: 200px;
    float: left;
}

#div3
{
    background-color: #00ff33;
    width: 50%;
    height: 200px;
    float: left;
    clear: left;
}

#div4
{
    background-color: #ffff99;
    width: 50%;
    height: 200px;
    float: left;
}

}

@media (min-width: 300px) and (max-width: 767px)
{
    body, input
    {
        font-family: Tahoma;
        font-size: 28px;
    }

    *
    {
        margin: 0px;
        padding: 0px;
    }

    #outercontainer
    {
        background-color: #00ffcc;
        width: 98%;
        margin: auto;
    }
}
```

```
#header
{
    background-color: #0066cc;
    height: 200px;
}

#nav
{
    background-color: #33ccff;
    height: 120px;
}

#container
{
    background-color: #ccffcc;
}

#leftcol
{
    background-color: #ffcccc;
    height: 150px;
    width: 100%;
}

#pagecontent
{
    background-color: #99ccff;
    height: 850px;
    width: 100%;
}

#footer
{
    background-color: #ff0099;
    height: 100px;
    clear: left;
}

#div1
{
    background-color: #ccffcc;
    width: 100%;
    height: 200px;
}

#div2
{
    background-color: #cccc99;
    width: 100%;
    height: 200px;
}

#div3
{
    background-color: #00ff33;
    width: 100%;
    height: 200px;
```

```
}
```

```
#div4
```

```
{
```

```
background-color: #ffff99;
```

```
width: 100%;
```

```
height: 200px;
```

```
}
```

```
}
```

HARSHA

BOOTSTRAP

Fundamentals of Bootstrap

Introduction to Bootstrap

- “Bootstrap” is a “CSS framework”, developed by “Twitter” company, which is a collection of ready-made “css classes”, which can be used in web pages to apply styles to the elements easily.
- Bootstrap can be used without css knowledge also. To customize the bootstrap styles, CSS knowledge is required.
- Bootstrap provides responsive web design by default.
- Bootstrap was developed based on “jQuery” and “Popper”.
- jQuery is a JavaScript library, which provides a set of functions to perform DOM manipulations easily.
- Popper is a JavaScript library, which provides a set of functions to display popup messages.

Preparing Environment for Bootstrap

Downloading Bootstrap

- Go to “<http://getbootstrap.com>”.
- Select the latest version in the dropdownlist (Ex: v4.1). It by default, selects the latest version.
- Click on “Download”.
- Click on “Download” again under "Compiled CSS and JS".
- Download the file “bootstrap-4.1.1.zip”.
- Go to the downloaded location, right click on the “bootstrap-4.1.1.zip” file and click on “Extract All”.
- After extracting, you will get extracted folder.
- Copy the following files from “extracted folder (bootstrap-4.1.1)”, into “application folder (c:\bootstrap)”.
 - css\bootstrap.css
 - js\bootstrap.js

Downloading jQuery

- Go to “<http://jquery.com>”.
- Click on “Download jQuery 3.3.1” (version number may vary).
- Click on “Download the uncompressed, development jQuery 3.3.1”.
- If required, press "Ctrl+S" to save the file. You will get a file “jquery-3.3.1.js”.
- Copy and paste “jquery-3.3.1.js” file from Downloaded location into “c:\bootstrap” folder.

Downloading Popper

- Go to "https://unpkg.com/popper.js".
- If required, press "Ctrl+S" to save the file. You will get a file "popper.js".
- Copy and paste "popper.js" file from Downloaded location into "c:\bootstrap" folder.

Importing Bootstrap

```
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
```

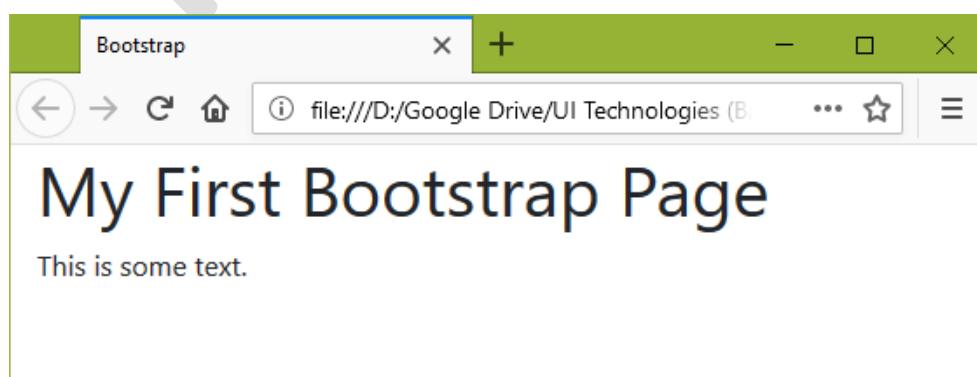
Importing Bootstrap

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

- The "viewport meta tag" is used to set the actual width of the device as width of the web page.
- It is must to make the web page responsive.
- It also sets the initial zoom to "1" (actual size).

First Example on Bootstrap (c:\bootstrap\first.html)

```
<html>
  <head>
    <title>Bootstrap</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
  </head>
  <body>
    <div class="container">
      <h1>My First Bootstrap Page</h1>
      <p>This is some text.</p>
    </div>
  </body>
</html>
```



“container” class

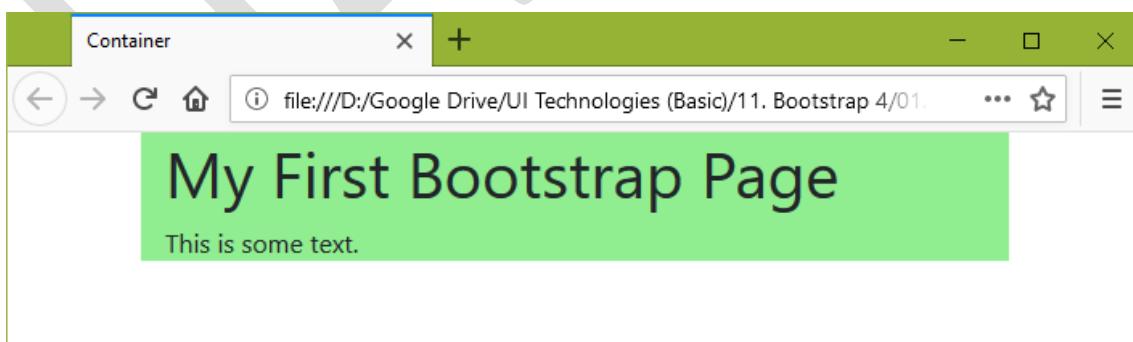
- It acts as “outer container” for the entire page.
- It makes the web page responsive.
- The entire content of the page should be inside the “container”.
- It provides margin left and margin right for the page.

Syntax:

```
<div class="container">
    any content
</div>
```

Example on Container

```
<html>
  <head>
    <title>Container</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
  </head>
  <body>
    <div class="container" style="background-color:lightgreen">
      <h1>My First Bootstrap Page</h1>
      <p>This is some text.</p>
    </div>
  </body>
</html>
```

**“container-fluid” class**

- It also acts as “outer container” for the entire page.
- It also makes the web page responsive.
- The entire content of the page should be inside the “container-fluid”.

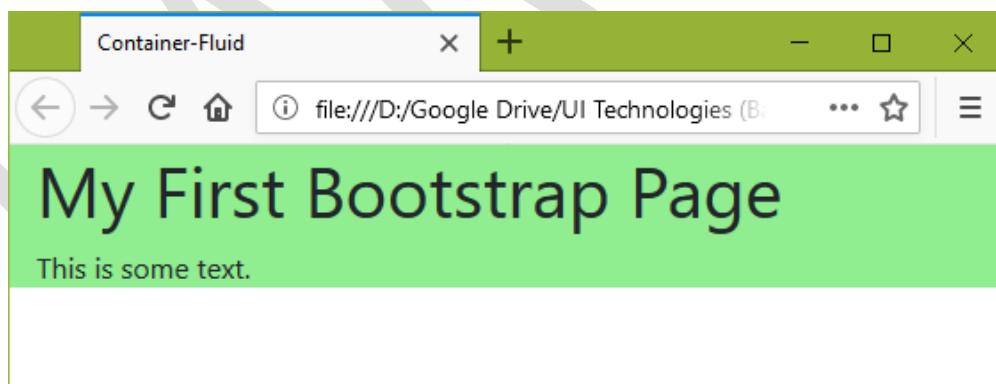
- It removes margin left and margin right for the page. It makes the content occupy the full available width of the web page.

Syntax:

```
<div class="container">  
    any content  
</div>
```

Example on Container-Fluid

```
<html>  
  <head>  
    <title>Container-Fluid</title>  
    <meta charset="utf-8">  
    <meta name="viewport" content="width=device-width, initial-scale=1">  
    <link rel="stylesheet" href="bootstrap.css">  
    <script src="jquery-3.3.1.js"></script>  
    <script src="popper.js"></script>  
    <script src="bootstrap.js"></script>  
  </head>  
  <body>  
    <div class="container-fluid" style="background-color:lightgreen">  
      <h1>My First Bootstrap Page</h1>  
      <p>This is some text.</p>  
    </div>  
  </body>  
</html>
```



Colors

Text Colors

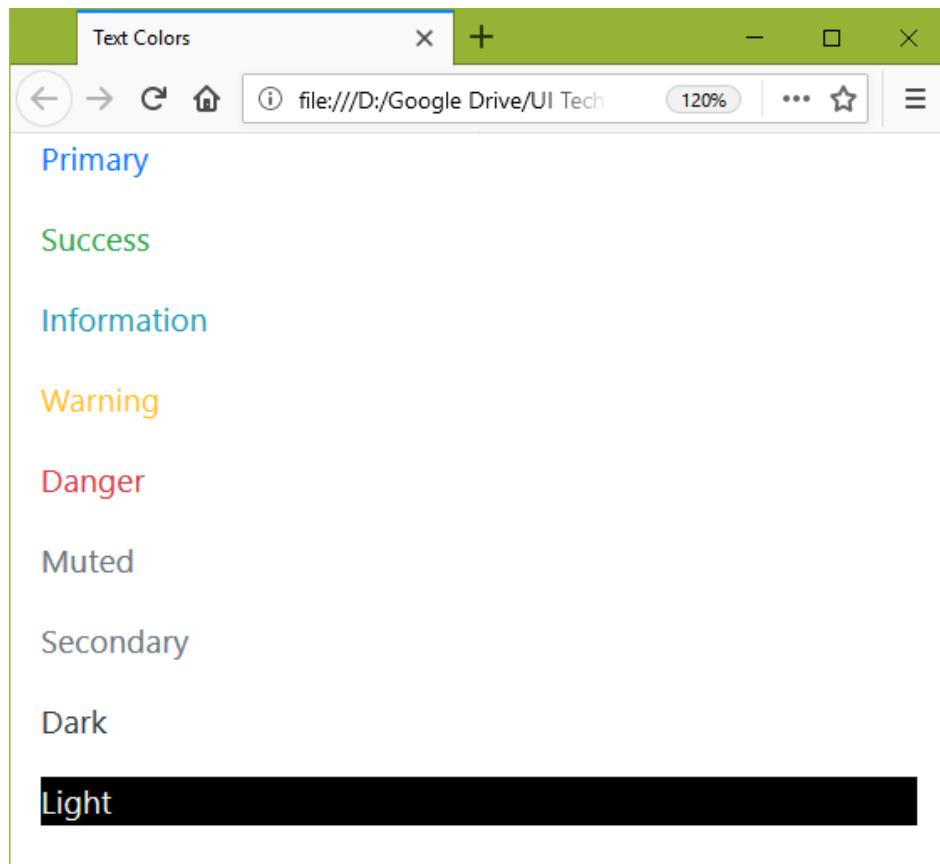
- It is used to set colors of the text.
- Based on the requirement, the developer can use any of the available colors.
- If you want other color, you can use CSS.

List of Classes

- text-primary : Blue text color
- text-success : Green text color
- text-info : Light blue text color
- text-warning : Orange text color
- text-danger : Red text color
- text-muted : Grey color
- text-secondary : Darker grey text color
- text-dark : Dark grey text color
- text-light : Light grey text color

Example on Text Colors

```
<html>
<head>
  <title>Text Colors</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>
<body>
  <div class="container">
    <p class="text-primary">Primary</p>
    <p class="text-success">Success</p>
    <p class="text-info">Information</p>
    <p class="text-warning">Warning</p>
    <p class="text-danger">Danger</p>
    <p class="text-muted">Muted</p>
    <p class="text-secondary">Secondary</p>
    <p class="text-dark">Dark</p>
    <p class="text-light" style="background-color:black">Light</p>
  </div>
</body>
</html>
```



Background Colors

- It is used to set background colors of the element.
- Based on the requirement, the developer can use any of the available colors.
- If you want other color, you can use CSS.

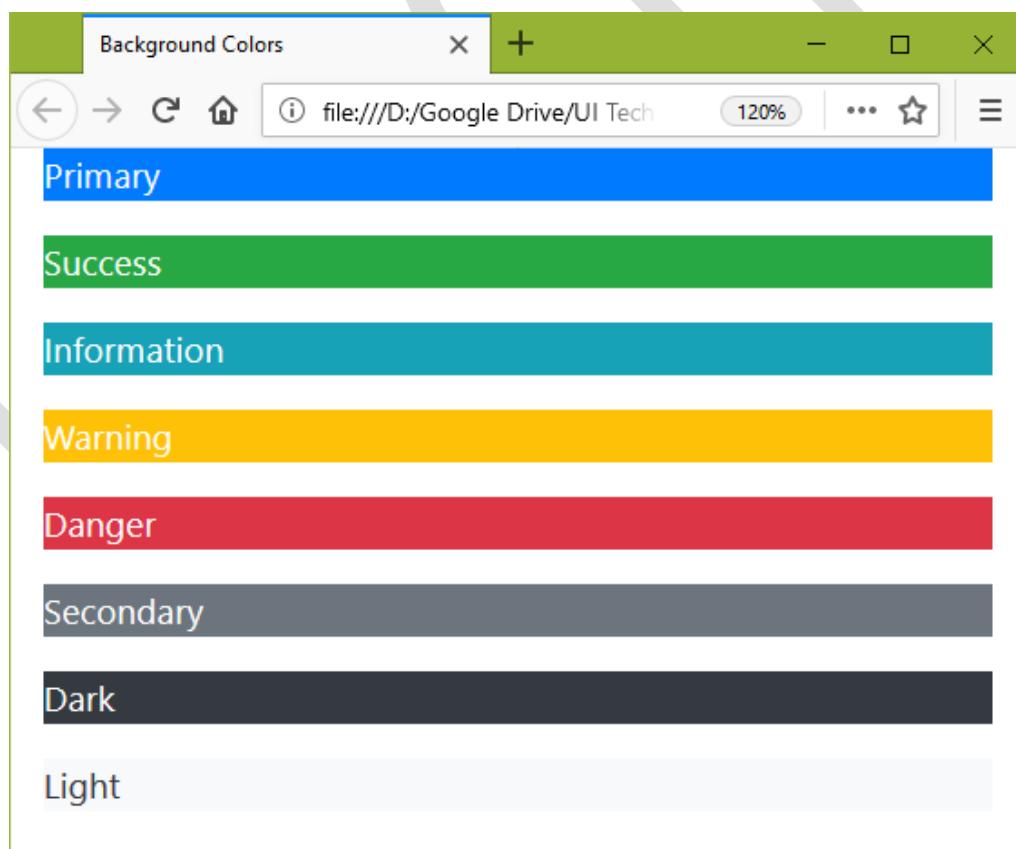
List of Classes

- bg-primary : Blue background color
- bg-success : Green background color
- bg-info : Light blue background color
- bg-warning : Orange background color
- bg-danger : Red background color
- bg-secondary : Grey background color
- bg-dark : Dark grey background color
- bg-light : Light grey background color

Example on Background Colors

```
<html>
<head>
```

```
<title>Background Colors</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container">
<p class="bg-primary text-white">Primary</p>
<p class="bg-success text-white">Success</p>
<p class="bg-info text-white">Information</p>
<p class="bg-warning text-white">Warning</p>
<p class="bg-danger text-white">Danger</p>
<p class="bg-secondary text-white">Secondary</p>
<p class="bg-dark text-white">Dark</p>
<p class="bg-light text-dark">Light</p>
</div>
</body>
</html>
```



Text

Display Headings

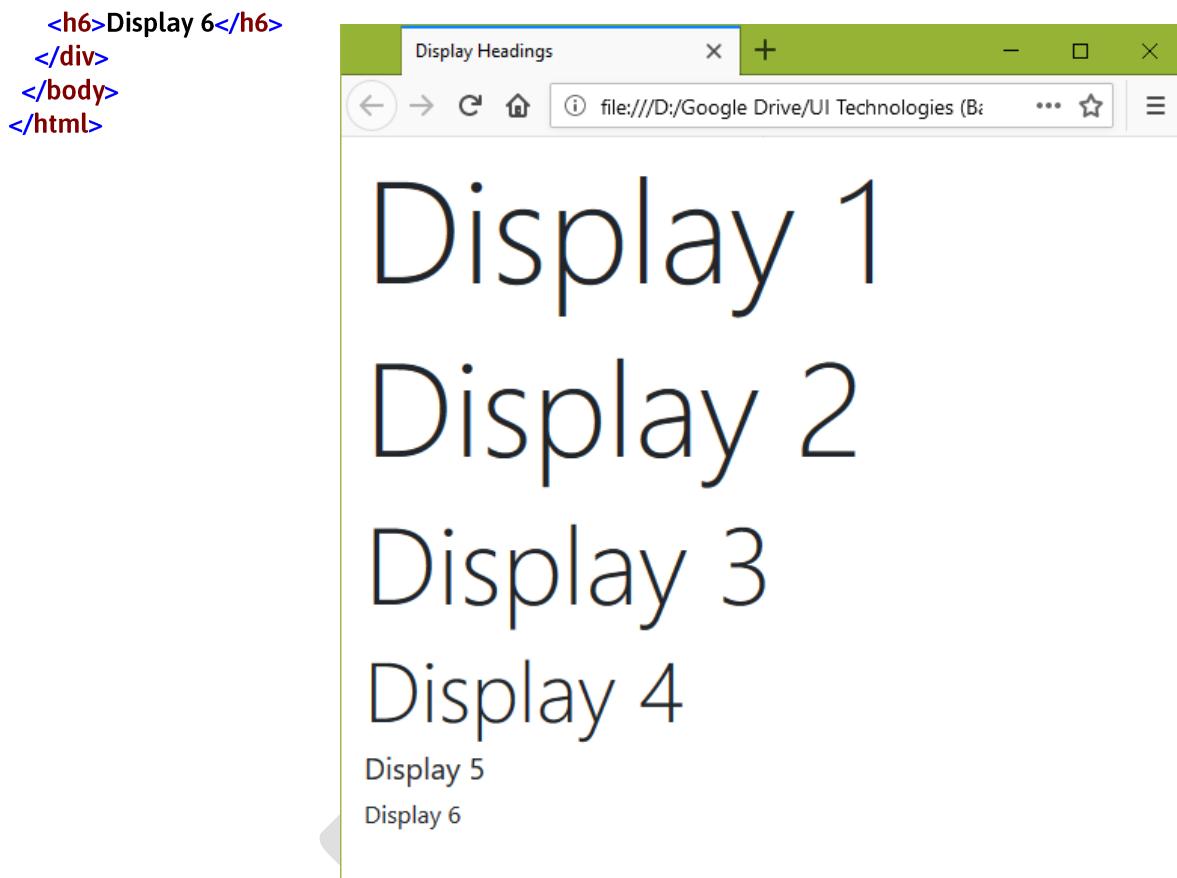
- It is used to display headings with thin text and larger font size.

List of Classes

- display-1 : Display Heading 1
- display-2 : Display Heading 2
- display-3 : Display Heading 3
- display-4 : Display Heading 4

Example on Display Headings

```
<html>
<head>
<title>Display Headings</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container">
<h1 class="display-1">Display 1</h1>
<h2 class="display-2">Display 2</h2>
<h3 class="display-3">Display 3</h3>
<h4 class="display-4">Display 4</h4>
<h5>Display 5</h5>
```



Text Alignment

- We can apply text alignment, by using the following bootstrap css classes.
- Default is "left alignment".

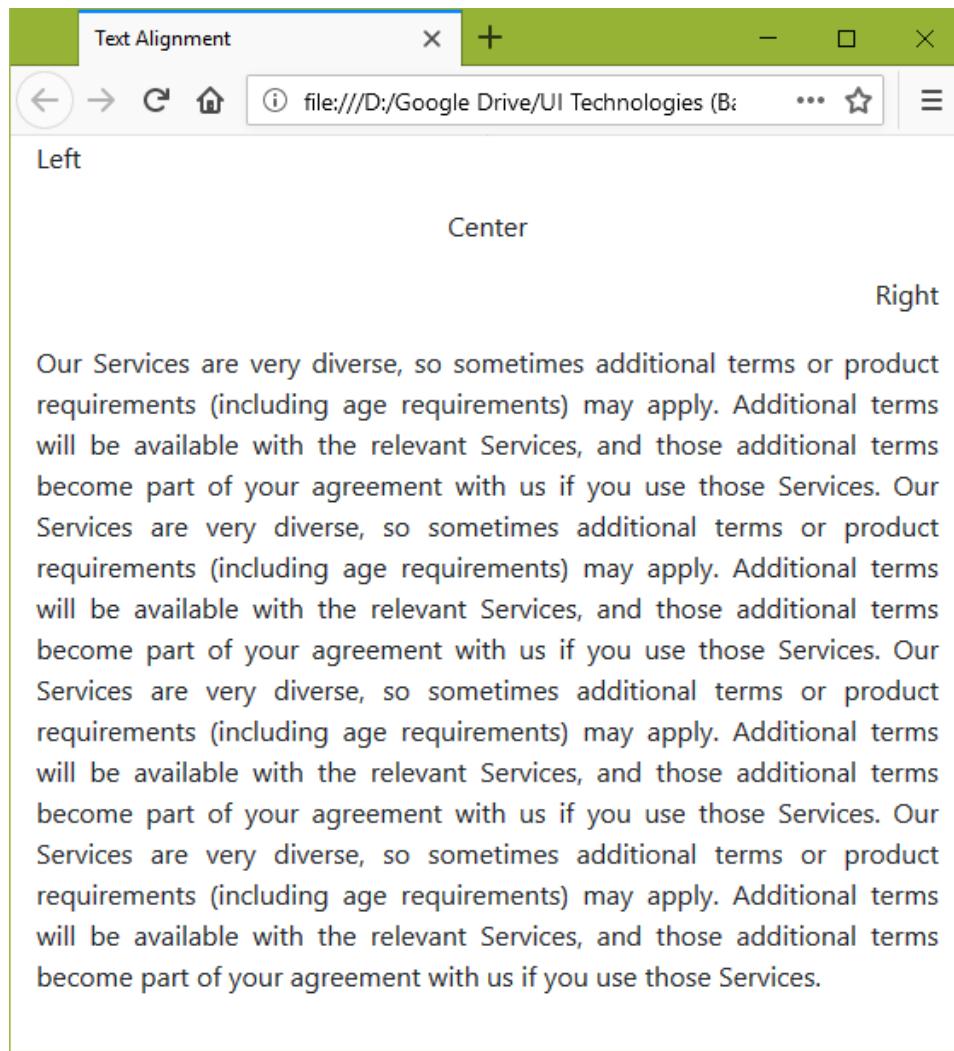
List of Classes

- text-left : Left alignment
- text-center : Center alignment
- text-right : Right alignment
- text-justify : Justify alignment

Example on Text Alignment

```
<html>
  <head>
    <title>Text Alignment</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
```

```
</head>
<body>
<div class="container">
<p class="text-left">Left</p>
<p class="text-center">Center</p>
<p class="text-right">Right</p>
<p class="text-justify">Our Services are very diverse, so sometimes additional terms or product requirements (including age requirements) may apply. Additional terms will be available with the relevant Services, and those additional terms become part of your agreement with us if you use those Services. Our Services are very diverse, so sometimes additional terms or product requirements (including age requirements) may apply. Additional terms will be available with the relevant Services, and those additional terms become part of your agreement with us if you use those Services. Our Services are very diverse, so sometimes additional terms or product requirements (including age requirements) may apply. Additional terms will be available with the relevant Services, and those additional terms become part of your agreement with us if you use those Services. Our Services are very diverse, so sometimes additional terms or product requirements (including age requirements) may apply. Additional terms will be available with the relevant Services, and those additional terms become part of your agreement with us if you use those Services.</p>
</div>
</body>
</html>
```



Text Styles

- The following set of bootstrap classes are used to set text styles such as bold, italic, uppercase etc.

List of Classes

- font-weight-bold : Bold text
- font-weight-light : Light weight text
- font-italic : Italic text
- text-lowercase : Lowercase
- text-uppercase : Uppercase
- text-capitalize : Capitalize

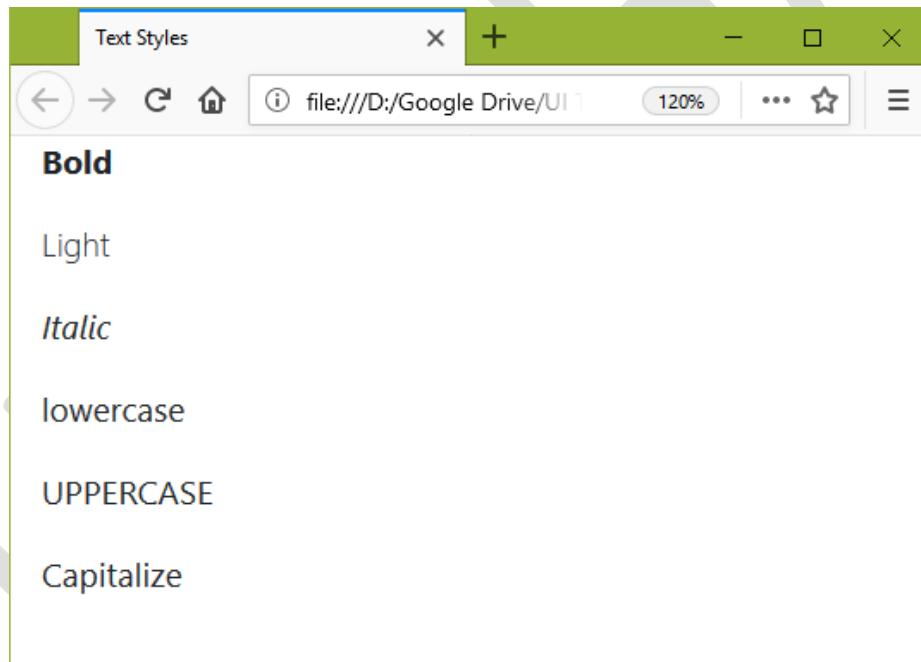
Example on Text Styles

```
<html>
<head>
<title>Text Styles</title>
```

```

<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container">
<p class="font-weight-bold">Bold</p>
<p class="font-weight-light">Light</p>
<p class="font-italic">Italic</p>
<p class="text-lowercase">Lowercase</p>
<p class="text-uppercase">Uppercase</p>
<p class="text-capitalize">Capitalize</p>
</div>
</body>
</html>

```



Lead

- It is used to display a leading paragraph (in larger font size and more line height).

List of Classes

- lead : Paragraph with larger font size and larger line height

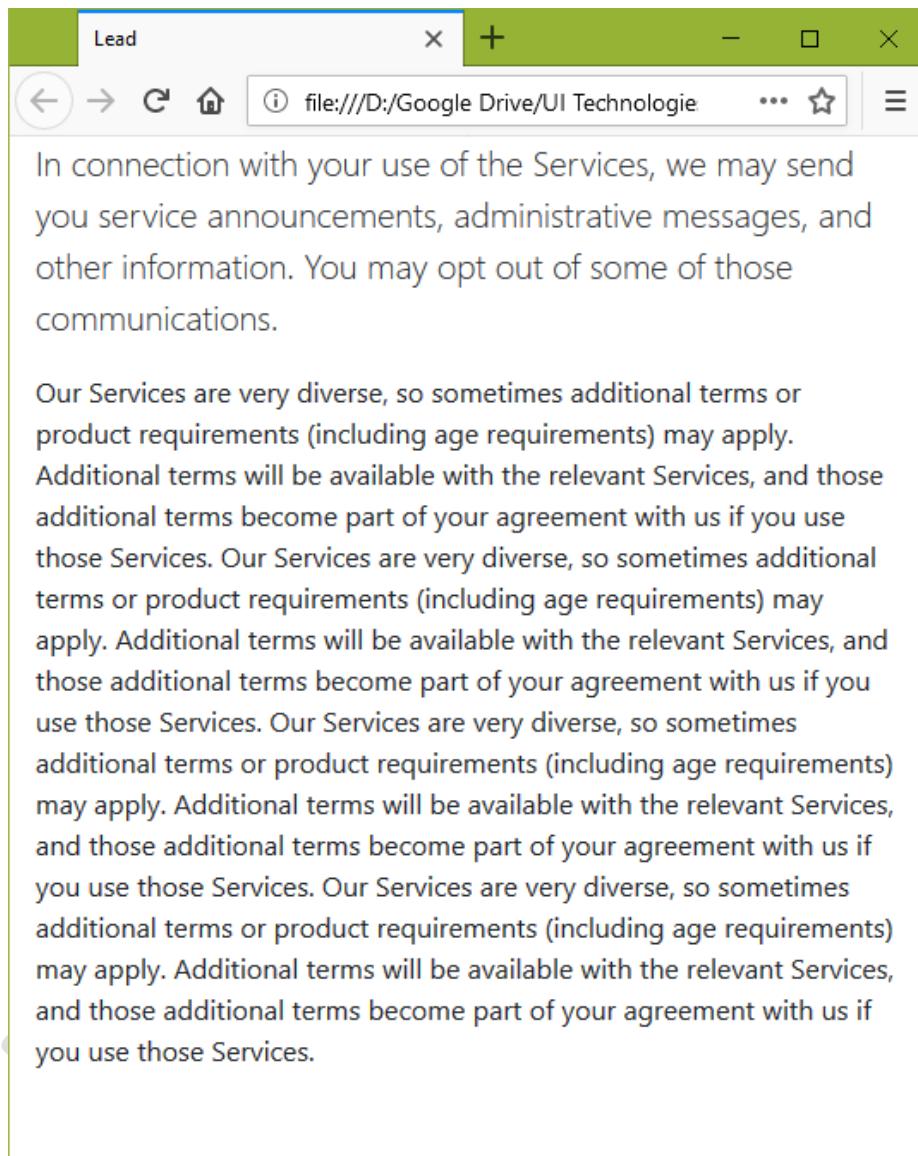
Example on Lead

```

<html>
<head>
<title>Lead</title>

```

```
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container">
<p class="lead">In connection with your use of the Services, we may send you service announcements, administrative messages, and other information. You may opt out of some of those communications.</p>
<p>Our Services are very diverse, so sometimes additional terms or product requirements (including age requirements) may apply. Additional terms will be available with the relevant Services, and those additional terms become part of your agreement with us if you use those Services. Our Services are very diverse, so sometimes additional terms or product requirements (including age requirements) may apply. Additional terms will be available with the relevant Services, and those additional terms become part of your agreement with us if you use those Services. Our Services are very diverse, so sometimes additional terms or product requirements (including age requirements) may apply. Additional terms will be available with the relevant Services, and those additional terms become part of your agreement with us if you use those Services. Our Services are very diverse, so sometimes additional terms or product requirements (including age requirements) may apply. Additional terms will be available with the relevant Services, and those additional terms become part of your agreement with us if you use those Services. Our Services are very diverse, so sometimes additional terms or product requirements (including age requirements) may apply. Additional terms will be available with the relevant Services, and those additional terms become part of your agreement with us if you use those Services.</p>
</div>
</body>
</html>
```



Visibility

- It is used to show / hide the element in the web page.

List of Classes

- visible : Element is visible
- invisible : Element is invisible

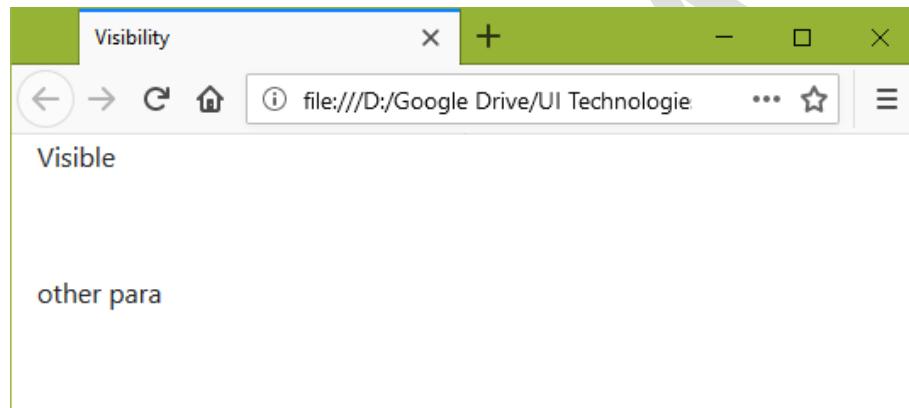
Example on Visibility

```
<html>
<head>
<title>Visibility</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
```

```

<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container">
<p class="visible">Visible</p>
<p class="invisible">Invisible</p>
<p>other para</p>
</div>
</body>
</html>

```



Grid System

Understanding the Columns

- It is used to divide the web page as rows.
- Each row contains 12 equal blocks / columns.
- A <div> tag can occupy one or more blocks.
- A row can have maximum 12 <div> tags.

row



List of Classes

- .col-n : Specifies how many columns are occupied by the <div> tag

Example on Grid System - 12

```

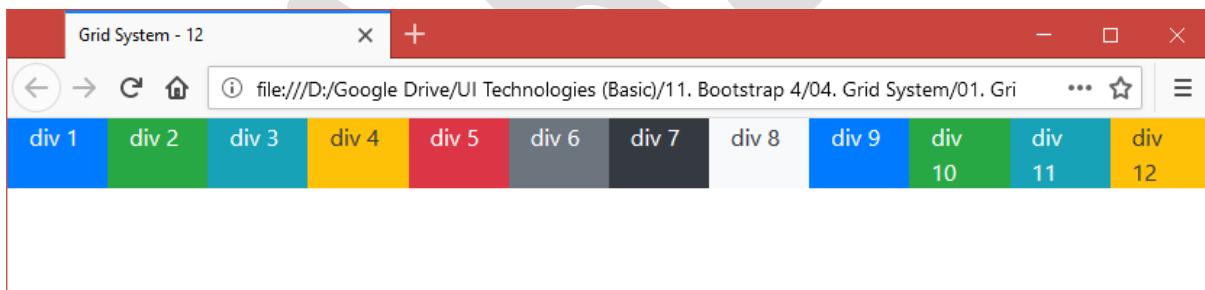
<html>
<head>

```

```

<title>Grid System - 12</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
<div class="row">
<div class="col-1 bg-primary text-white">div 1</div>
<div class="col-1 bg-success text-white">div 2</div>
<div class="col-1 bg-info text-white">div 3</div>
<div class="col-1 bg-warning text-dark">div 4</div>
<div class="col-1 bg-danger text-white">div 5</div>
<div class="col-1 bg-secondary text-white">div 6</div>
<div class="col-1 bg-dark text-white">div 7</div>
<div class="col-1 bg-light text-dark">div 8</div>
<div class="col-1 bg-primary text-white">div 9</div>
<div class="col-1 bg-success text-white">div 10</div>
<div class="col-1 bg-info text-white">div 11</div>
<div class="col-1 bg-warning text-dark">div 12</div>
</div>
</div>
</body>
</html>

```



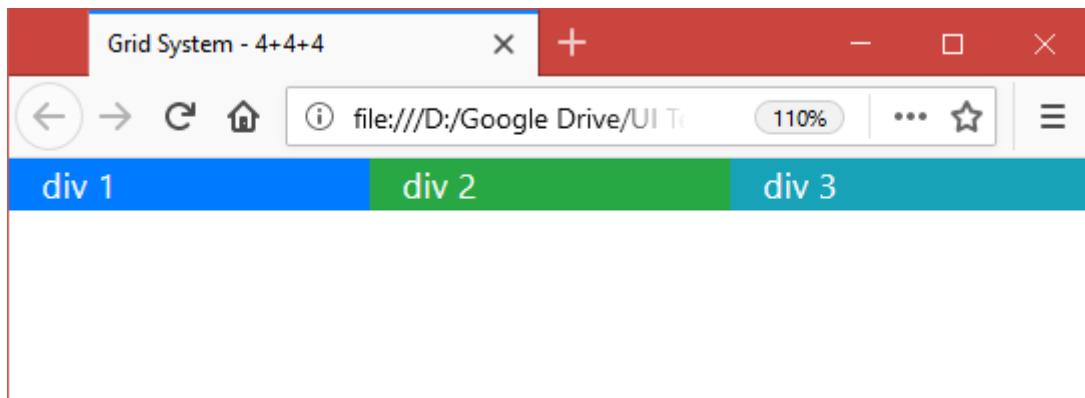
Example on Grid System - 4+4+4

```

<html>
<head>
<title>Grid System - 4+4+4</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
<div class="row">

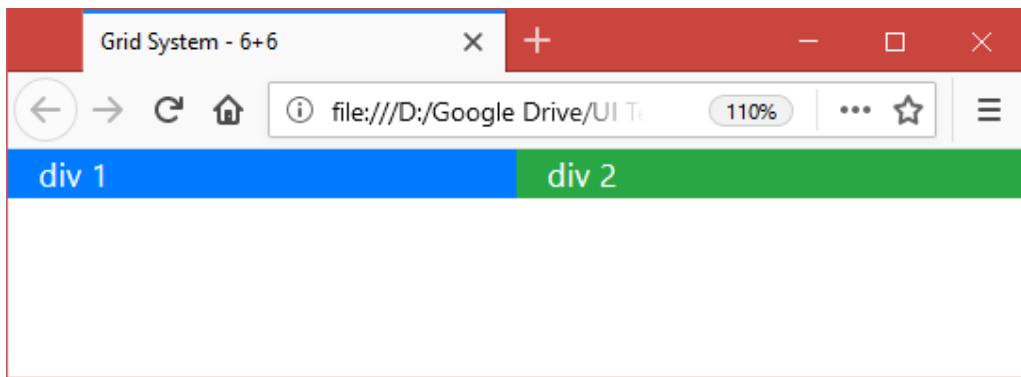
```

```
<div class="col-4 bg-primary text-white">div 1</div>
<div class="col-4 bg-success text-white">div 2</div>
<div class="col-4 bg-info text-white">div 3</div>
</div>
</div>
</body>
</html>
```



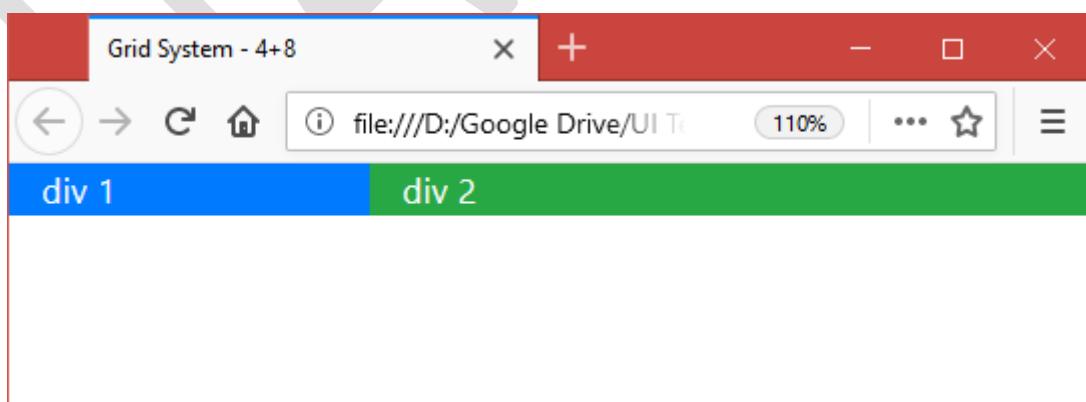
Example on Grid System - 6+6

```
<html>
<head>
  <title>Grid System - 6+6</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>
<body>
  <div class="container-fluid">
    <div class="row">
      <div class="col-6 bg-primary text-white">div 1</div>
      <div class="col-6 bg-success text-white">div 2</div>
    </div>
  </div>
</body>
</html>
```



Example on Grid System - 4+8

```
<html>
<head>
    <title>Grid System - 4+8</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
</head>
<body>
    <div class="container-fluid">
        <div class="row">
            <div class="col-4 bg-primary text-white">div 1</div>
            <div class="col-8 bg-success text-white">div 2</div>
        </div>
    </div>
</body>
</html>
```



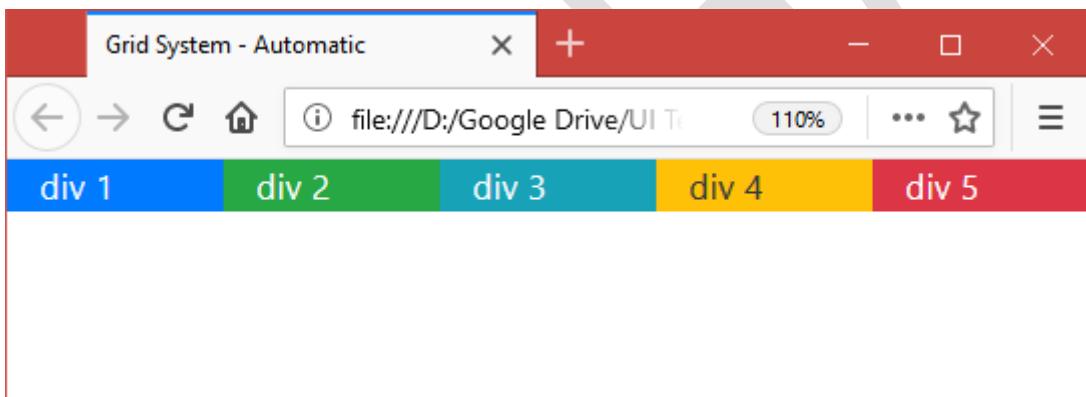
Example on Grid System - Automatic

```
<html>
<head>
    <title>Grid System - Automatic</title>
    <meta charset="utf-8">
```

```

<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
<div class="row">
<div class="col bg-primary text-white">div 1</div>
<div class="col bg-success text-white">div 2</div>
<div class="col bg-info text-white">div 3</div>
<div class="col bg-warning text-dark">div 4</div>
<div class="col bg-danger text-white">div 5</div>
</div>
</div>
</body>
</html>

```



Grid System with Responsive Web Design

- It is used to display the content differently on different devices, based on the screen resolution.
- It makes the web page fit for the current resolution automatically.
- We divide the devices into 5 types.

Sl. No	Type of Device	Screen width (pixels)	Examples
1	Extra Small Devices	1px to 575px	iPhone 2G, 3G (320px / 480px height)
2	Small Devices	576px to 767px	iPhone 4, 4S (640px width / 960px height) iPhone 5, 5C, 5C, SE (640px width / 1136px) iPhone 6, 6S, 7, 8 (750px width / 1134px height)
3	Medium Devices	768px to 991px	Samsung Note 1 (800px width / 1280px height)

4	Large Devices	992px to 1199px	iPhone 6 Plus (1080px width / 1920px height) iPhone 10 (1125px width / 2436px height)
5	Extra Large Devices	1200px to unlimited	iPhone 7+, 8+ (1242px width / 2208px height) Most-used laptops

Extra Small Devices:

- Very-Low-range Phones: Screens between 1px to 575px width.
- Ex: iPhone 2G, 3G (320px width / 480px height)

```
<div class="col -n">...</div>
```

```
<div class="col -n">...</div>
```

...

Small Devices:

- Low-range phones & Tablets: Screens between 576px to 767px width.
- Ex: iPhone 4, 4s (640px width / 960px height)
- Ex: iPhone 5, 5s, 5C, SE (640px width / 1136px height)
- Ex: iPhone 6, 6s, 7, 8 (750px width / 1334px height)

```
<div class="col-sm-n">...</div>
```

```
<div class="col-sm-n">...</div>
```

...

Medium Devices:

- Lower-mid range phones & Small laptops: Screens between 768px to 991px width.
- Ex: Samsung Note 1 (800px width / 1280px height)

```
<div class="col-md-n">...</div>
```

```
<div class="col-md-n">...</div>
```

...

Large Devices:

- Mid-range phones & Small laptops: Screens between 992px to 1199px width.
- Ex: iPhone 6 Plus (1080px width / 1920px height)
- Ex: iPhone 10 (1125px width / 2436px height)

```
<div class="col-lg-n">...</div>
```

```
<div class="col-lg-n">...</div>
```

...

Extra Large Devices:

- High-end phones & Most used laptops: Screens between 1200px to unlimited width.
- Ex: iPhone 7+, 8+ (1242px width / 2208px height)
- Ex: iPad (all types)

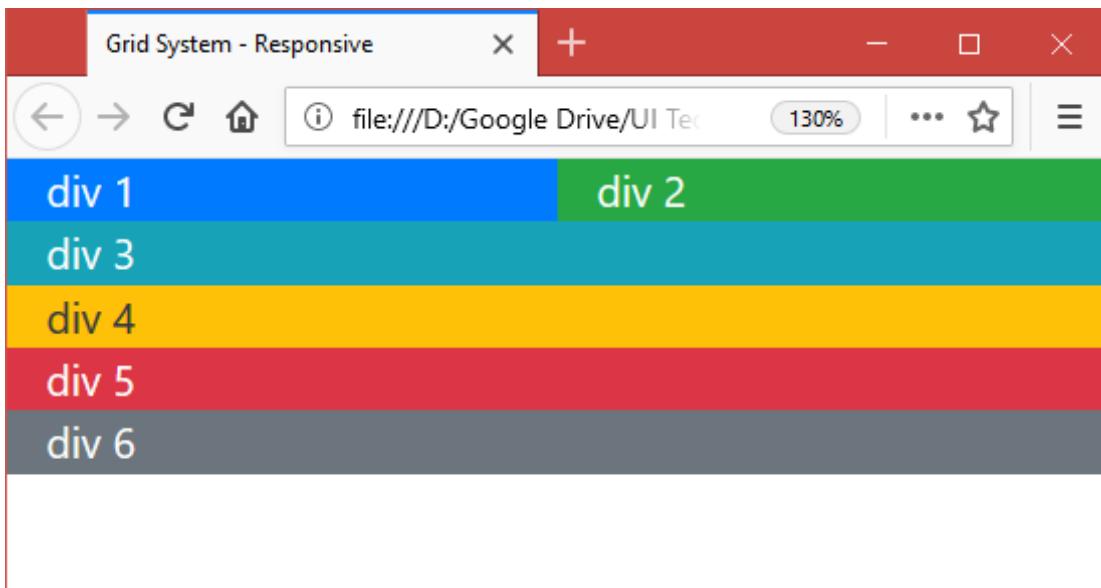
```
<div class="col-lg-n">...</div>
```

```
<div class="col-lg-n">...</div>
```

...

Example on Grid System - Responsive

```
<html>
<head>
  <title>Grid System - Responsive</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>
<body>
  <div class="container-fluid">
    <div class="row">
      <div class="col-xl-2 col-lg-3 col-md-4 col-sm-6 col-6 bg-primary text-white">div 1</div>
      <div class="col-xl-2 col-lg-3 col-md-4 col-sm-6 col-6 bg-success text-white">div 2</div>
      <div class="col-xl-2 col-lg-3 col-md-4 col-sm-6 col-12 bg-info text-white">div 3</div>
      <div class="col-xl-2 col-lg-3 col-md-4 col-sm-6 col-12 bg-warning text-dark">div 4</div>
      <div class="col-xl-2 col-lg-6 col-md-4 col-sm-6 col-12 bg-danger text-white">div 5</div>
      <div class="col-xl-2 col-lg-6 col-md-4 col-sm-6 col-12 bg-secondary text-white">div 6</div>
    </div>
  </div>
</body>
</html>
```



Example on Grid System - Responsive - With Content

```

<html>
  <head>
    <title>Grid System - Responsive - Content</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
  </head>
  <body>
    <div class="container-fluid">
      <div class="row">
        <div class="col-xl-2 col-lg-3 col-md-4 col-sm-6 col-6 bg-primary text-white">
          <h1>Welcome to Google!</h1>
          <p>Our Services are very diverse, so sometimes additional terms or product requirements (including age requirements) may apply. Additional terms will be available with the relevant Services, and those additional terms become part of your agreement with us if you use those Services.</p>
        </div>
        <div class="col-xl-2 col-lg-3 col-md-4 col-sm-6 col-6 bg-success text-white">
          <h1>Welcome to Google!</h1>
          <p>Our Services are very diverse, so sometimes additional terms or product requirements (including age requirements) may apply. Additional terms will be available with the relevant Services, and those additional terms become part of your agreement with us if you use those Services.</p>
        </div>
        <div class="col-xl-2 col-lg-3 col-md-4 col-sm-6 col-12 bg-info text-white">
          <h1>Welcome to Google!</h1>
          <p>Our Services are very diverse, so sometimes additional terms or product requirements (including age requirements) may apply. Additional terms will be available with the relevant Services, and those additional terms become part of your agreement with us if you use those Services.</p>
        </div>
        <div class="col-xl-2 col-lg-3 col-md-4 col-sm-6 col-12 bg-warning text-dark">

```

```
<h1>Welcome to Google!</h1>
<p>Our Services are very diverse, so sometimes additional terms or product requirements
(including age requirements) may apply. Additional terms will be available with the relevant Services,
and those additional terms become part of your agreement with us if you use those Services.</p>
</div>
<div class="col-xl-2 col-lg-6 col-md-4 col-sm-6 col-12 bg-danger text-white">
<h1>Welcome to Google!</h1>
<p>Our Services are very diverse, so sometimes additional terms or product requirements
(including age requirements) may apply. Additional terms will be available with the relevant Services,
and those additional terms become part of your agreement with us if you use those Services.</p>
</div>
<div class="col-xl-2 col-lg-6 col-md-4 col-sm-6 col-12 bg-secondary text-white">
<h1>Welcome to Google!</h1>
<p>Our Services are very diverse, so sometimes additional terms or product requirements
(including age requirements) may apply. Additional terms will be available with the relevant Services,
and those additional terms become part of your agreement with us if you use those Services.</p>
</div>
</div>
</div>
</body>
</html>
```



Jumbotron

Jumbotron

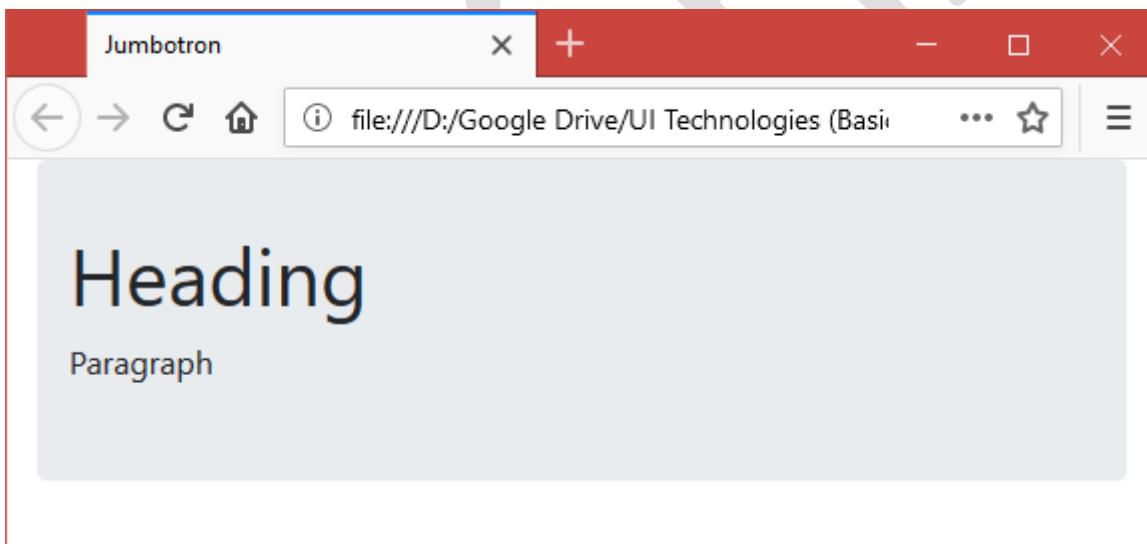
- It is used to display heading and paragraph in large size with a special box to highlight its content.

List of Classes

- jumbotron : Large heading and paragraph.

Example on Jumbotron

```
<html>
<head>
<title>Jumbotron</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
<div class="jumbotron">
<h1>Heading</h1>
<p>Paragraph</p>
</div>
</div>
</body>
</html>
```



Images

Image Shapes

- It is used to display images with rounded corners.

List of Classes

- rounded : Rounded corners
- rounded-circle : Circle-shaped image
- img-thumbnail : Bordered image

Example on Image Shapes

```
<html>
<head>
    <title>Image Shapes</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
</head>
<body>
    <div class="container-fluid">
        
        
        
    </div>
</body>
</html>
```



Image Alignment

- It is used to specify horizontal alignment of the image.

List of Classes

- float-left : Left alignment
- float-right : Right alignment
- mx-auto : Center alignment
- d-block : Display the image as a block; this is needed to apply "mx-auto".

Example on Image Alignment

```
<html>
<head>
    <title>Image Alignment</title>
    <meta charset="utf-8">
```

```
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
  
  
  
</div>
</body>
</html>
```



Image Fluid

- It is used to display reduce the size of the image automatically, if the page width is reduced.

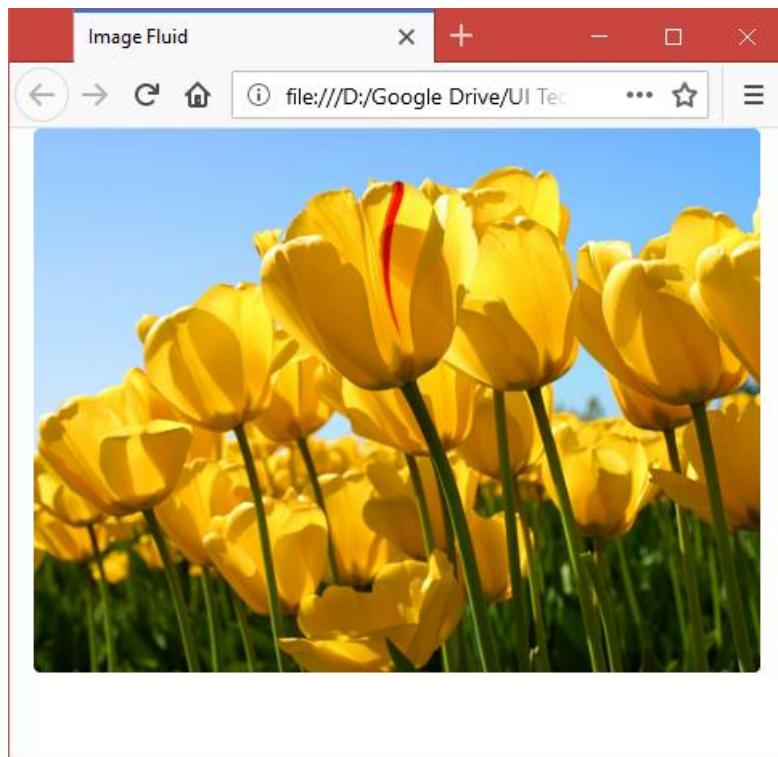
List of Classes

- img-fluid : Image size automatically gets reduced if the screen width is reduced.

Example on Image Fluid

```
<html>
<head>
<title>Image Fluid</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
  
</div>
</body>
```

</html>



Tables

Basic Table

- It is used to display table with expand width and padding, horizontal borders.

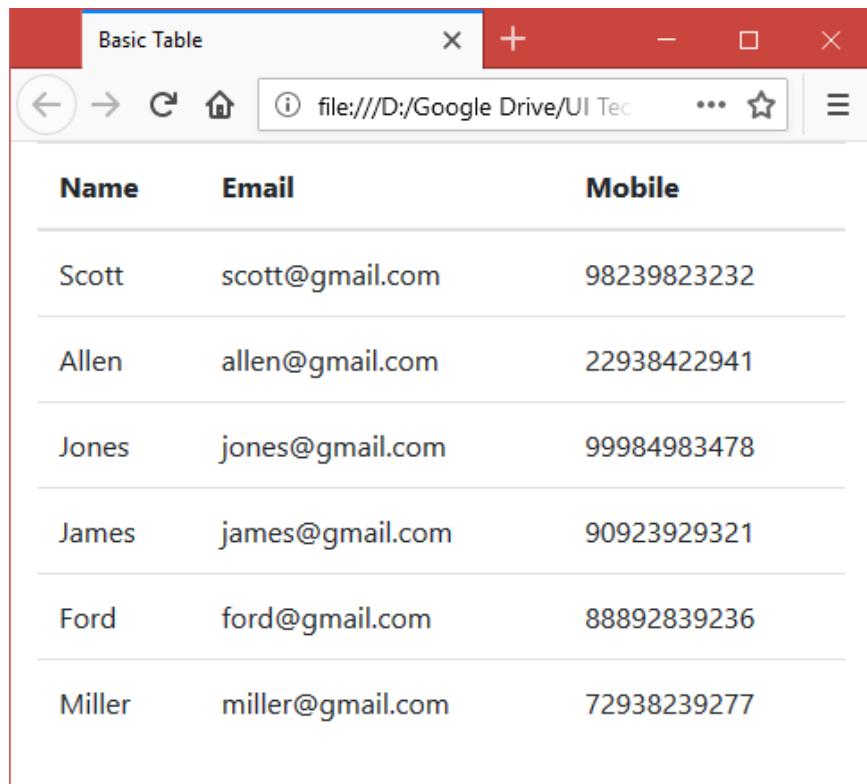
List of Classes

- table : bootstrap table style.

Example on Basic Table

```
<html>
<head>
  <title>Basic Table</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>
<body>
  <div class="container">
    <table class="table">
      <thead>
        <tr>
```

```
<th>Name</th>
<th>Email</th>
<th>Mobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scott</td>
<td>scott@gmail.com</td>
<td>9823982323</td>
</tr>
<tr>
<td>Allen</td>
<td>allen@gmail.com</td>
<td>22938422941</td>
</tr>
<tr>
<td>Jones</td>
<td>jones@gmail.com</td>
<td>99984983478</td>
</tr>
<tr>
<td>James</td>
<td>james@gmail.com</td>
<td>90923929321</td>
</tr>
<tr>
<td>Ford</td>
<td>ford@gmail.com</td>
<td>88892839236</td>
</tr>
<tr>
<td>Miller</td>
<td>miller@gmail.com</td>
<td>72938239277</td>
</tr>
</tbody>
</table>
</div>
</body>
</html>
```



A screenshot of a web browser window titled "Basic Table". The address bar shows the URL as file:///D:/Google Drive/UI Tec. The table has a red border and contains six rows of data:

Name	Email	Mobile
Scott	scott@gmail.com	98239823232
Allen	allen@gmail.com	22938422941
Jones	jones@gmail.com	99984983478
James	james@gmail.com	90923929321
Ford	ford@gmail.com	88892839236
Miller	miller@gmail.com	72938239277

Borderless Table

- It is used to display table without borders.

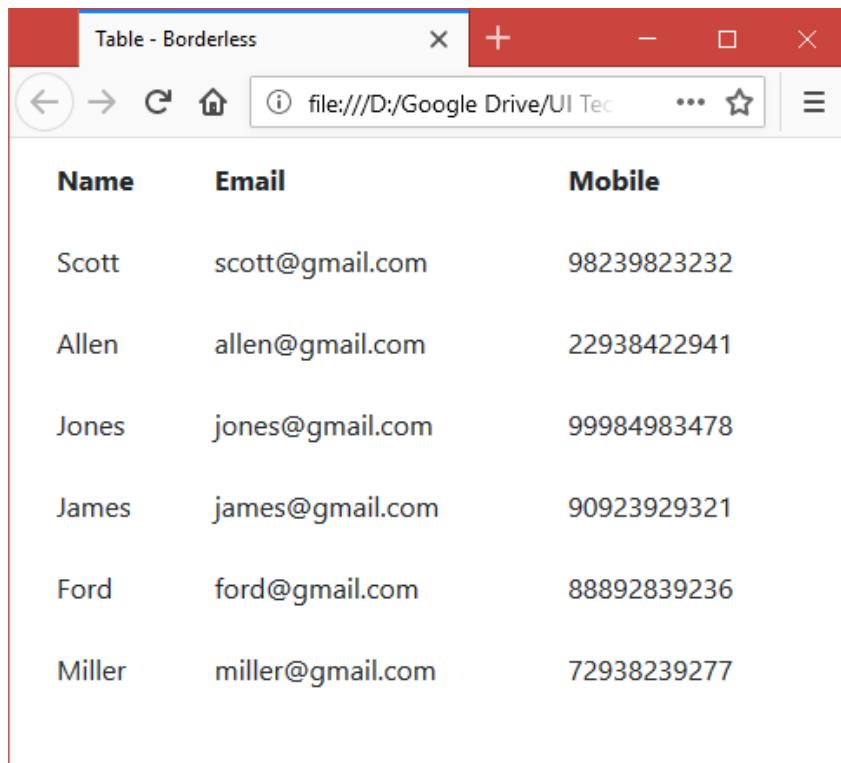
List of Classes

- `table-borderless` : Table without border

Example on Borderless Table

```
<html>
<head>
  <title>Table - Borderless</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>
<body>
  <div class="container">
    <table class="table table-borderless">
      <thead>
        <tr>
          <th>Name</th>
          <th>Email</th>
          <th>Mobile</th>
        </tr>
      </thead>
```

```
</thead>
<tbody>
<tr>
<td>Scott</td>
<td>scott@gmail.com</td>
<td>9823982323</td>
</tr>
<tr>
<td>Allen</td>
<td>allen@gmail.com</td>
<td>22938422941</td>
</tr>
<tr>
<td>Jones</td>
<td>jones@gmail.com</td>
<td>99984983478</td>
</tr>
<tr>
<td>James</td>
<td>james@gmail.com</td>
<td>90923929321</td>
</tr>
<tr>
<td>Ford</td>
<td>ford@gmail.com</td>
<td>88892839236</td>
</tr>
<tr>
<td>Miller</td>
<td>miller@gmail.com</td>
<td>72938239277</td>
</tr>
</tbody>
</table>
</div>
</body>
</html>
```



The screenshot shows a web browser window titled "Table - Borderless". The address bar indicates the file is located at "file:///D:/Google Drive/UI Tec". The table has a red border around the entire structure. It contains six rows of data with three columns each: "Name", "Email", and "Mobile".

Name	Email	Mobile
Scott	scott@gmail.com	98239823232
Allen	allen@gmail.com	22938422941
Jones	jones@gmail.com	99984983478
James	james@gmail.com	90923929321
Ford	ford@gmail.com	88892839236
Miller	miller@gmail.com	72938239277

Bordered Table

- It is used to display table with both horizontal & vertical borders.

List of Classes

- table-bordered : Table with border

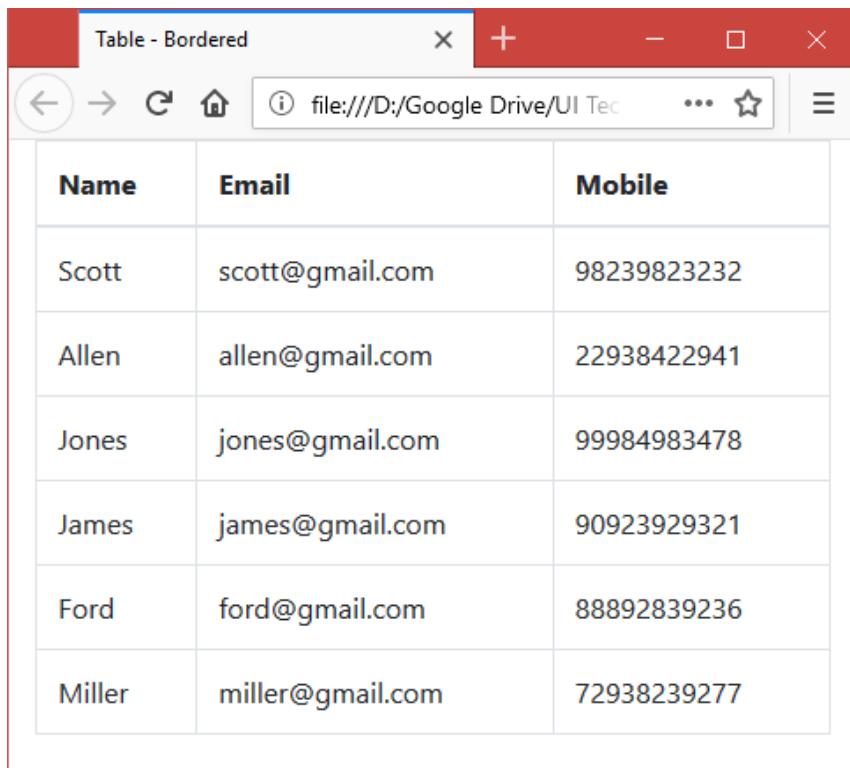
Example on Bordered Table

```

<html>
  <head>
    <title>Table - Bordered</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
  </head>
  <body>
    <div class="container">
      <table class="table table-bordered">
        <thead>
          <tr>
            <th>Name</th>
            <th>Email</th>
            <th>Mobile</th>
          </tr>
        </thead>

```

```
</thead>
<tbody>
<tr>
<td>Scott</td>
<td>scott@gmail.com</td>
<td>9823982323</td>
</tr>
<tr>
<td>Allen</td>
<td>allen@gmail.com</td>
<td>22938422941</td>
</tr>
<tr>
<td>Jones</td>
<td>jones@gmail.com</td>
<td>99984983478</td>
</tr>
<tr>
<td>James</td>
<td>james@gmail.com</td>
<td>90923929321</td>
</tr>
<tr>
<td>Ford</td>
<td>ford@gmail.com</td>
<td>88892839236</td>
</tr>
<tr>
<td>Miller</td>
<td>miller@gmail.com</td>
<td>72938239277</td>
</tr>
</tbody>
</table>
</div>
</body>
</html>
```



A screenshot of a web browser window titled "Table - Bordered". The address bar shows the URL "file:///D:/Google Drive/UI Tec". The main content is a table with the following data:

Name	Email	Mobile
Scott	scott@gmail.com	98239823232
Allen	allen@gmail.com	22938422941
Jones	jones@gmail.com	99984983478
James	james@gmail.com	90923929321
Ford	ford@gmail.com	88892839236
Miller	miller@gmail.com	72938239277

Striped Table

- It is used to display table with alternate row background

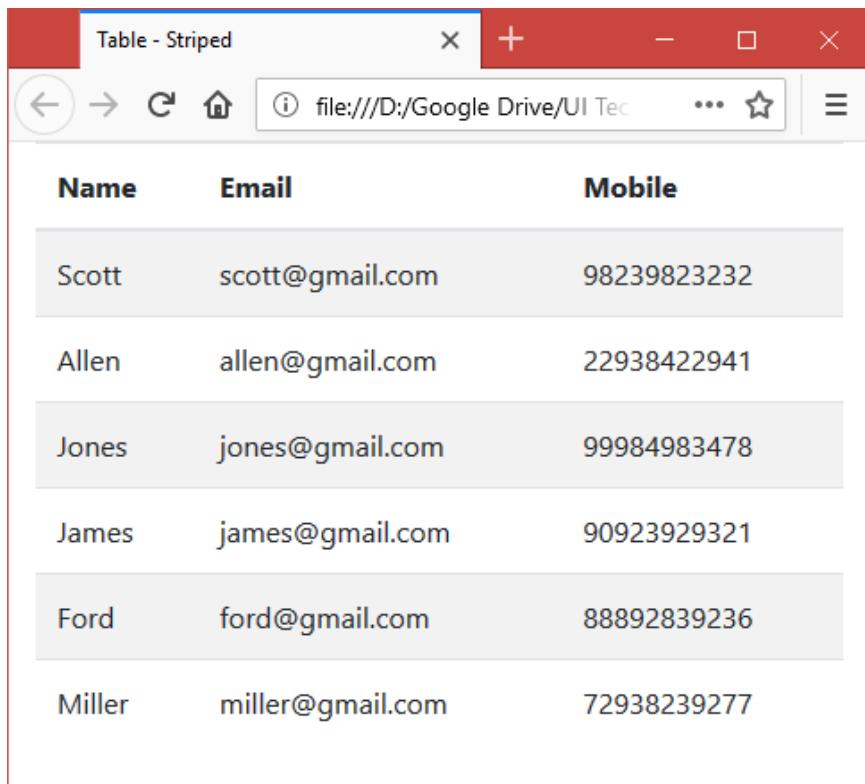
List of Classes

- table-striped : Table with alternate row background.

Example on Striped Table

```
<html>
<head>
  <title>Table - Striped</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>
<body>
  <div class="container">
    <table class="table table-striped">
      <thead>
        <tr>
          <th>Name</th>
          <th>Email</th>
          <th>Mobile</th>
```

```
</tr>
</thead>
<tbody>
<tr>
<td>Scott</td>
<td>scott@gmail.com</td>
<td>98239823232</td>
</tr>
<tr>
<td>Allen</td>
<td>allen@gmail.com</td>
<td>22938422941</td>
</tr>
<tr>
<td>Jones</td>
<td>jones@gmail.com</td>
<td>99984983478</td>
</tr>
<tr>
<td>James</td>
<td>james@gmail.com</td>
<td>90923929321</td>
</tr>
<tr>
<td>Ford</td>
<td>ford@gmail.com</td>
<td>88892839236</td>
</tr>
<tr>
<td>Miller</td>
<td>miller@gmail.com</td>
<td>72938239277</td>
</tr>
</tbody>
</table>
</div>
</body>
</html>
```



The screenshot shows a table titled "Table - Striped" in a browser window. The table has three columns: "Name", "Email", and "Mobile". The rows alternate in background color, with the first row being white and the subsequent rows having a light gray background. The data in the table is as follows:

Name	Email	Mobile
Scott	scott@gmail.com	98239823232
Allen	allen@gmail.com	22938422941
Jones	jones@gmail.com	99984983478
James	james@gmail.com	90923929321
Ford	ford@gmail.com	88892839236
Miller	miller@gmail.com	72938239277

Hover Table

- It is used to display table with background color change on row hover.

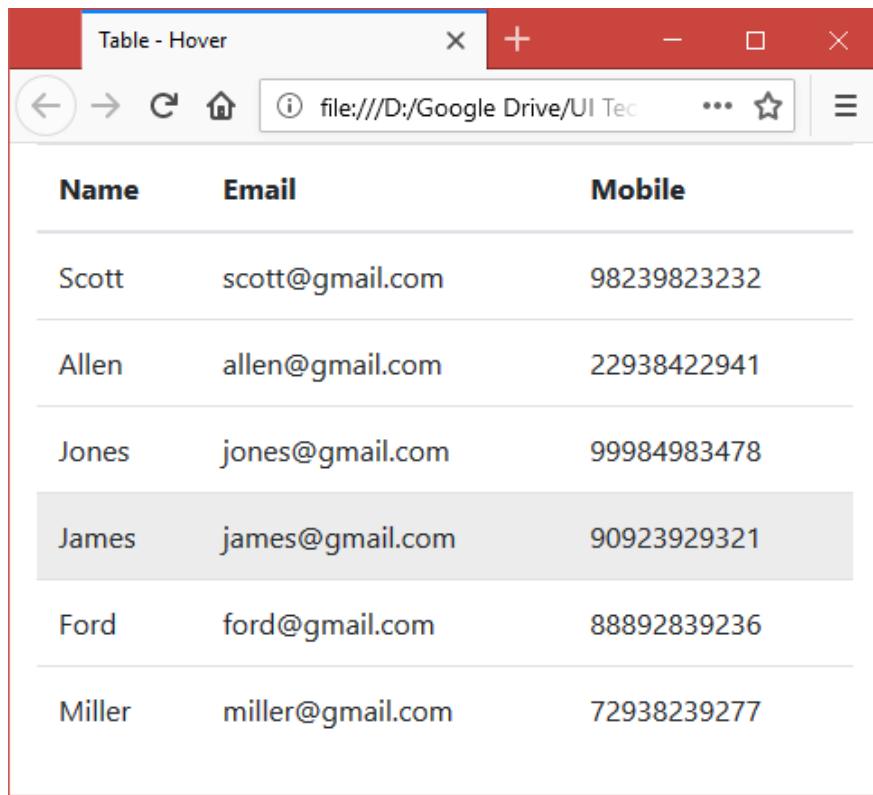
List of Classes

- table-hover : Table row background color gets changed on hover

Example on Hover Table

```
<html>
<head>
<title>Table - Hover</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container">
<table class="table table-hover">
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Mobile</th>
</tr>
```

```
</thead>
<tbody>
<tr>
<td>Scott</td>
<td>scott@gmail.com</td>
<td>9823982323</td>
</tr>
<tr>
<td>Allen</td>
<td>allen@gmail.com</td>
<td>22938422941</td>
</tr>
<tr>
<td>Jones</td>
<td>jones@gmail.com</td>
<td>99984983478</td>
</tr>
<tr>
<td>James</td>
<td>james@gmail.com</td>
<td>90923929321</td>
</tr>
<tr>
<td>Ford</td>
<td>ford@gmail.com</td>
<td>88892839236</td>
</tr>
<tr>
<td>Miller</td>
<td>miller@gmail.com</td>
<td>72938239277</td>
</tr>
</tbody>
</table>
</div>
</body>
</html>
```



The screenshot shows a table with a red header row and a light grey footer row. The body rows have white backgrounds. The table has three columns: Name, Email, and Mobile. The data is as follows:

Name	Email	Mobile
Scott	scott@gmail.com	98239823232
Allen	allen@gmail.com	22938422941
Jones	jones@gmail.com	99984983478
James	james@gmail.com	90923929321
Ford	ford@gmail.com	88892839236
Miller	miller@gmail.com	72938239277

Table Background Colors

- It is used to display table / rows with different background colors.
- These classes can be applicable for <table>, <tr> or <td> tags.

List of Classes

- table-primary : Blue color
- table-success : Green color
- table-danger : Red color
- table-info : Light blue color
- table-warning : Orange color
- table-active : Grey color
- table-secondary : Different Grey color
- table-light : Light grey color
- table-dark : Dark grey color

Example on Table Background Colors

```

<html>
<head>
<title>Table - Background Colors</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">

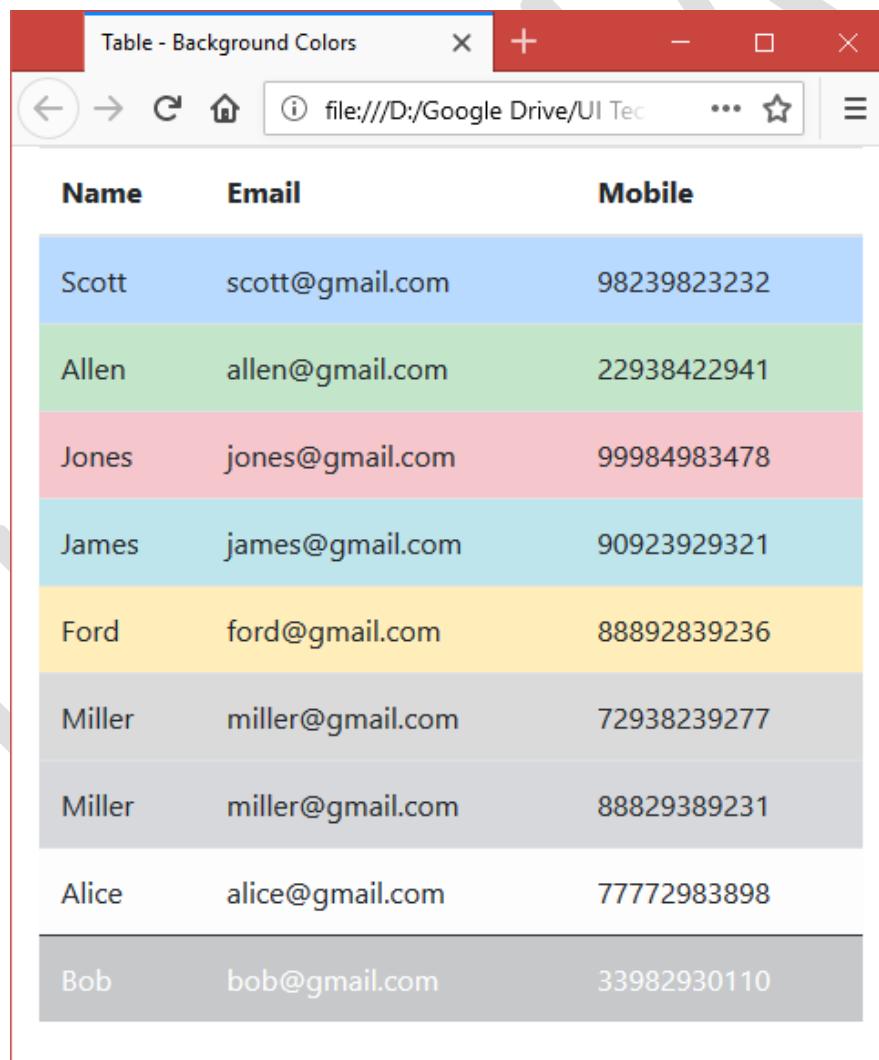
```

```
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container">
<table class="table">
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Mobile</th>
</tr>
</thead>
<tbody>
<tr class="table-primary">
<td>Scott</td>
<td>scott@gmail.com</td>
<td>98239823232</td>
</tr>
<tr class="table-success">
<td>Allen</td>
<td>allen@gmail.com</td>
<td>22938422941</td>
</tr>
<tr class="table-danger">
<td>Jones</td>
<td>jones@gmail.com</td>
<td>99984983478</td>
</tr>
<tr class="table-info">
<td>James</td>
<td>james@gmail.com</td>
<td>90923929321</td>
</tr>
<tr class="table-warning">
<td>Ford</td>
<td>ford@gmail.com</td>
<td>88892839236</td>
</tr>
<tr class="table-active">
<td>Miller</td>
<td>miller@gmail.com</td>
<td>72938239277</td>
</tr>
<tr class="table-secondary">
<td>Miller</td>
<td>miller@gmail.com</td>
<td>88829389231</td>
</tr>
<tr class="table-light">
```

```

<td>Alice</td>
<td>alice@gmail.com</td>
<td>77772983898</td>
</tr>
<tr class="table-dark">
<td>Bob</td>
<td>bob@gmail.com</td>
<td>33982930110</td>
</tr>
</tbody>
</table>
</div>
</body>
</html>

```



The screenshot shows a table with 9 rows. The rows alternate in background color: light blue, light green, pink, light blue, yellow, grey, grey, light grey, and dark grey. The columns are labeled "Name", "Email", and "Mobile". The data is as follows:

Name	Email	Mobile
Scott	scott@gmail.com	98239823232
Allen	allen@gmail.com	22938422941
Jones	jones@gmail.com	99984983478
James	james@gmail.com	90923929321
Ford	ford@gmail.com	88892839236
Miller	miller@gmail.com	72938239277
Miller	miller@gmail.com	88829389231
Alice	alice@gmail.com	77772983898
Bob	bob@gmail.com	33982930110

Table Header Background Colors

- It is used to display table header row with dark / light colors.
- These classes can be applicable only for <thead> tag.

List of Classes

- thead-dark : Black color
- thead-light : Light Grey color

Example on Table Header Background Colors

```
<html>
<head>
  <title>Table - Header Colors</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>
<body>
  <div class="container">
    <table class="table">
      <thead class="thead-dark">
        <tr>
          <th>Name</th>
          <th>Email</th>
          <th>Mobile</th>
        </tr>
      </thead>
      <tbody>
        <tr>
          <td>Scott</td>
          <td>scott@gmail.com</td>
          <td>9823982323</td>
        </tr>
        <tr>
          <td>Allen</td>
          <td>allen@gmail.com</td>
          <td>22938422941</td>
        </tr>
        <tr>
          <td>Jones</td>
          <td>jones@gmail.com</td>
          <td>99984983478</td>
        </tr>
      </tbody>
    </table>
  <table class="table">
    <thead class="thead-light">
      <tr>
        <th>Name</th>
        <th>Email</th>
        <th>Mobile</th>
      </tr>
```

```
</tr>
</thead>
<tbody>
<tr>
<td>James</td>
<td>james@gmail.com</td>
<td>90923929321</td>
</tr>
<tr>
<td>Ford</td>
<td>ford@gmail.com</td>
<td>88892839236</td>
</tr>
<tr>
<td>Miller</td>
<td>miller@gmail.com</td>
<td>72938239277</td>
</tr>
</tbody>
</table>
</div>
</body>
</html>
```

The screenshot shows a web browser window titled "Table - Header Colors". The address bar indicates the file is located at "file:///D:/Google Drive/UI Tec". The browser interface includes standard controls like back, forward, home, and search.

The page displays two tables side-by-side. Both tables have three columns: "Name", "Email", and "Mobile".

Top Table (Dark Header):

Name	Email	Mobile
Scott	scott@gmail.com	98239823232
Allen	allen@gmail.com	22938422941
Jones	jones@gmail.com	99984983478

Bottom Table (Light Header):

Name	Email	Mobile
James	james@gmail.com	90923929321
Ford	ford@gmail.com	88892839236
Miller	miller@gmail.com	72938239277

Table Small

- It is used to display table with small size (less padding).

List of Classes

- table-sm : Table with Less padding

Example on Table Small

```

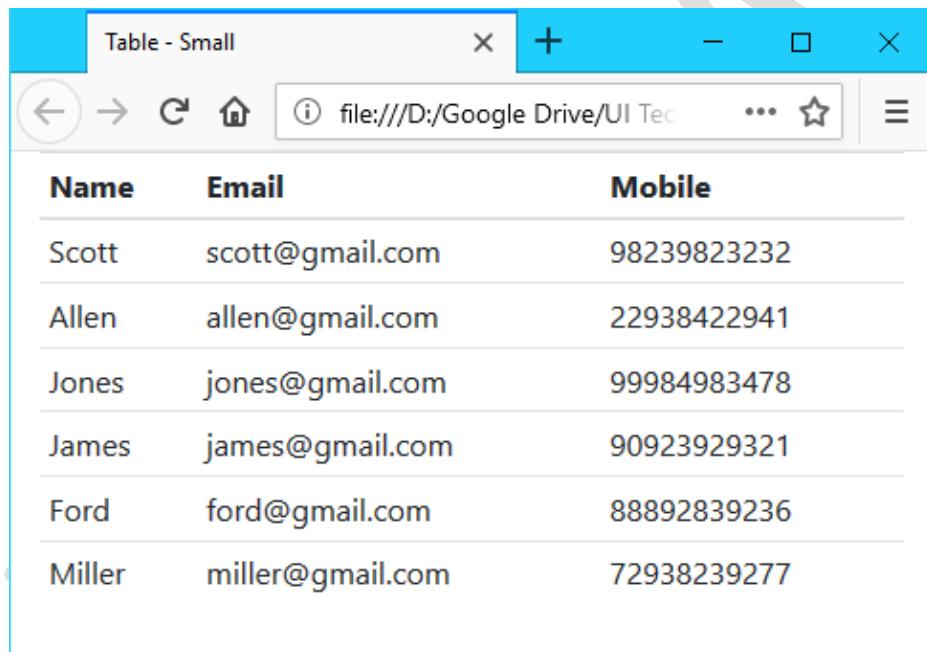
<html>
  <head>
    <title>Table - Small</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
  </head>
  <body>
    <div class="container">
      <table class="table table-sm">
        <thead>
          <tr>
            <th>Name</th>
            <th>Email</th>
            <th>Mobile</th>
          </tr>
        </thead>
        <tbody>
          <tr>
            <td>Scott</td>
            <td>scott@gmail.com</td>
            <td>9823982323</td>
          </tr>
          <tr>
            <td>Allen</td>
            <td>allen@gmail.com</td>
            <td>22938422941</td>
          </tr>
          <tr>
            <td>Jones</td>
            <td>jones@gmail.com</td>
            <td>99984983478</td>
          </tr>
          <tr>
            <td>James</td>
            <td>james@gmail.com</td>
            <td>90923929321</td>
          </tr>
          <tr>
            <td>Ford</td>
          </tr>
        </tbody>
      </table>
    </div>
  </body>
</html>

```

```

<td>ford@gmail.com</td>
<td>88892839236</td>
</tr>
<tr>
<td>Miller</td>
<td>miller@gmail.com</td>
<td>72938239277</td>
</tr>
</tbody>
</table>
</div>
</body>
</html>

```



Name	Email	Mobile
Scott	scott@gmail.com	98239823232
Allen	allen@gmail.com	22938422941
Jones	jones@gmail.com	99984983478
James	james@gmail.com	90923929321
Ford	ford@gmail.com	88892839236
Miller	miller@gmail.com	72938239277

Table Responsive

- It is used to display scrollbar for the table automatically, when the web page is resized.
- This class can be applicable only for <div> tag that contains <table> tag.

List of Classes

- table-responsive : Table with scrollbar

Example on Table Responsive

```

<html>
<head>
<title>Table - Responsive</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>

```

```
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container">
<div class="table-responsive">
<table class="table">
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Mobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scott</td>
<td>scott@gmail.com</td>
<td>9823982323</td>
</tr>
<tr>
<td>Allen</td>
<td>allen@gmail.com</td>
<td>22938422941</td>
</tr>
<tr>
<td>Jones</td>
<td>jones@gmail.com</td>
<td>99984983478</td>
</tr>
<tr>
<td>James</td>
<td>james@gmail.com</td>
<td>90923929321</td>
</tr>
<tr>
<td>Ford</td>
<td>ford@gmail.com</td>
<td>88892839236</td>
</tr>
<tr>
<td>Miller</td>
<td>miller@gmail.com</td>
<td>72938239277</td>
</tr>
</tbody>
</table>
</div>
</div>
</body>
</html>
```

Name	Email	Mobile
Scott	scott@gmail.com	98239823
Allen	allen@gmail.com	22938422
Jones	jones@gmail.com	99984983
James	james@gmail.com	90923929
Ford	ford@gmail.com	88892839
Miller	miller@gmail.com	72938239

Alerts

Alerts

- It is used to display alert message (short message) at the top of the web page.

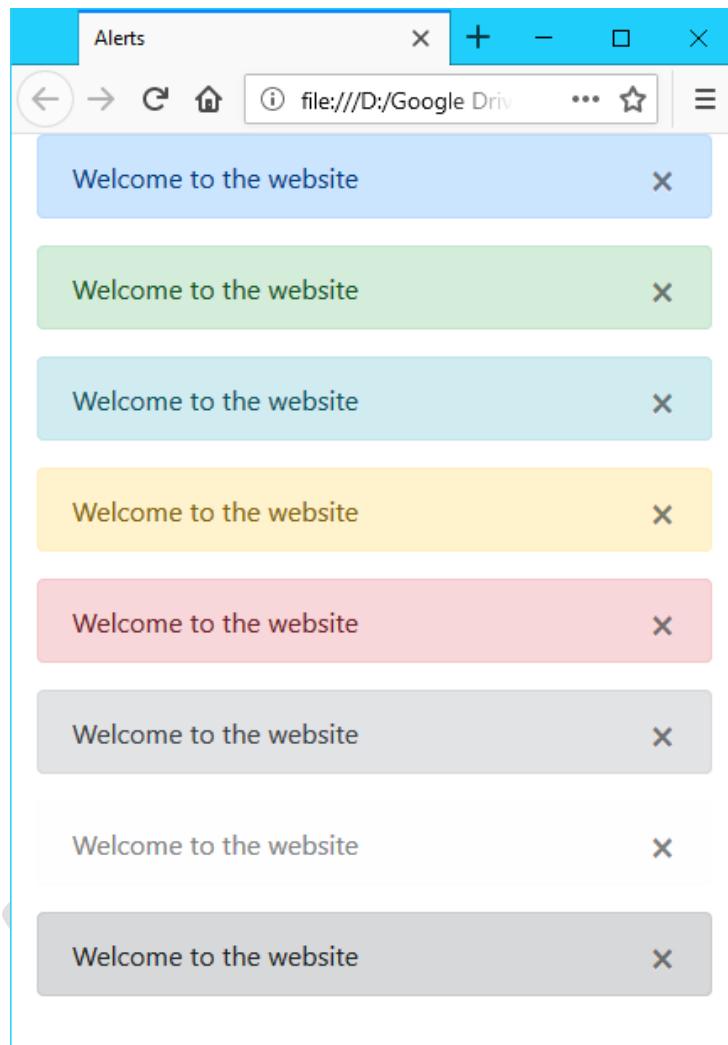
List of Classes

- alert : Represents alert
- fade : Show alert with fade
- show : Displays the alert
- close : Displays close button
- alert-primary : Blue color
- alert-success : Green color
- alert-info : Light blue color
- alert-warning : Orange color
- alert-danger : Red color
- alert-secondary : Grey color

- alert-light : Light grey color
- alert-dark : Black color

Example on Alerts

```
<html>
<head>
  <title>Alerts</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>
<body>
  <div class="container-fluid">
    <div class="alert alert-primary fade show">
      <button class="close" data-dismiss="alert">&times;</button>
      Welcome to the website
    </div>
    <div class="alert alert-success fade show">
      <button class="close" data-dismiss="alert">&times;</button>
      Welcome to the website
    </div>
    <div class="alert alert-info fade show">
      <button class="close" data-dismiss="alert">&times;</button>
      Welcome to the website
    </div>
    <div class="alert alert-warning fade show">
      <button class="close" data-dismiss="alert">&times;</button>
      Welcome to the website
    </div>
    <div class="alert alert-danger fade show">
      <button class="close" data-dismiss="alert">&times;</button>
      Welcome to the website
    </div>
    <div class="alert alert-secondary fade show">
      <button class="close" data-dismiss="alert">&times;</button>
      Welcome to the website
    </div>
    <div class="alert alert-light fade show">
      <button class="close" data-dismiss="alert">&times;</button>
      Welcome to the website
    </div>
    <div class="alert alert-dark fade show">
      <button class="close" data-dismiss="alert">&times;</button>
      Welcome to the website
    </div>
  </div>
</body>
</html>
```



Buttons

Button Colors

- It is used to display buttons with different colors.

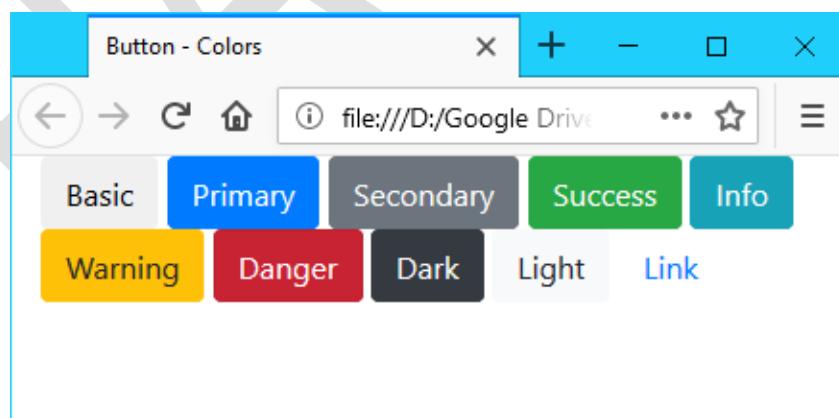
List of Classes

- btn : Bootstrap button style
- btn-primary : Blue color
- btn-secondary : Grey color
- btn-success : Green color
- btn-info : Light blue color
- btn-warning : Orange color
- btn-danger : Red color

- btn-dark : Black color
- btn-light : Light grey color
- btn-link : Link style

Example on Button Colors

```
<html>
<head>
    <title>Button - Colors</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
</head>
<body>
    <div class="container-fluid">
        <button class="btn">Basic</button>
        <button class="btn btn-primary">Primary</button>
        <button class="btn btn-secondary">Secondary</button>
        <button class="btn btn-success">Success</button>
        <button class="btn btn-info">Info</button>
        <button class="btn btn-warning">Warning</button>
        <button class="btn btn-danger">Danger</button>
        <button class="btn btn-dark">Dark</button>
        <button class="btn btn-light">Light</button>
        <button class="btn btn-link">Link</button>
    </div>
</body>
</html>
```



Button Outline

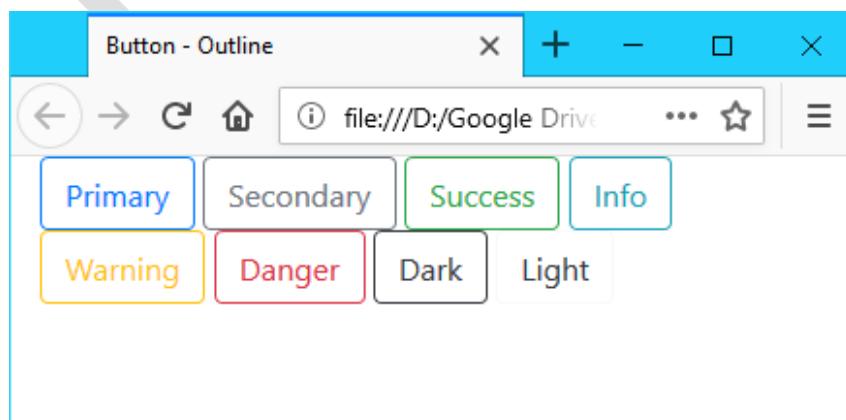
- It is used to display buttons with only border (white background).

List of Classes

- btn-outline-primary : Blue color
- btn-outline-secondary : Grey color
- btn-outline-success : Green color
- btn-outline-info : Light blue color
- btn-outline-warning : Orange color
- btn-outline-danger : Red color
- btn-outline-dark : Black color
- btn-outline-light : Light grey color

Example on Button Outline

```
<html>
<head>
<title>Button - Outline</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
<button class="btn btn-outline-primary">Primary</button>
<button class="btn btn-outline-secondary">Secondary</button>
<button class="btn btn-outline-success">Success</button>
<button class="btn btn-outline-info">Info</button>
<button class="btn btn-outline-warning">Warning</button>
<button class="btn btn-outline-danger">Danger</button>
<button class="btn btn-outline-dark">Dark</button>
<button class="btn btn-outline-light text-dark">Light</button>
</div>
</body>
</html>
```



Button Sizes

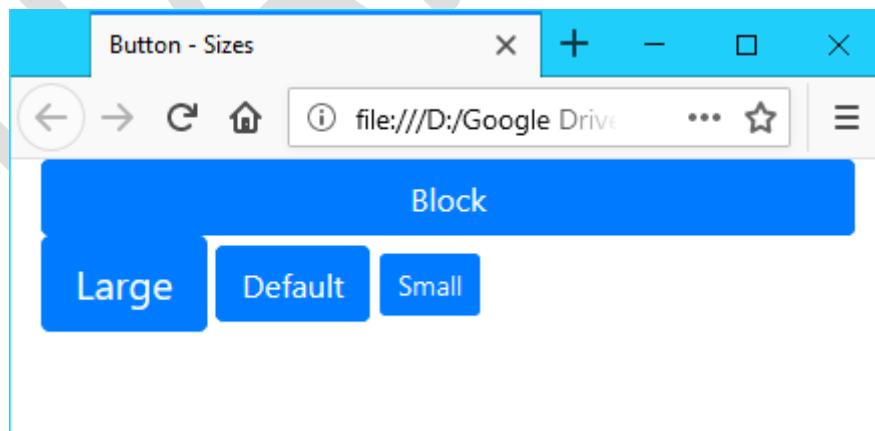
- It is used to display large / small buttons.

List of Classes

- btn-block : Full-width button
- btn-lg : Large button
- btn-sm : Small button

Example on Button Sizes

```
<html>
<head>
  <title>Button - Sizes</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>
<body>
  <div class="container-fluid">
    <button class="btn btn-primary btn-block">Block</button>
    <button class="btn btn-primary btn-lg">Large</button>
    <button class="btn btn-primary">Default</button>
    <button class="btn btn-primary btn-sm">Small</button>
  </div>
</body>
</html>
```



Button Groups

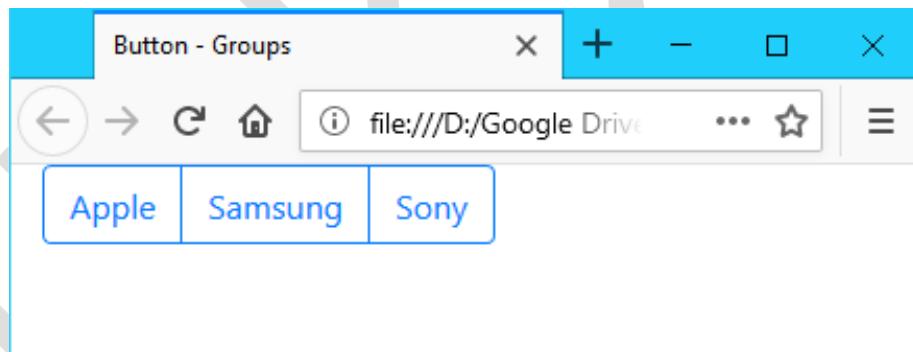
- It is used to display grouped buttons.
- It reduces margin between buttons.

List of Classes

- btn-group : Group of buttons

Example on Button Groups

```
<html>
<head>
  <title>Button - Groups</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>
<body>
  <div class="container-fluid">
    <div class="btn-group">
      <button class="btn btn-outline-primary">Apple</button>
      <button class="btn btn-outline-primary">Samsung</button>
      <button class="btn btn-outline-primary">Sony</button>
    </div>
  </div>
</body>
</html>
```



Button Vertical Groups

- It is used to display vertically grouped buttons.
- It reduces margin between buttons.

List of Classes

- btn-group-vertical : Vertical group of buttons

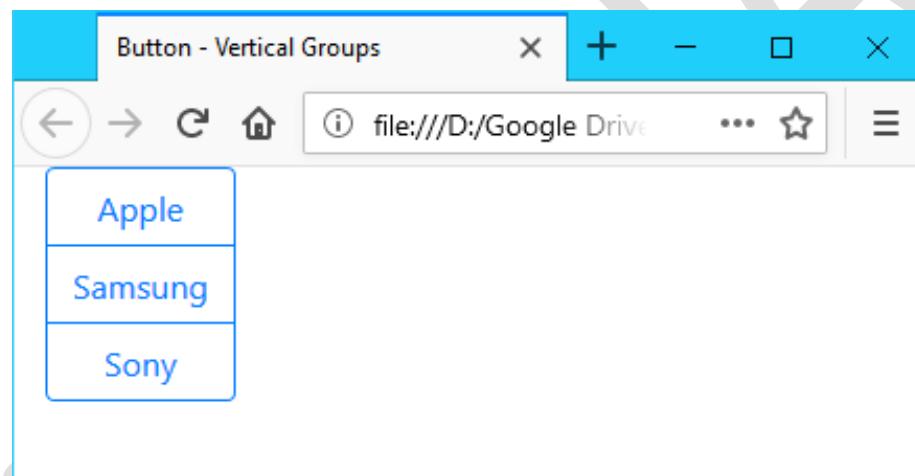
Example on Button Vertical Groups

```
<html>
<head>
  <title>Button - Vertical Groups</title>
  <meta charset="utf-8">
```

```

<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
<div class="btn-group-vertical">
<button class="btn btn-outline-primary">Apple</button>
<button class="btn btn-outline-primary">Samsung</button>
<button class="btn btn-outline-primary">Sony</button>
</div>
</div>
</body>
</html>

```



Button DropDown

- It is used to display dropdownlist for the button.

List of Classes

- dropdown-toggle : Dropdown button
- dropdown-toggle-split : Split button
- caret : Caret symbol
- dropdown-menu : Represents the menu
- dropdown-item : Represents item in the menu

Example on Button DropDown

```

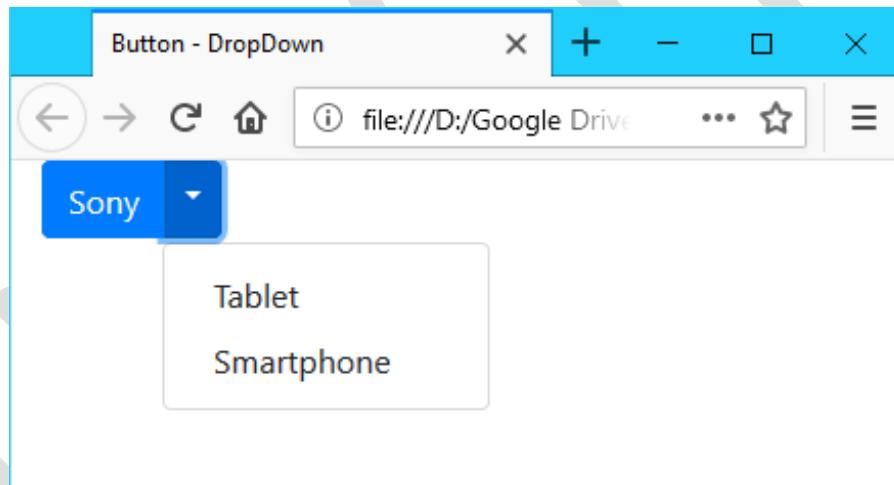
<html>
<head>
<title>Button - DropDown</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">

```

```

<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
<div class="btn-group">
<button type="button" class="btn btn-primary">Sony</button>
<button type="button" class="btn btn-primary dropdown-toggle dropdown-toggle-split" data-toggle="dropdown">
<span class="caret"></span>
</button>
<div class="dropdown-menu">
<a class="dropdown-item" href="#">Tablet</a>
<a class="dropdown-item" href="#">Smartphone</a>
</div>
</div>
</div>
</body>
</html>

```



Badges

Basic Badges

- It is used to indication near heading / button.

List of Classes

- badge : Represents Badge

Example on Badges

```

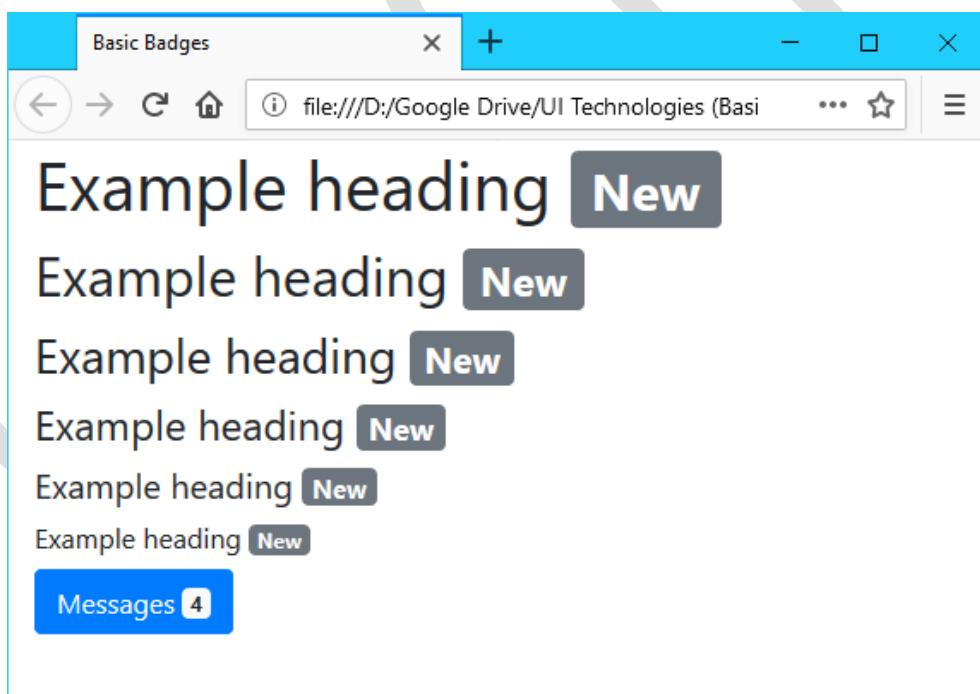
<html>
<head>
<title>Basic Badges</title>

```

```

<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
<h1>Example heading <span class="badge badge-secondary">New</span></h1>
<h2>Example heading <span class="badge badge-secondary">New</span></h2>
<h3>Example heading <span class="badge badge-secondary">New</span></h3>
<h4>Example heading <span class="badge badge-secondary">New</span></h4>
<h5>Example heading <span class="badge badge-secondary">New</span></h5>
<h6>Example heading <span class="badge badge-secondary">New</span></h6>
<button type="button" class="btn btn-primary">
  Messages <span class="badge badge-light">4</span>
</button>
</div>
</body>
</html>

```



Badge Colors

- It is used to set background colors for the badges

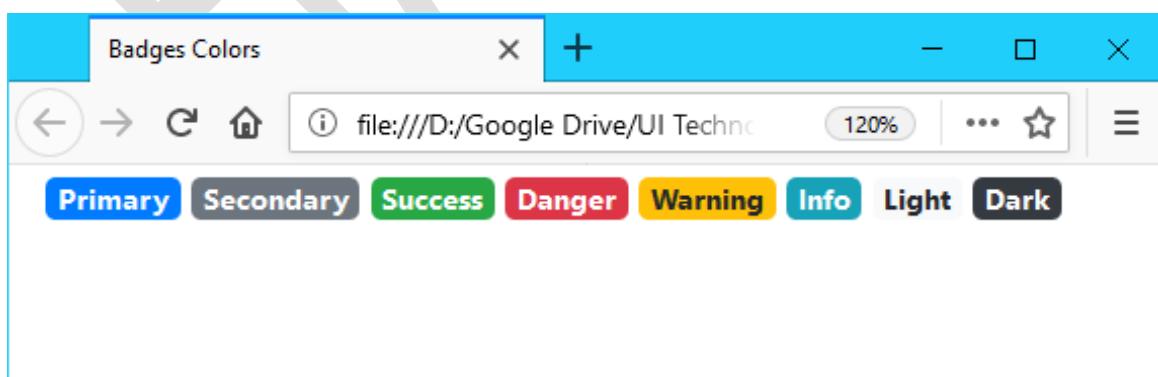
List of Classes

- badge-primary : Blue color
- badge-secondary : Grey color

- badge-success : Green color
- badge-info : Light blue color
- badge-warning : Orange color
- badge-danger : Red color
- badge-dark : Black color
- badge-light : Light grey color

Example on Badge Colors

```
<html>
<head>
<title>Basic Badges</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
<h1>Example heading <span class="badge badge-secondary">New</span></h1>
<h2>Example heading <span class="badge badge-secondary">New</span></h2>
<h3>Example heading <span class="badge badge-secondary">New</span></h3>
<h4>Example heading <span class="badge badge-secondary">New</span></h4>
<h5>Example heading <span class="badge badge-secondary">New</span></h5>
<h6>Example heading <span class="badge badge-secondary">New</span></h6>
<button type="button" class="btn btn-primary">
  Messages <span class="badge badge-light">4</span>
</button>
</div>
</body>
</html>
```



Pill Badges

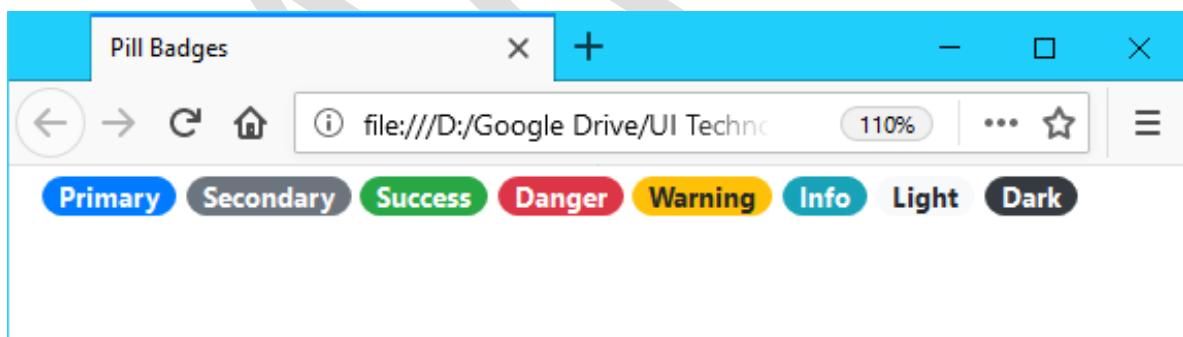
- It is used to display more rounded badges.

List of Classes

- badge-pill : More rounded badge

Example on Pill Badges

```
<html>
<head>
  <title>Pill Badges</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>
<body>
  <div class="container-fluid">
    <span class="badge badge-pill badge-primary">Primary</span>
    <span class="badge badge-pill badge-secondary">Secondary</span>
    <span class="badge badge-pill badge-success">Success</span>
    <span class="badge badge-pill badge-danger">Danger</span>
    <span class="badge badge-pill badge-warning">Warning</span>
    <span class="badge badge-pill badge-info">Info</span>
    <span class="badge badge-pill badge-light">Light</span>
    <span class="badge badge-pill badge-dark">Dark</span>
  </div>
</body>
</html>
```



Progress Bar

Basic Progress Bar

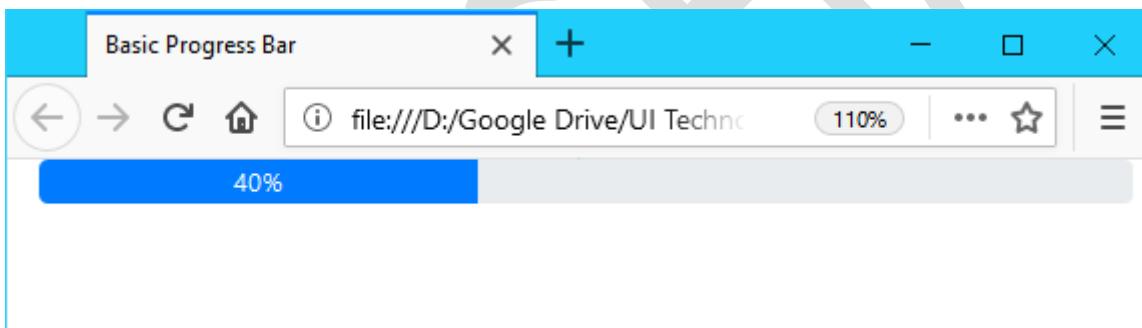
- It is used to display progress bar, based on the given width and height.

List of Classes

- progress : Progress bar container
- progress-bar : Progress
- mx-auto : Center alignment

Example on Basic Progress Bar

```
<html>
<head>
  <title>Basic Progress Bar</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>
<body>
  <div class="container-fluid">
    <div class="progress mx-auto" style="width:500px; height:20px">
      <div class="progress-bar" style="width:40%;height:20px">40%</div>
    </div>
  </div>
</body>
</html>
```



Progress Bar Colors

- It is used to display progress bar with different colors..

List of Classes

- bg-success : Green color
- bg-info : Light blue color
- bg-warning : Orange color
- bg-danger : Red color
- bg-secondary : Grey color
- bg-light : Light grey color
- bg-dark : Black color
- progress-bar-striped : Striped progress bar
- progress-bar-animated : Animated progress bar

Example on Progress Bar Colors

```
<html>
<head>
    <title>Progress Bar Colors</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
</head>
<body>
    <div class="container-fluid">
        <div class="progress" style="height:25px">
            <div class="progress-bar" style="width:10%"></div>
        </div>

        <div class="progress" style="height:25px">
            <div class="progress-bar bg-success" style="width:20%"></div>
        </div>

        <div class="progress" style="height:25px">
            <div class="progress-bar bg-info" style="width:30%"></div>
        </div>

        <div class="progress" style="height:25px">
            <div class="progress-bar bg-warning" style="width:40%"></div>
        </div>

        <div class="progress" style="height:25px">
            <div class="progress-bar bg-danger" style="width:50%"></div>
        </div>

        <div class="progress" style="height:25px">
            <div class="progress-bar bg-secondary" style="width:70%"></div>
        </div>

        <div class="progress border" style="height:25px">
            <div class="progress-bar bg-light" style="width:80%"></div>
        </div>

        <div class="progress" style="height:25px">
            <div class="progress-bar bg-dark" style="width:85%"></div>
        </div>

        <div class="progress" style="height:25px">
            <div class="progress-bar progress-bar-striped bg-success" style="width:90%"></div>
        </div>

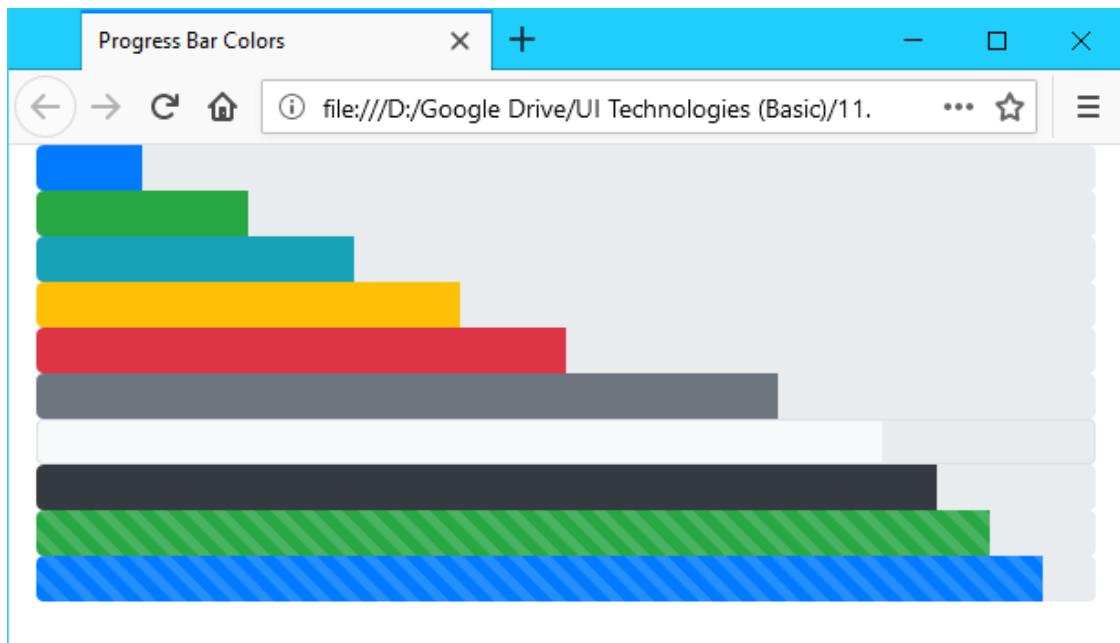
        <div class="progress" style="height:25px">
            <div class="progress-bar progress-bar-striped progress-bar-animated bg-primary" style="width:95%"></div>
        </div>
    </div>
</body>

```

```

</div>
</div>
</body>
</html>

```



Pagination

Basic Pagination

- It is used to display page numbers.

List of Classes

- pagination : Enable pagination style
- page-item : Page number
- page-link : Page number link
- active : Current page

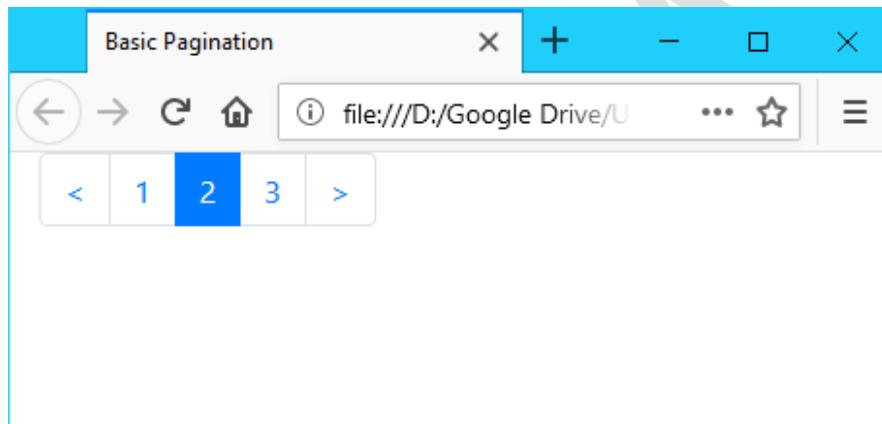
Example on Basic Pagination

```

<html>
<head>
  <title>Basic Pagination</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>

```

```
<body>
<div class="container-fluid">
<ul class="pagination">
<li class="page-item"><a class="page-link" href="#">&lt;</a></li>
<li class="page-item"><a class="page-link" href="#">1</a></li>
<li class="page-item active"><a class="page-link" href="#">2</a></li>
<li class="page-item"><a class="page-link" href="#">3</a></li>
<li class="page-item"><a class="page-link" href="#">&gt;</a></li>
</ul>
</div>
</body>
</html>
```



Pagination Size

- It is used to display pagination in large / small size.

List of Classes

- pagination-lg : Large size progress bar
- pagination-sm : Small size progress bar

Example on Pagination Size

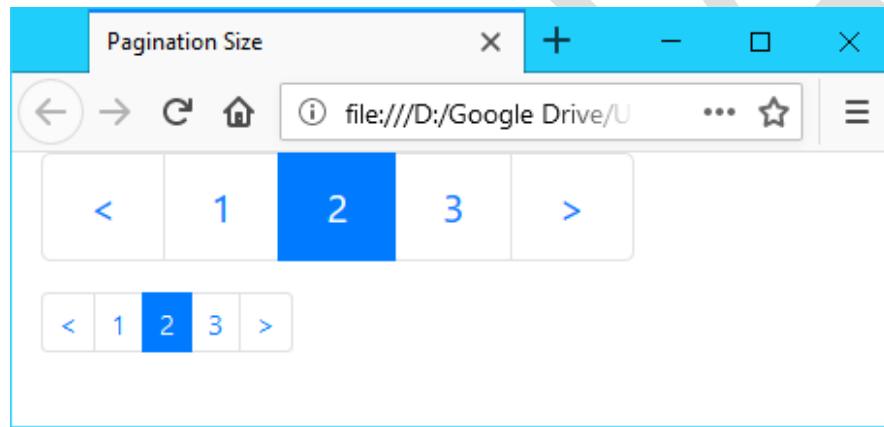
```
<html>
<head>
<title>Pagination Size</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
<ul class="pagination pagination-lg">
<li class="page-item"><a class="page-link" href="#">&lt;</a></li>
<li class="page-item"><a class="page-link" href="#">1</a></li>
```

```

<li class="page-item active"><a class="page-link" href="#">2</a></li>
<li class="page-item"><a class="page-link" href="#">3</a></li>
<li class="page-item"><a class="page-link" href="#">&gt;</a></li>
</ul>

<ul class="pagination pagination-sm">
<li class="page-item"><a class="page-link" href="#">&lt;</a></li>
<li class="page-item"><a class="page-link" href="#">1</a></li>
<li class="page-item active"><a class="page-link" href="#">2</a></li>
<li class="page-item"><a class="page-link" href="#">3</a></li>
<li class="page-item"><a class="page-link" href="#">&gt;</a></li>
</ul>
</div>
</body>
</html>

```



Pagination Alignment

- It is used to display pagination left / center / right side of the page.

List of Classes

- justify-content-center : Center alignment for pagination
- justify-content-end : Right alignment for pagination

Example on Pagination Alignment

```

<html>
<head>
<title>Pagination Alignment</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">

```

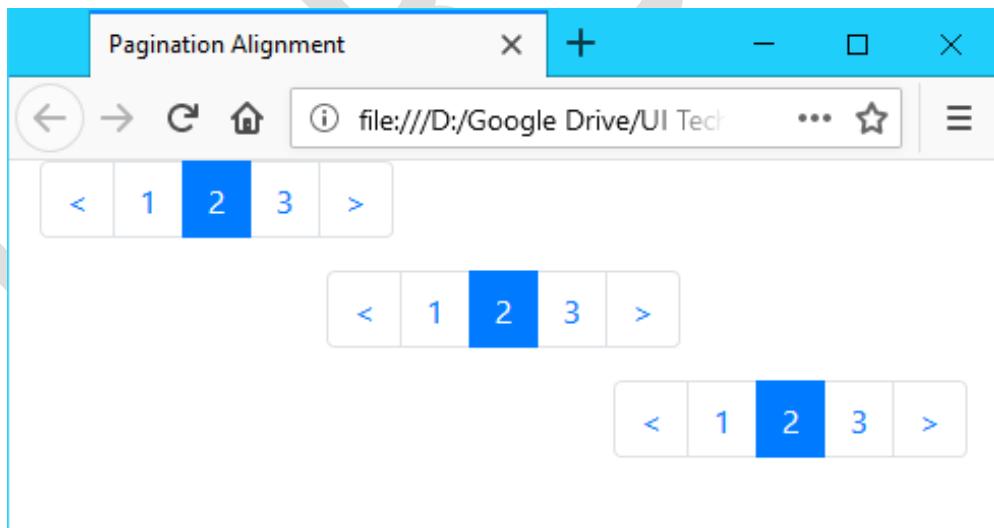
```

<ul class="pagination">
    <li class="page-item"><a class="page-link" href="#">&lt;</a></li>
    <li class="page-item"><a class="page-link" href="#">1</a></li>
    <li class="page-item active"><a class="page-link" href="#">2</a></li>
    <li class="page-item"><a class="page-link" href="#">3</a></li>
    <li class="page-item"><a class="page-link" href="#">&gt;</a></li>
</ul>

<ul class="pagination justify-content-center">
    <li class="page-item"><a class="page-link" href="#">&lt;</a></li>
    <li class="page-item"><a class="page-link" href="#">1</a></li>
    <li class="page-item active"><a class="page-link" href="#">2</a></li>
    <li class="page-item"><a class="page-link" href="#">3</a></li>
    <li class="page-item"><a class="page-link" href="#">&gt;</a></li>
</ul>

<ul class="pagination justify-content-end">
    <li class="page-item"><a class="page-link" href="#">&lt;</a></li>
    <li class="page-item"><a class="page-link" href="#">1</a></li>
    <li class="page-item active"><a class="page-link" href="#">2</a></li>
    <li class="page-item"><a class="page-link" href="#">3</a></li>
    <li class="page-item"><a class="page-link" href="#">&gt;</a></li>
</ul>
</div>
</body>
</html>

```



Breadcrumbs

Breadcrumbs

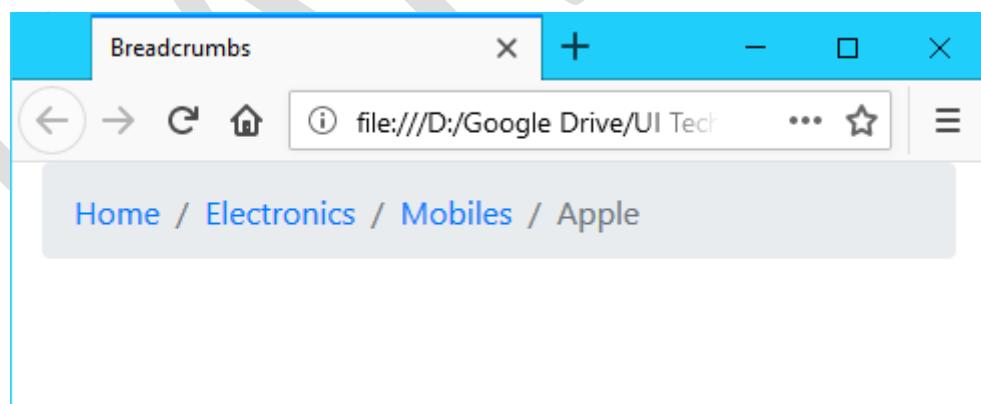
- It is used to display location (navigation path) of the current web page in the website.

List of Classes

- breadcrumb : Represents entire breadcrumb
- breadcrumb-item : Represents single item in the breadcrumb
- active : Represents current item

Example on Breadcrumbs

```
<html>
<head>
  <title>Breadcrumbs</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>
<body>
  <div class="container-fluid">
    <ul class="breadcrumb">
      <li class="breadcrumb-item"><a href="#">Home</a></li>
      <li class="breadcrumb-item"><a href="#">Electronics</a></li>
      <li class="breadcrumb-item"><a href="#">Mobiles</a></li>
      <li class="breadcrumb-item active">Apple</li>
    </ul>
  </div>
</body>
</html>
```



List Groups

Basic List Groups

- It is used to display items (text / hyperlinks) as a list.

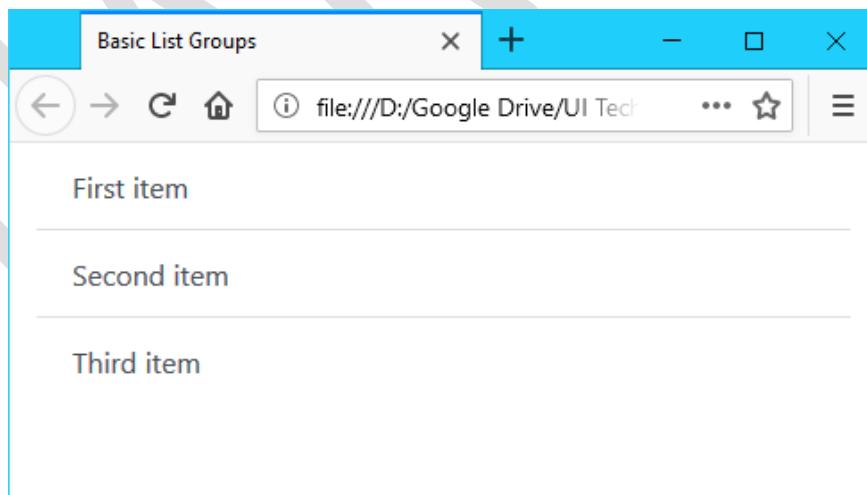
List of Classes

- list-group : Represents the list

- list-group-flush : Remove borders for the list group
- list-group-item : Represents single item
- list-group-item-action : Hover style for the item

Example on Basic List Groups

```
<html>
<head>
<title>Basic List Groups</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
<div class="list-group list-group-flush">
<a href="#" class="list-group-item list-group-item-action">First item</a>
<a href="#" class="list-group-item list-group-item-action">Second item</a>
<a href="#" class="list-group-item list-group-item-action">Third item</a>
</div>
</div>
</body>
</html>
```



List Group Colors

- It is used to display list group with different background colors.

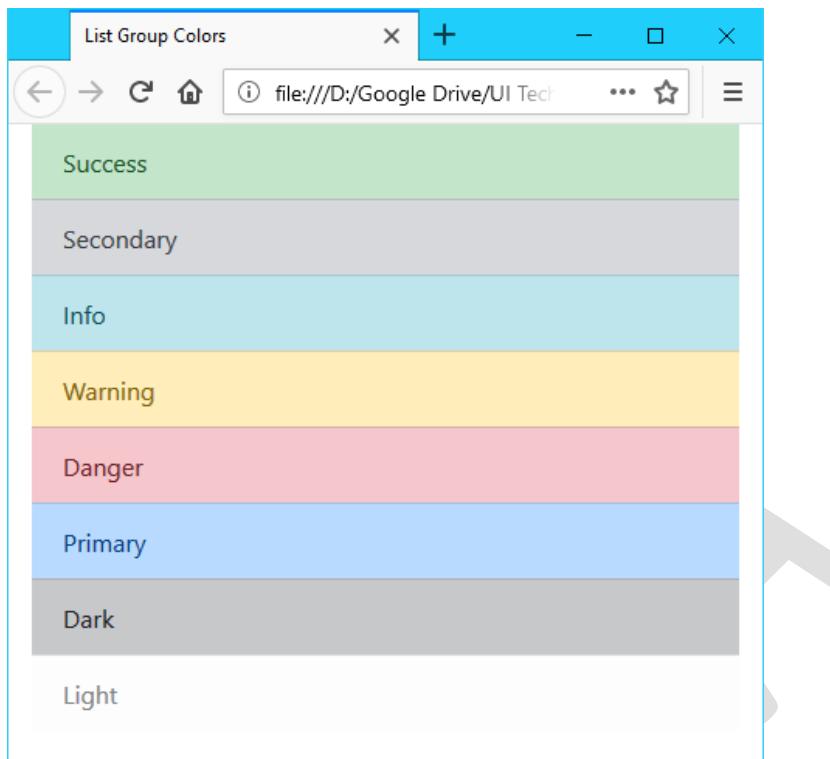
List of Classes

- list-group-item-success : Green color

- list-group-item-secondary : Grey color
- list-group-item-info : Light blue color
- list-group-item-warning : Orange color
- list-group-item-danger : Red color
- list-group-item-dark : Black color
- list-group-item-light

Example on List Group Colors

```
<html>
<head>
  <title>List Group Colors</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>
<body>
  <div class="container-fluid">
    <div class="list-group list-group-flush">
      <a href="#" class="list-group-item list-group-item-action list-group-item-success">Success</a>
      <a href="#" class="list-group-item list-group-item-action list-group-item-secondary">Secondary</a>
      <a href="#" class="list-group-item list-group-item-action list-group-item-info">Info</a>
      <a href="#" class="list-group-item list-group-item-action list-group-item-warning">Warning</a>
      <a href="#" class="list-group-item list-group-item-action list-group-item-danger">Danger</a>
      <a href="#" class="list-group-item list-group-item-action list-group-item-primary">Primary</a>
      <a href="#" class="list-group-item list-group-item-action list-group-item-dark">Dark</a>
      <a href="#" class="list-group-item list-group-item-action list-group-item-light">Light</a>
    </div>
  </div>
</body>
</html>
```



Cards

Basic Cards

- It is used to display some content (box) with header and footer.

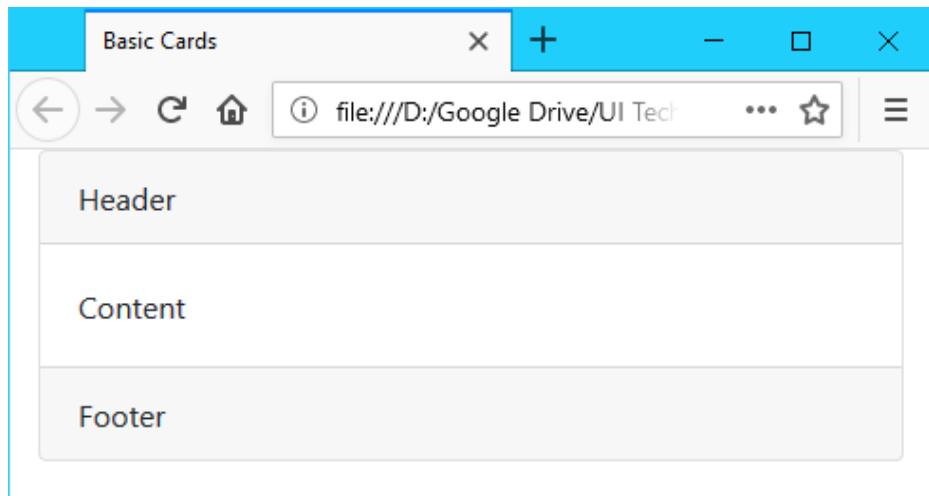
List of Classes

- card : Represents entire card
- card-header : Header of card
- card-body : Content of card
- card-footer : Footer of card

Example on Basic Cards

```
<html>
<head>
  <title>Basic Cards</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>
<body>
```

```
<div class="container-fluid">
<div class="card">
  <div class="card-header">Header</div>
  <div class="card-body">Content</div>
  <div class="card-footer">Footer</div>
</div>
</div>
</body>
</html>
```



Card Colors

- It is used to display some content (box) with header and footer.

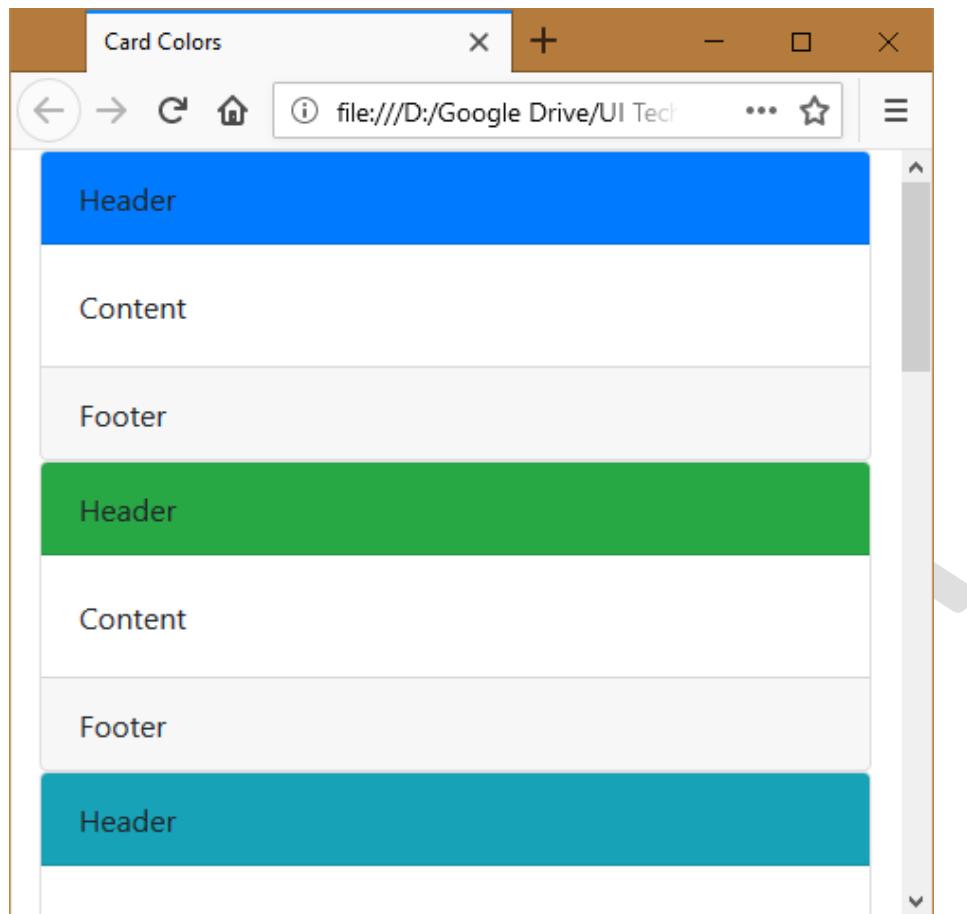
List of Classes

- bg-primary : Blue color
- bg-success : Green color
- bg-info : Light blue color
- bg-warning : Orange color
- bg-danger : Red color
- bg-secondary : Grey color
- bg-dark : Black color

Example on Card Colors

```
<html>
<head>
  <title>Card Colors</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
```

```
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
<div class="card">
<div class="card-header bg-primary">Header</div>
<div class="card-body">Content</div>
<div class="card-footer">Footer</div>
</div>
<div class="card">
<div class="card-header bg-success">Header</div>
<div class="card-body">Content</div>
<div class="card-footer">Footer</div>
</div>
<div class="card">
<div class="card-header bg-info">Header</div>
<div class="card-body">Content</div>
<div class="card-footer">Footer</div>
</div>
<div class="card">
<div class="card-header bg-warning">Header</div>
<div class="card-body">Content</div>
<div class="card-footer">Footer</div>
</div>
<div class="card">
<div class="card-header bg-danger">Header</div>
<div class="card-body">Content</div>
<div class="card-footer">Footer</div>
</div>
<div class="card">
<div class="card-header bg-secondary">Header</div>
<div class="card-body">Content</div>
<div class="card-footer">Footer</div>
</div>
<div class="card">
<div class="card-header bg-dark text-light">Header</div>
<div class="card-body">Content</div>
<div class="card-footer">Footer</div>
</div>
<div class="card">
<div class="card-header bg-danger">Header</div>
<div class="card-body">Content</div>
<div class="card-footer">Footer</div>
</div>
</div>
</body>
</html>
```



Card Images

- It is used to display cards with images.

List of Classes

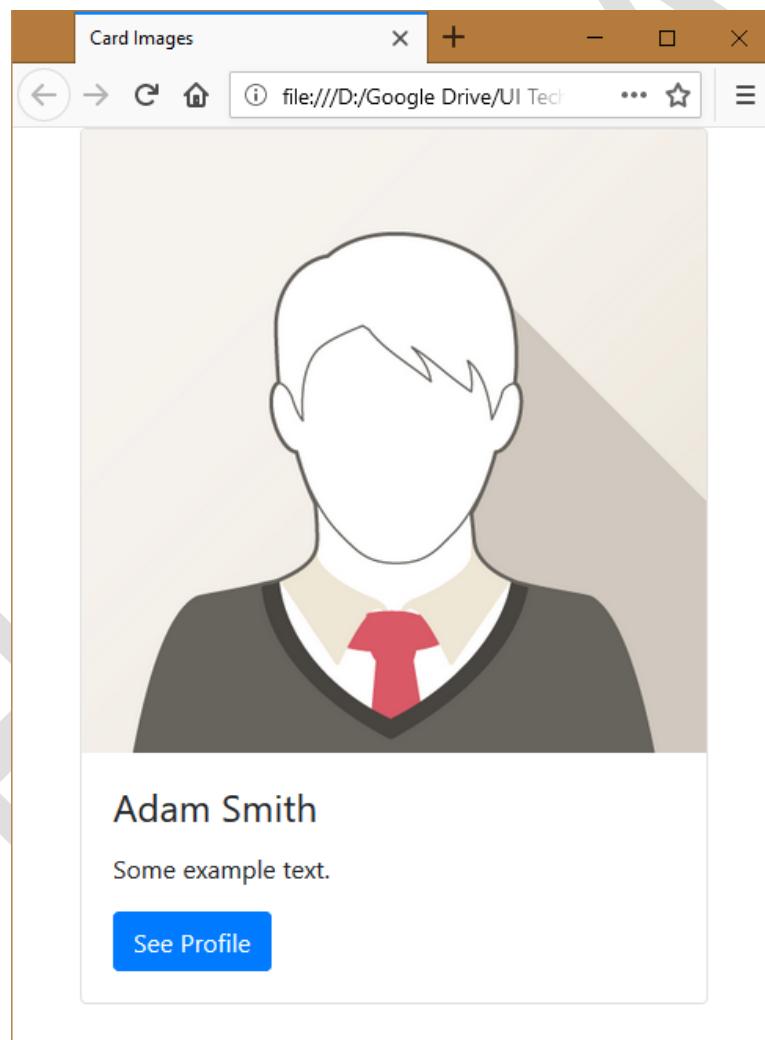
- card-img-top : Represents card image at top
- card-img-bottom : Represents card image at bottom
- card-title : Title of the card
- card-text : Normal text of the card

Example on Card Images

```
<html>
<head>
<title>Card Images</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
```

```
</head>
<body>
<div class="container-fluid">
<div class="card mx-auto" style="width:400px">

<div class="card-body">
<h4 class="card-title">Adam Smith</h4>
<p class="card-text">Some example text.</p>
<a href="#" class="btn btn-primary">See Profile</a>
</div>
</div>
</div>
</body>
</html>
```



Card Groups

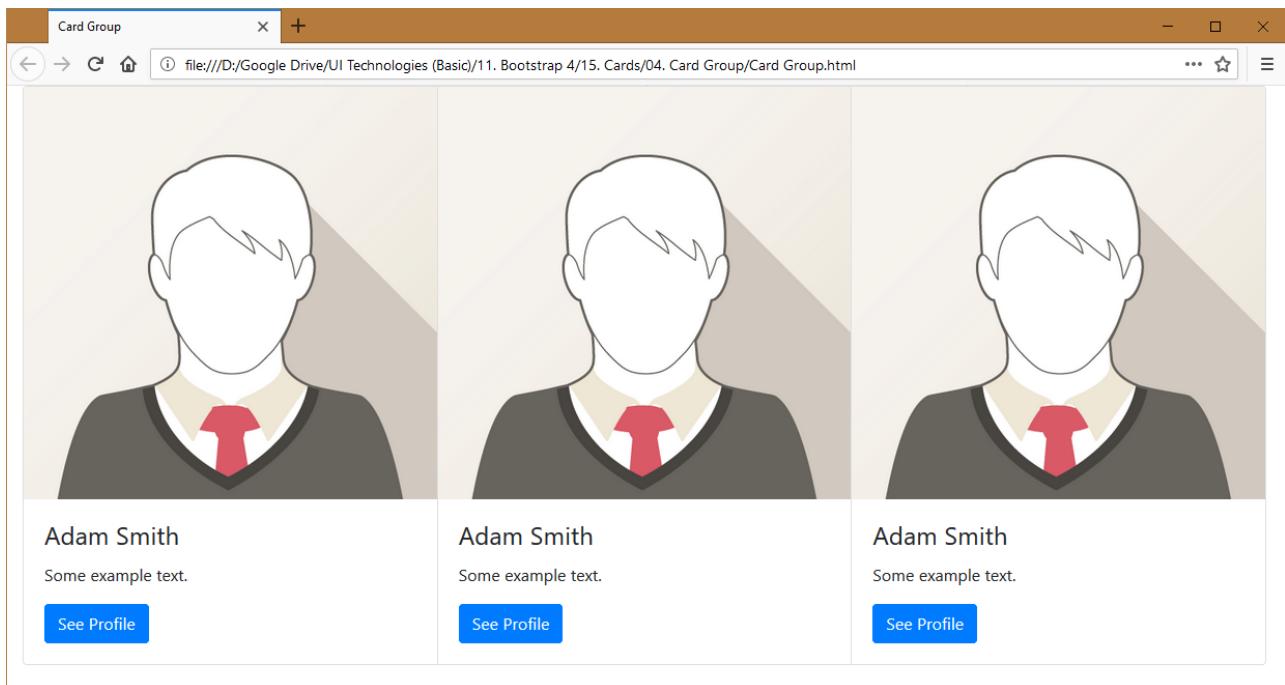
- It is used to display group of cards side by side.

List of Classes

- card-group : Group of cards

Example on Card Groups

```
<html>
<head>
  <title>Card Group</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>
<body>
  <div class="container-fluid">
    <div class="card-group" style="width:1200px">
      <div class="card" style="width:400px">
        
        <div class="card-body">
          <h4 class="card-title">Adam Smith</h4>
          <p class="card-text">Some example text.</p>
          <a href="#" class="btn btn-primary">See Profile</a>
        </div>
      </div>
      <div class="card" style="width:400px">
        
        <div class="card-body">
          <h4 class="card-title">Adam Smith</h4>
          <p class="card-text">Some example text.</p>
          <a href="#" class="btn btn-primary">See Profile</a>
        </div>
      </div>
      <div class="card" style="width:400px">
        
        <div class="card-body">
          <h4 class="card-title">Adam Smith</h4>
          <p class="card-text">Some example text.</p>
          <a href="#" class="btn btn-primary">See Profile</a>
        </div>
      </div>
    </div>
  </div>
</body>
</html>
```



Tooltip

Tooltip

- It is used to display tooltip message when the user places mouse pointer on it.

List of Classes

- | | |
|--|-----------------------------------|
| • data-toggle="tooltip" | : Enables tooltip for the element |
| • data-placement="top bottom left right" | : Specifies position of tooltip |
| • title | : Tooltip text |

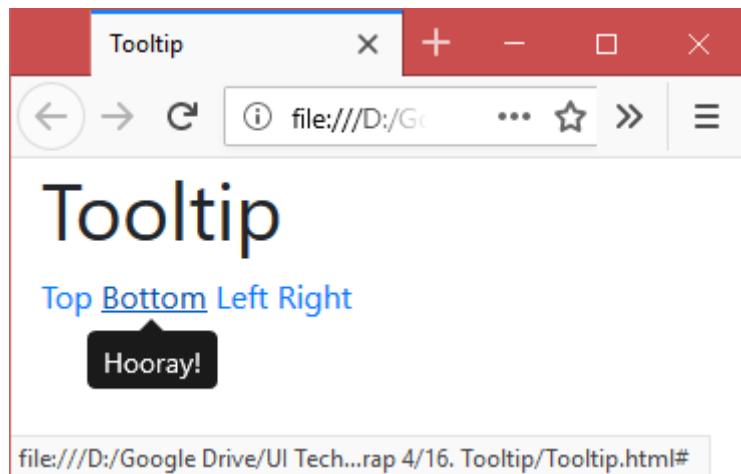
Example on Tooltip

```
<html>
<head>
<title>Tooltip</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
<h1>Tooltip</h1>
<a href="#" data-toggle="tooltip" data-placement="top" title="Hooray!">Top</a>
<a href="#" data-toggle="tooltip" data-placement="bottom" title="Hooray!">Bottom</a>
```

```

<a href="#" data-toggle="tooltip" data-placement="left" title="Hooray!">Left</a>
<a href="#" data-toggle="tooltip" data-placement="right" title="Hooray!">Right</a>
</div>
<script>
$( "[data-toggle='tooltip']" ).tooltip();
</script>
</body>
</html>

```



Popover

Popover

- It is used to display message (some text) when the user clicks an element.
- The popover can show when the cursor focuses the element.
- The popover can have title and content also.

List of Classes

- | | |
|--|-------------------------|
| • data-toggle="popover" | : Enables popover |
| • title | : Title of popover |
| • data-content=" <i>some text</i> " | : Text of popover |
| • data-placement="top bottom left right" | : Position of popover |
| • data-trigger="focus" | : Show popover on focus |

Example on Popover

```

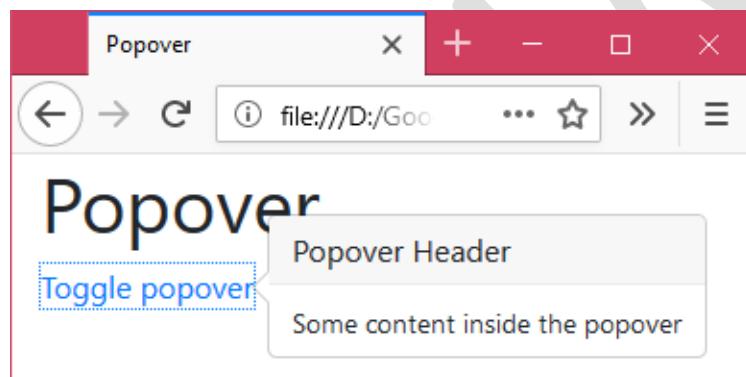
<html>
<head>
  <title>Popover</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>

```

```

<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
  <div class="container-fluid">
    <h1>Popover</h1>
    <a href="#" data-toggle="popover" title="Popover Header" data-content="Some content inside the
    popover" data-placement="right" data-trigger="focus">Toggle popover</a>
  </div>
  <script>
    $('[data-toggle="popover"]').popover();
  </script>
</body>
</html>

```



Collapsible

Basic Collapsible

- It is used to display expandable / collapsible content.
- The content will be shown when the user clicks on the button / link.

List of Classes

- collapse : Represents collapsible container.
- data-toggle="collapse" : Enables collapsible content, when button is clicked
- data-target="#id" : Connects the button with collapsible container.

Example on Basic Collapsible

```

<html>
  <head>
    <title>Basic Collapsible</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>

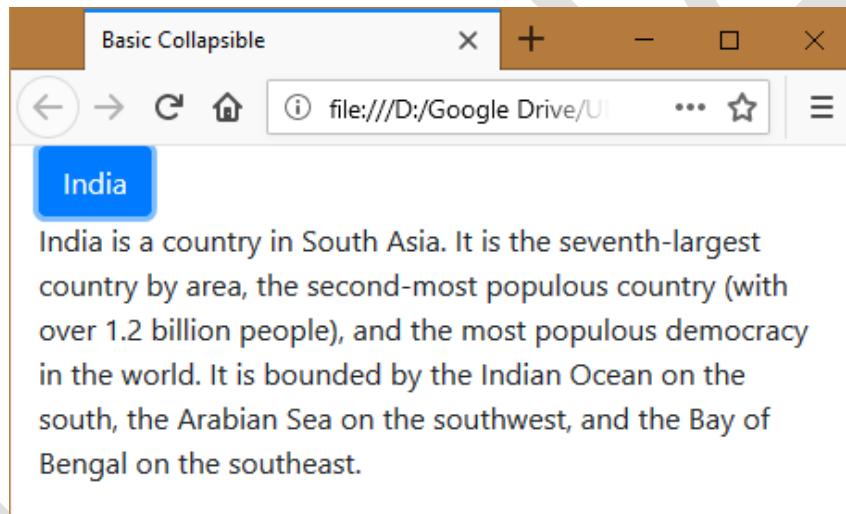
```

```

<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
<button class="btn btn-primary" data-toggle="collapse" data-target="#div1">India</button>

<div id="div1" class="collapse">
    India is a country in South Asia. It is the seventh-largest country by area, the second-most populous country (with over 1.2 billion people), and the most populous democracy in the world. It is bounded by the Indian Ocean on the south, the Arabian Sea on the southwest, and the Bay of Bengal on the southeast.
</div>
</div>
</body>
</html>

```



Link Collapsible

- It is used to display expandable / collapsible content, based on the link.
- The content will be shown when the user clicks on the link.

List of Classes

- show : Shows the collapsible content by default, while page is loading.

Example on Link Collapsible

```

<html>
<head>
<title>Link Collapsible</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>

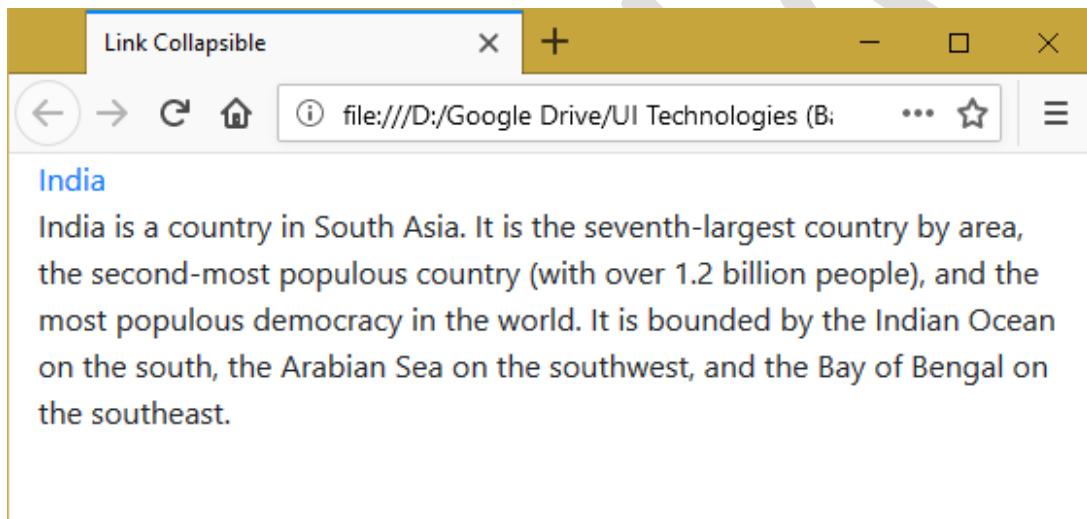
```

```

</head>
<body>
<div class="container-fluid">
<a data-toggle="collapse" href="#div1">India</a>

<div id="div1" class="collapse show">
    India is a country in South Asia. It is the seventh-largest country by area, the second-most populous country (with over 1.2 billion people), and the most populous democracy in the world. It is bounded by the Indian Ocean on the south, the Arabian Sea on the southwest, and the Bay of Bengal on the southeast.
</div>
</div>
</body>
</html>

```



Accordion

- It is used to display a group of collapsible items and show any one of them, when the user clicks it.
- Out of few collapsible items, only one is visible to the user.

List of Classes

- `show` : Shows the card
- `data-parent="id"` : Specifies reference to the parent div

Example on Accordion

```

<html>
<head>
    <title>Accordion</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>

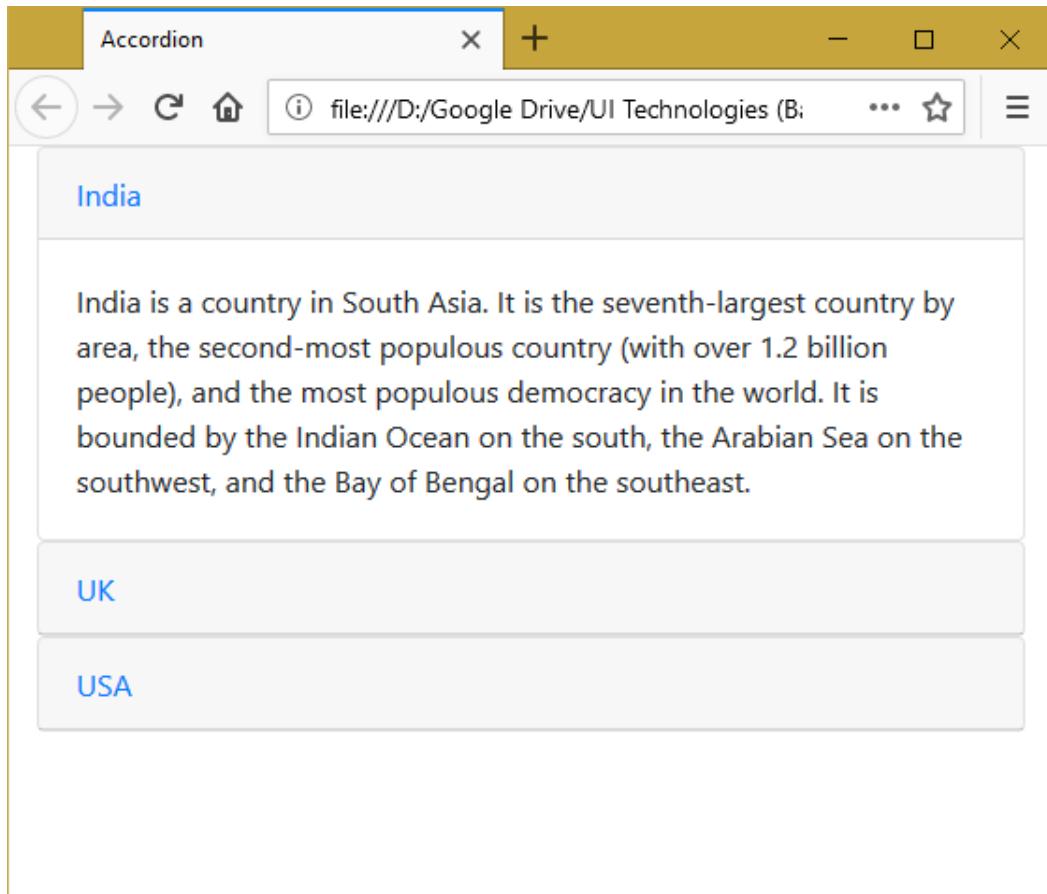
```

```
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
<div id="accordion">
<div class="card">
<div class="card-header">
<a class="card-link" data-toggle="collapse" href="#collapseOne">
    India
</a>
</div>
<div id="collapseOne" class="collapse show" data-parent="#accordion">
<div class="card-body">
    India is a country in South Asia. It is the seventh-largest country by area, the second-most populous country (with over 1.2 billion people), and the most populous democracy in the world. It is bounded by the Indian Ocean on the south, the Arabian Sea on the southwest, and the Bay of Bengal on the southeast.
</div>
</div>
</div>

<div class="card">
<div class="card-header">
<a class="collapsed card-link" data-toggle="collapse" href="#collapseTwo">
    UK
</a>
</div>
<div id="collapseTwo" class="collapse" data-parent="#accordion">
<div class="card-body">
    The United Kingdom of Great Britain and Northern Ireland, commonly known as the United Kingdom (UK) or Britain, is a sovereign country in western Europe. Lying off the north-western coast of the European mainland, the UK includes the island of Great Britain, the north-eastern part of the island of Ireland and many smaller islands.
</div>
</div>
</div>

<div class="card">
<div class="card-header">
<a class="collapsed card-link" data-toggle="collapse" href="#collapseThree">
    USA
</a>
</div>
<div id="collapseThree" class="collapse" data-parent="#accordion">
<div class="card-body">
    The United States of America (USA), commonly known as the United States (U.S.) or America, is a federal republic composed of 50 states, a federal district, five major self-governing territories, and various possessions. At 3.8 million square miles (9.8 million km2) and with over 325 million people, the United States is the world's third- or fourth-largest country by total area and the third-most populous country.
</div>
</div>
```

```
</div>
</div>
</div>
</body>
</html>
```



Forms

Inline Form

- It is used to create a simple form (with limited no. of elements), where the elements appear side-by-side.

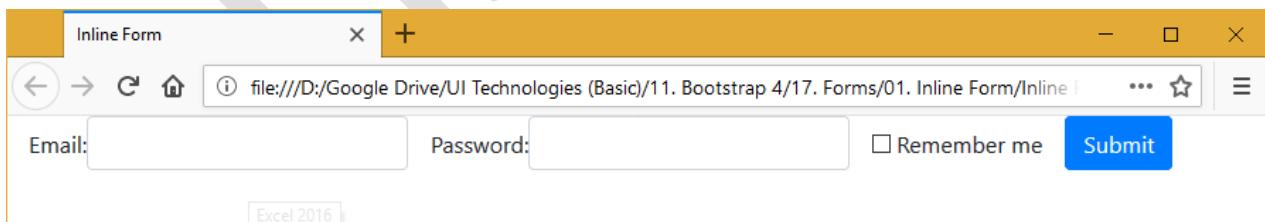
List of Classes

- form-inline
- form-group
- form-control
- mr-n
- form-check
- form-check-label

- form-check-input

Example on Inline Form

```
<html>
<head>
  <title>Inline Form</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>
<body>
  <div class="container-fluid">
    <form class="form-inline">
      <div class="form-group mr-3">
        <label for="email">Email:</label>
        <input type="email" class="form-control" id="email">
      </div>
      <div class="form-group mr-3">
        <label for="pwd">Password:</label>
        <input type="password" class="form-control" id="pwd">
      </div>
      <div class="form-group form-check mr-3">
        <label class="form-check-label">
          <input class="form-check-input" type="checkbox">Remember me
        </label>
      </div>
      <button class="btn btn-primary">Submit</button>
    </form>
  </div>
</body>
</html>
```



Stacked Form

- It is used to create a form, where the form elements appear line-by-line.

List of Classes

- form-text

- form-control-file

Example on Stacked Form

```
<html>
<head>
    <title>Stacked Form</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
</head>
<body>
    <div class="container-fluid">
        <div class="row">
            <div class="col-10">
                <h1>Registration</h1>
                <form>
                    <div class="form-group">
                        <label for="txtEmail">Email</label>
                        <input type="email" class="form-control" id="txtEmail" placeholder="Enter email">
                        <small class="form-text text-muted">We'll never share your email with anyone else.</small>
                    </div>

                    <div class="form-group">
                        <label for="txtPassword">Password</label>
                        <input type="password" class="form-control" id="txtPassword" placeholder="Password">
                    </div>

                    <div class="form-group">
                        <label for="drpCountry">Country</label>
                        <select class="form-control" id="drpCountry">
                            <option>Please Select</option>
                            <option>India</option>
                            <option>UK</option>
                            <option>USA</option>
                            <option>Japan</option>
                            <option>China</option>
                        </select>
                    </div>

                    <div class="form-group">
                        <label for="txtComments">Comments</label>
                        <textarea class="form-control" id="txtComments" rows="3"></textarea>
                    </div>

                    <div class="form-group">
                        <label for="txtFile">Attachment</label>
                        <input type="file" class="form-control-file" id="txtFile">
                    </div>
                </form>
            </div>
        </div>
    </div>
</body>
```

```
</div>

<div class="form-group">
<label>Gender</label>
<div class="form-check">
<label class="form-check-label">
<input type="radio" class="form-check-input" name="rbGender" value="male">Male
</label>
</div>
<div class="form-check">
<label class="form-check-label">
<input type="radio" class="form-check-input" name="rbGender" value="female">
Female
</label>
</div>
</div>

<div class="form-group form-check">
<label class="form-check-label">
<input type="checkbox" class="form-check-input" checked="checked">
Remember Me
</label>
</div>

<button type="submit" class="btn btn-primary">Register</button>
</form>
</div>
<div class="col-2">div 2</div>
</div>
</div>
</body>
</html>
```

The screenshot shows a registration form titled "Registration" within a browser window titled "Stacked Form". The form includes fields for Email, Password, Country, Comments, Attachment, Gender (Male/Female), and a Remember Me checkbox. A "Register" button is at the bottom.

Email
Enter email
We'll never share your email with anyone else.

Password
Password

Country
Please Select

Comments

Attachment
Browse... No file selected.

Gender
 Male
 Female

Remember Me

Register

Form Grid

- It is used to create a form, where the desired form elements appear side-by-side.

List of Classes

- form-row

Example on Form Grid

```
<html>
<head>
    <title>Form Grid</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
</head>
<body>
    <div class="container-fluid">
        <h1>Registration</h1>
        <form>
            <div class="form-row">
                <div class="form-group col-sm-6">
                    <label for="txtEmail">Email</label>
                    <input type="email" class="form-control" id="txtEmail" placeholder="Enter email">
                </div>

                <div class="form-group col-sm-6">
                    <label for="txtPassword">Password</label>
                    <input type="password" class="form-control" id="txtPassword" placeholder="Password">
                </div>
            </div>

            <div class="form-row">
                <div class="form-group col-sm-4">
                    <label for="txtStreet">Street</label>
                    <input type="text" class="form-control" id="txtStreet" placeholder="Street">
                </div>

                <div class="form-group col-sm-4">
                    <label for="txtCity">City</label>
                    <input type="text" class="form-control" id="txtCity" placeholder="City">
                </div>

                <div class="form-group col-sm-4">
                    <label for="drpCountry">Country</label>
                    <select class="form-control" id="drpCountry">
                        <option>Please Select</option>
                        <option>India</option>
                        <option>UK</option>
                        <option>USA</option>
                        <option>Japan</option>
                        <option>China</option>
                    </select>
                </div>
            </div>
        <div class="form-group">
```

```

<label for="txtComments">Comments</label>
<textarea class="form-control" id="txtComments" rows="3"></textarea>
</div>

<button type="submit" class="btn btn-primary">Register</button>
</form>
</div>
</body>
</html>

```

The screenshot shows a registration form titled "Registration". The form is structured using a grid system. It includes fields for Email (labeled "Email" with placeholder "Enter email"), Password (labeled "Password"), Street (labeled "Street" with placeholder "Street"), City (labeled "City" with placeholder "City"), Country (labeled "Country" with a dropdown menu showing "Please Select"), and Comments (a large text area labeled "Comments"). A "Register" button is located at the bottom left of the form.

Horizontal Form Grid

- It is used to create a form, where the labels and form elements appear side-by-side.

List of Classes

- form-row
- col-sm-n
- col-form-label
- offset-sm-n

Example on Horizontal Form Grid

```

<html>
  <head>
    <title>Horizontal Form Grid</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
  </head>
  <body>
    <div class="container-fluid">
      <div class="row">
        <div class="col-10">
          <h1>Registration</h1>
          <form>
            <div class="form-group form-row">
              <label for="txtEmail" class="col-sm-2 col-form-label">Email</label>
              <div class="col-sm-10">
                <input type="email" class="form-control" id="txtEmail" placeholder="Enter Email">
              </div>
            </div>

            <div class="form-group form-row">
              <label for="txtPassword" class="col-sm-2 col-form-label">Password</label>
              <div class="col-sm-10">
                <input type="password" class="form-control" id="txtPassword" placeholder="Password">
              </div>
            </div>

            <div class="form-group form-row">
              <label for="drpCountry" class="col-sm-2 col-form-label">Country</label>
              <div class="col-sm-10">
                <select class="form-control" id="drpCountry">
                  <option>Please Select</option>
                  <option>India</option>
                  <option>UK</option>
                  <option>USA</option>
                  <option>Japan</option>
                  <option>China</option>
                </select>
              </div>
            </div>

            <div class="form-group form-row">
              <label class="form-label col-sm-2">Gender</label>
              <div class="col-sm-10">
                <div class="form-check form-check-inline">
                  <label class="form-check-label">
                    <input class="form-check-input" type="radio" name="gender" value="male">
                    Male
                  </label>
                </div>
              </div>
            </div>
          </form>
        </div>
      </div>
    </div>
  </body>

```

```
</label>
</div>
<div class="form-check form-check-inline">
<label class="form-check-label">
<input class="form-check-input" type="radio" name="gender" value="female">
    Female
</label>
</div>
</div>
</div>

<div class="form-group form-row">
<label class="col-sm-2"></label>
<div class="col-sm-10">
<div class="form-check">
<label class="form-check-label">
<input class="form-check-input" type="checkbox">
    Remember me
</label>
</div>
</div>
</div>

<div class="form-group form-row">
<div class="offset-sm-2 col-sm-10">
    <button type="submit" class="btn btn-primary">Sign in</button>
</div>
</div>

</form>
</div>
<div class="col-2">div 2</div>
</div>
</div>
</body>
</html>
```

The screenshot shows a registration form titled "Registration". The form includes fields for "Email" (with placeholder "Enter Email"), "Password" (with placeholder "Password"), "Country" (with placeholder "Please Select"), "Gender" (with radio buttons for "Male" and "Female"), and a "Remember me" checkbox. A "Sign in" button is at the bottom.

Input Groups

- It is used to create a form element, with some text inside it.

List of Classes

- input-group
- input-group-prepend
- input-group-append
- input-group-text

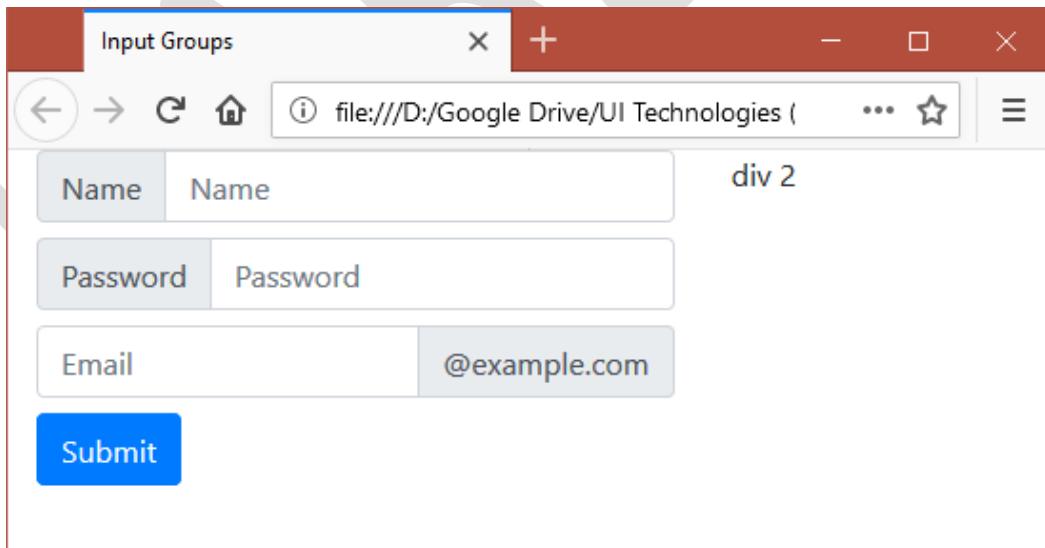
Example on Input Groups

```
<html>
<head>
  <title>Input Groups</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>
<body>
  <div class="container-fluid">
    <div class="row">
      <div class="col-8">
```

```

<form>
  <div class="input-group mb-2">
    <div class="input-group-prepend">
      <span class="input-group-text">Name</span>
    </div>
    <input type="text" class="form-control" placeholder="Name">
  </div>
  <div class="input-group mb-2">
    <div class="input-group-prepend">
      <span class="input-group-text">Password</span>
    </div>
    <input type="password" class="form-control" placeholder="Password">
  </div>
  <div class="input-group mb-2">
    <input type="text" class="form-control" placeholder="Email">
    <div class="input-group-append">
      <span class="input-group-text">@example.com</span>
    </div>
  </div>
  <button class="btn btn-primary">Submit</button>
</form>
</div>
<div class="col-4">div 2</div>
</div>
</div>
</body>
</html>

```



Form Validation

- It is used to display success message / error message, based on the value that is entered by the user.

List of Classes

- needs-validation

- novalidate="novalidate"
- valid-feedback
- invalid-feedback
- valid-tooltip
- invalid-tooltip
- required="required"
- pattern="reg exp"

Example on Form Validation

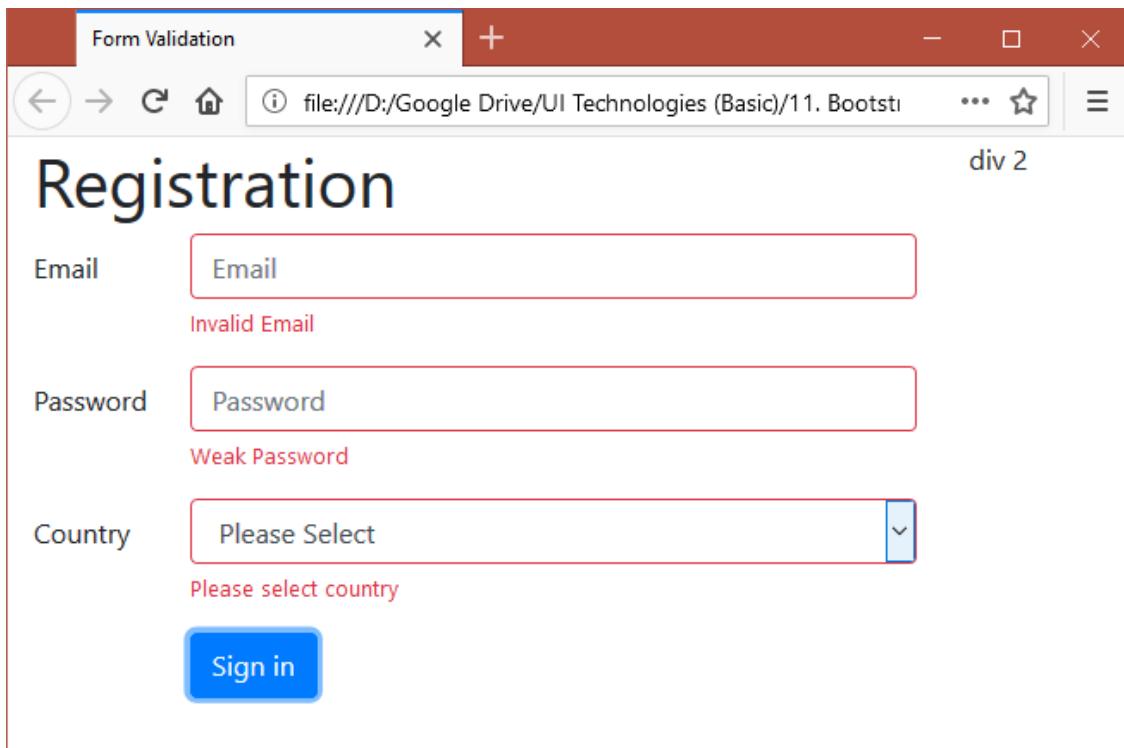
```
<html>
  <head>
    <title>Form Validation</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
  </head>
  <body>
    <div class="container-fluid">
      <div class="row">
        <div class="col-10">
          <h1>Registration</h1>
          <form class="needs-validation" novalidate="novalidate">

            <div class="form-group row">
              <label for="txtEmail" class="col-sm-2 col-form-label">Email</label>
              <div class="col-sm-10">
                <input type="email" class="form-control" id="txtEmail" placeholder="Email"
required="required">
                <div class="valid-feedback">
                  Looks good!
                </div>
                <div class="invalid-feedback">
                  Invalid Email
                </div>
              </div>
            </div>

            <div class="form-group row">
              <label for="txtPassword" class="col-sm-2 col-form-label">Password</label>
              <div class="col-sm-10">
                <input type="password" class="form-control" id="txtPassword" placeholder="Password"
pattern="((?=.\d)(?=.*[a-z])(?=.*[A-Z]).{6,15})" required="required">
                <div class="valid-feedback">
                  Great Password!
                </div>
              </div>
            </div>
          </form>
        </div>
      </div>
    </div>
  </body>

```

```
<div class="invalid-feedback">  
  Weak Password  
</div>  
</div>  
</div>  
  
<div class="form-group row">  
  <label for="drpCountry" class="col-sm-2 col-form-label">Country</label>  
  <div class="col-sm-10">  
    <select class="form-control" id="drpCountry" required="required">  
      <option value="">Please Select</option>  
      <option>India</option>  
      <option>UK</option>  
      <option>USA</option>  
      <option>Japan</option>  
      <option>China</option>  
    </select>  
    <div class="invalid-feedback">  
      Please select country  
</div>  
  </div>  
</div>  
  
<div class="form-group row">  
  <div class="offset-sm-2 col-sm-10">  
    <button type="submit" class="btn btn-primary">Sign in</button>  
  </div>  
</div>  
  
</form>  
</div>  
<div class="col-2">div 2</div>  
</div>  
</div>  
  
<script>  
document.getElementsByClassName("needs-validation")[0].addEventListener("submit",  
function(event)  
{  
  if (event.target.checkValidity() == false)  
  {  
    event.preventDefault();  
    event.target.classList.add("was-validated");  
  }  
});  
</script>  
</body>  
</html>
```



Navigation

Basic Navigation

- It is used to display a simple navigation bar with few hyperlinks
- When the user clicks on any hyperlink, the corresponding web page (html file) will be opened.

List of Classes

- nav
- nav-item
- nav-link

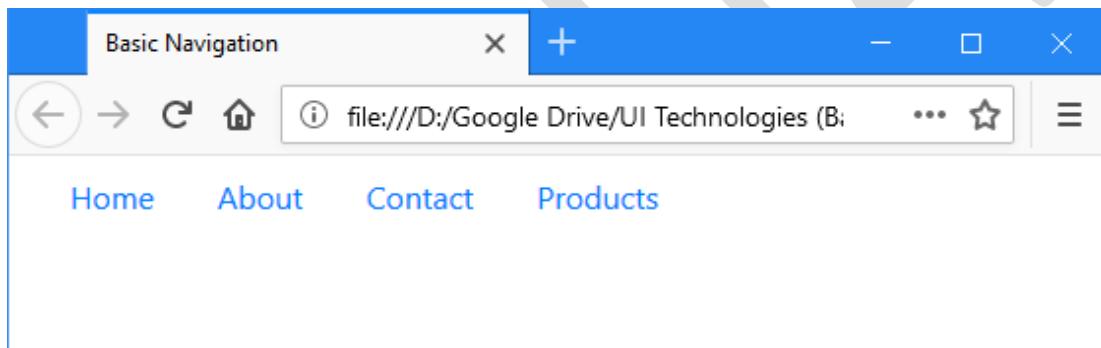
Example on Basic Navigation

```
<html>
<head>
<title>Basic Navigation</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
```

```

<ul class="nav">
  <li class="nav-item">
    <a class="nav-link" href="#">Home</a>
  </li>
  <li class="nav-item">
    <a class="nav-link" href="#">About</a>
  </li>
  <li class="nav-item">
    <a class="nav-link" href="#">Contact</a>
  </li>
  <li class="nav-item">
    <a class="nav-link" href="#">Products</a>
  </li>
</ul>
</div>
</body>
</html>

```



Navigation Alignment

- It is used to set alignment for the simple navigation bar.
- Default is left alignment.
- You can set center / right alignment.

List of Classes

- justify-content-center
- justify-content-end

Example on Navigation Alignment

```

<html>
  <head>
    <title>Navigation Alignment</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>

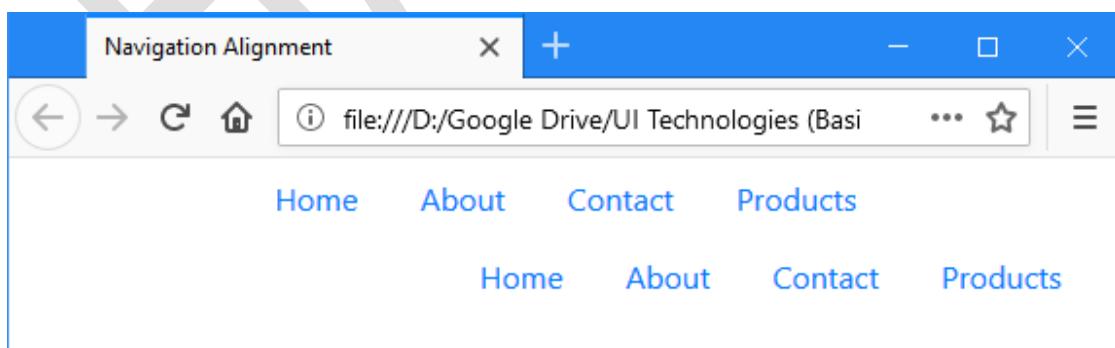
```

```

</head>
<body>
<div class="container-fluid">
  <ul class="nav justify-content-center">
    <li class="nav-item">
      <a class="nav-link" href="#">Home</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">About</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">Contact</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">Products</a>
    </li>
  </ul>

  <ul class="nav justify-content-end">
    <li class="nav-item">
      <a class="nav-link" href="#">Home</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">About</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">Contact</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">Products</a>
    </li>
  </ul>
</div>
</body>
</html>

```



Vertical Navigation

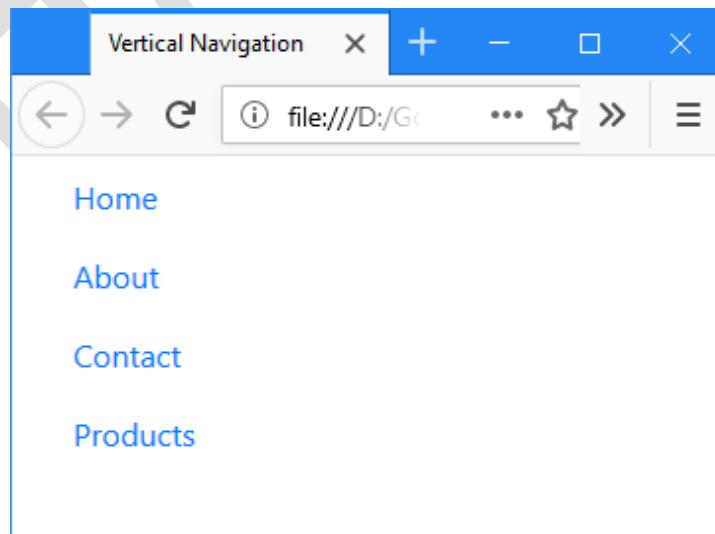
- It is used to display the simple navigation bar in vertical mode.

List of Classes

- flex-column

Example on Vertical Navigation

```
<html>
  <head>
    <title>Vertical Navigation</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
  </head>
  <body>
    <div class="container-fluid">
      <ul class="nav flex-column">
        <li class="nav-item">
          <a class="nav-link" href="#">Home</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="#">About</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="#">Contact</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="#">Products</a>
        </li>
      </ul>
    </div>
  </body>
</html>
```



Tabs

- It is used to display a set of tabs and show the corresponding content below, when the user clicks on any one tab.

List of Classes

- nav-tabs
- data-toggle="tab"
- tab-content
- tab-pane
- container
- active
- fade

Example on Tabs

```

<html>
  <head>
    <title>Tabs</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
  </head>
  <body>
    <div class="container-fluid">
      <ul class="nav nav-tabs">
        <li class="nav-item">
          <a class="nav-link active" data-toggle="tab" href="#menu1">India</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" data-toggle="tab" href="#menu2">UK</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" data-toggle="tab" href="#menu3">USA</a>
        </li>
      </ul>

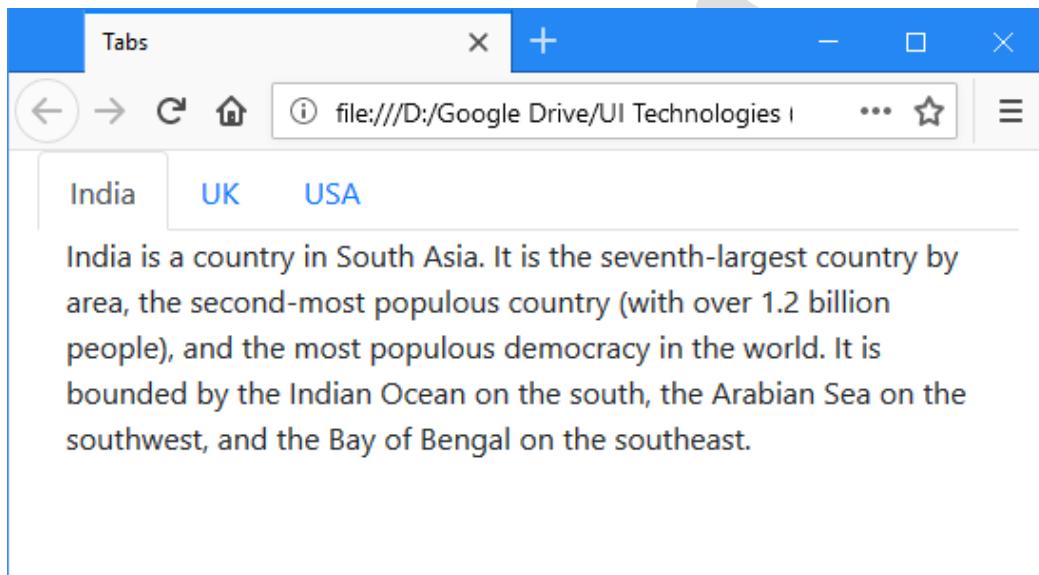
      <div class="tab-content">
        <div class="tab-pane container active" id="menu1">India is a country in South Asia. It is the seventh-largest country by area, the second-most populous country (with over 1.2 billion people), and the most populous democracy in the world. It is bounded by the Indian Ocean on the south, the Arabian Sea on the southwest, and the Bay of Bengal on the southeast.</div>
        <div class="tab-pane container fade" id="menu2">The United Kingdom of Great Britain and Northern Ireland, commonly known as the United Kingdom (UK) or Britain, is a sovereign country in
      </div>
    </div>
  </body>

```

western Europe. Lying off the north-western coast of the European mainland, the UK includes the island of Great Britain, the north-eastern part of the island of Ireland and many smaller islands.</div>

<div class="tab-pane container fade" id="menu3">The United States of America (USA), commonly known as the United States (U.S.) or America, is a federal republic composed of 50 states, a federal district, five major self-governing territories, and various possessions. At 3.8 million square miles (9.8 million km²) and with over 325 million people, the United States is the world's third- or fourth-largest country by total area and the third-most populous country.</div>

```
</div>
</div>
</body>
</html>
```



Pills

- It is used to display a set of tabs with more rounded corners and background color.

List of Classes

- nav-pills
- data-toggle="pill"

Example on Pills

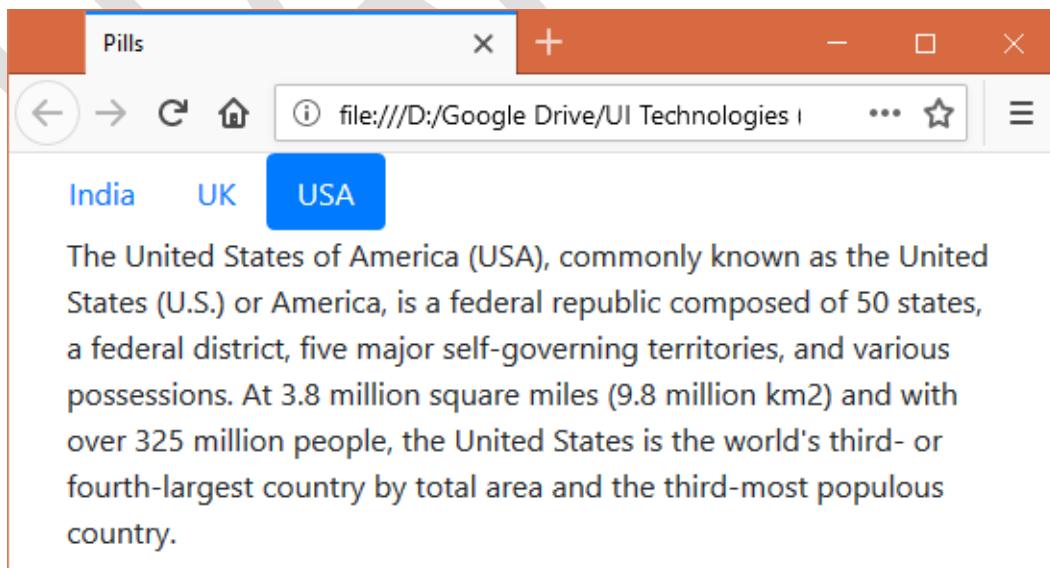
```
<html>
<head>
  <title>Pills</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>
<body>
```

```

<div class="container-fluid">
<ul class="nav nav-pills">
<li class="nav-item">
<a class="nav-link active" data-toggle="pill" href="#menu1">India</a>
</li>
<li class="nav-item">
<a class="nav-link" data-toggle="pill" href="#menu2">UK</a>
</li>
<li class="nav-item">
<a class="nav-link" data-toggle="pill" href="#menu3">USA</a>
</li>
</ul>

<div class="tab-content">
<div class="tab-pane container active" id="menu1">India is a country in South Asia. It is the seventh-largest country by area, the second-most populous country (with over 1.2 billion people), and the most populous democracy in the world. It is bounded by the Indian Ocean on the south, the Arabian Sea on the southwest, and the Bay of Bengal on the southeast.</div>
<div class="tab-pane container fade" id="menu2">The United Kingdom of Great Britain and Northern Ireland, commonly known as the United Kingdom (UK) or Britain, is a sovereign country in western Europe. Lying off the north-western coast of the European mainland, the UK includes the island of Great Britain, the north-eastern part of the island of Ireland and many smaller islands.</div>
<div class="tab-pane container fade" id="menu3">The United States of America (USA), commonly known as the United States (U.S.) or America, is a federal republic composed of 50 states, a federal district, five major self-governing territories, and various possessions. At 3.8 million square miles (9.8 million km2) and with over 325 million people, the United States is the world's third- or fourth-largest country by total area and the third-most populous country.</div>
</div>
</div>
</body>
</html>

```



Tabs with DropDown

- It is used to display dropdown menu in the tabs.

List of Classes

- dropdown
- dropdown-toggle
- data-toggle="dropdown"
- dropdown-menu
- dropdown-item

Example on DropDown

```

<html>
  <head>
    <title>Tabs with Dropdown</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
  </head>
  <body>
    <div class="container-fluid">
      <ul class="nav nav-tabs">
        <li class="nav-item">
          <a class="nav-link active" data-toggle="tab" href="#menu1">India</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" data-toggle="tab" href="#menu2">UK</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" data-toggle="tab" href="#menu3">USA</a>
        </li>
        <li class="nav-item dropdown">
          <a class="nav-link dropdown-toggle" data-toggle="dropdown" href="#">Cities</a>
          <div class="dropdown-menu">
            <a class="dropdown-item" data-toggle="tab" href="#menu4">Hyderabad</a>
            <a class="dropdown-item" data-toggle="tab" href="#menu5">New Delhi</a>
            <a class="dropdown-item" data-toggle="tab" href="#menu6">New York</a>
          </div>
        </li>
      </ul>

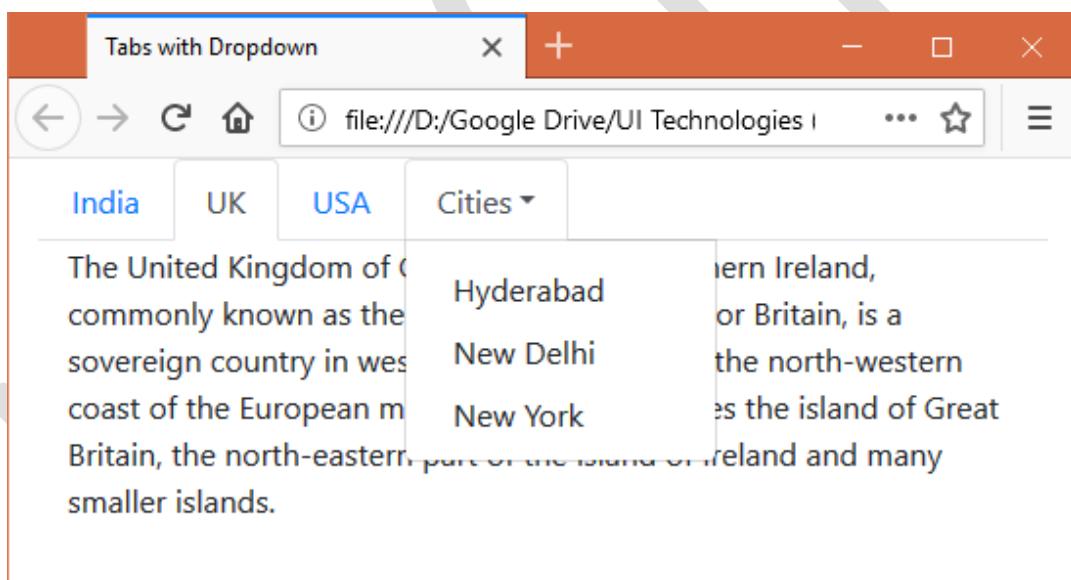
      <div class="tab-content">
        <div class="tab-pane container active" id="menu1">India is a country in South Asia. It is the seventh-largest country by area, the second-most populous country (with over 1.2 billion people), and the most populous democracy in the world. It is bounded by the Indian Ocean on the south, the Arabian Sea on the southwest, and the Bay of Bengal on the southeast.</div>
      </div>
    </div>
  </body>
</html>

```

```

<div class="tab-pane container fade" id="menu2">The United Kingdom of Great Britain and
Northern Ireland, commonly known as the United Kingdom (UK) or Britain, is a sovereign country in
western Europe. Lying off the north-western coast of the European mainland, the UK includes the island
of Great Britain, the north-eastern part of the island of Ireland and many smaller islands.</div>
<div class="tab-pane container fade" id="menu3">The United States of America (USA), commonly
known as the United States (U.S.) or America, is a federal republic composed of 50 states, a federal
district, five major self-governing territories, and various possessions. At 3.8 million square miles (9.8
million km2) and with over 325 million people, the United States is the world's third- or fourth-largest
country by total area and the third-most populous country.</div>
<div class="tab-pane container fade" id="menu4">Hyderabad is the capital of the Indian state of
Telangana and de jure capital of Andhra Pradesh.</div>
<div class="tab-pane container fade" id="menu5">New Delhi is an urban district of Delhi which
serves as the capital of India and seat of all three branches of Government of India.</div>
<div class="tab-pane container fade" id="menu6">The City of New York, often called New York City
(NYC) or simply New York, is the most populous city in the United States. With an estimated 2017
population of 8,622,698 distributed over a land area of about 302.6 square miles (784 km2), New York
City is also the most densely populated major city in the United States.</div>
</div>
</div>
</body>
</html>

```



Navigation Bar

Basic Navigation Bar

- It is used to display a complex navigation bar (NavBar) with few hyperlinks.
- When the user clicks on any hyperlink, the corresponding web page (html file) will be opened.
- NavBar can shrink when we reduce the width of the browser / in mobile devices, automatically.
- NavBar supports to display website logo (text / image).
- NavBar supports to display form elements such as textboxes etc.

List of Classes

- navbar
- navbar-expand-sm
- navbar-dark
- navbar-nav
- nav-item
- nav-link
- active

Example on Basic Navigation Bar

home.html

```
<html>
<head>
  <title>Home</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="bootstrap.css">
  <script src="jquery-3.3.1.js"></script>
  <script src="popper.js"></script>
  <script src="bootstrap.js"></script>
</head>
<body>
  <div class="container-fluid">
    <nav class="navbar navbar-expand-sm bg-success navbar-dark">
      <ul class="navbar-nav">
        <li class="nav-item">
          <a class="nav-link active" href="home.html">Home</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="about.html">About</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="contact.html">Contact</a>
        </li>
      </ul>
    </nav>
    Home page content here
  </div>
</body>
</html>
```

about.html

```
<html>
<head>
  <title>About</title>
  <meta charset="utf-8">
```

```

<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
<nav class="navbar navbar-expand-sm bg-success navbar-dark">
<ul class="navbar-nav">
<li class="nav-item">
<a class="nav-link" href="home.html">Home</a>
</li>
<li class="nav-item">
<a class="nav-link active" href="about.html">About</a>
</li>
<li class="nav-item">
<a class="nav-link" href="contact.html">Contact</a>
</li>
</ul>
</nav>
About page content here
</div>
</body>
</html>

```

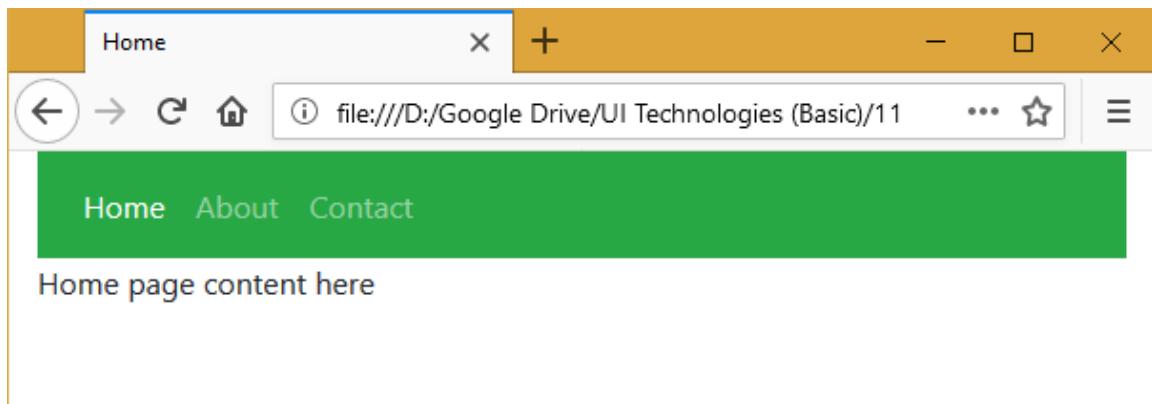
contact.html

```

<html>
<head>
<title>Contact</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
<nav class="navbar navbar-expand-sm bg-success navbar-dark">
<ul class="navbar-nav">
<li class="nav-item">
<a class="nav-link" href="home.html">Home</a>
</li>
<li class="nav-item">
<a class="nav-link" href="about.html">About</a>
</li>
<li class="nav-item">
<a class="nav-link active" href="contact.html">Contact</a>
</li>
</ul>
</nav>

```

```
Contact page content here  
</div>  
</body>  
</html>
```



NavBar Collapsible

- It is used to display a collapsible navbar. That means when the web page has been opened in small devices, the menu will be automatically converted into "=" icon. When the user clicks on this icon, the menu gets opened.

List of Classes

- navbar-expand-sm
- navbar-brand
- navbar-toggler
- data-toggle="collapse"
- data-target="#id"
- collapse
- navbar-collapse

Example on NavBar Collapsible

```
<html>  
<head>  
  <title>NavBar Collapsible</title>  
  <meta charset="utf-8">  
  <meta name="viewport" content="width=device-width, initial-scale=1">  
  <link rel="stylesheet" href="bootstrap.css">  
  <script src="jquery-3.3.1.js"></script>  
  <script src="popper.js"></script>  
  <script src="bootstrap.js"></script>  
</head>  
<body>  
  <div class="container-fluid">  
    <nav class="navbar navbar-expand-sm bg-light navbar-light">
```

```

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

</a>  
  

<button class="navbar-toggler" data-toggle="collapse" data-target="#collapsibleNavbar">  

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

</button>  
  

<div class="collapse navbar-collapse" id="collapsibleNavbar">  

  <ul class="navbar-nav">  

    <li class="nav-item">  

      <a class="nav-link active" href="#">Home</a>  

    </li>  

    <li class="nav-item">  

      <a class="nav-link" href="#">About</a>  

    </li>  

    <li class="nav-item">  

      <a class="nav-link" href="#">Contact</a>  

    </li>  

  </ul>  

</div>  

</nav>  

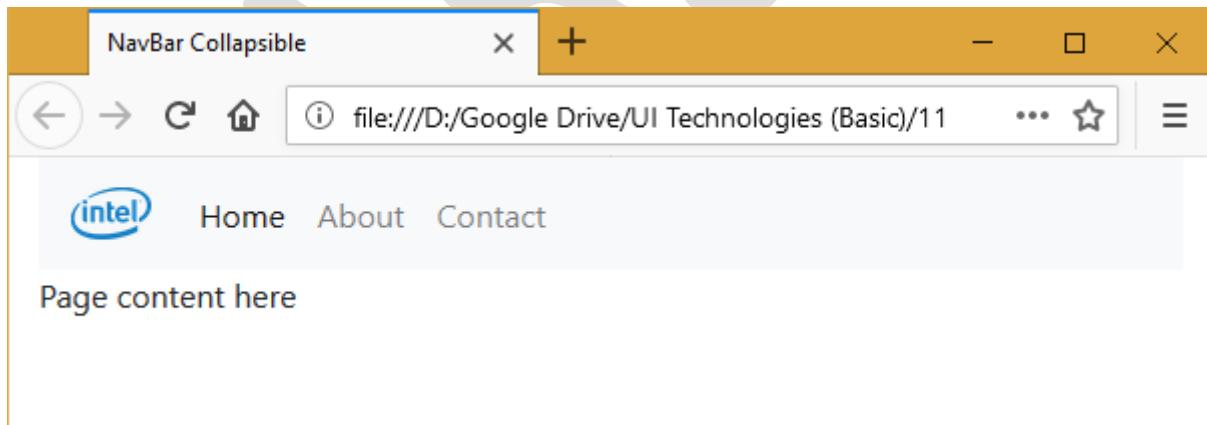
  Page content here  

</div>  

</body>  

</html>

```



NavBar DropDown

- It is used to display a dropdown menu for the navigation bar item.

List of Classes

- dropdown
- dropdown-toggle
- data-toggle="dropdown"

- dropdown-menu
- dropdown-item

Example on NavBar DropDown

```

<html>
  <head>
    <title>NavBar Dropdown</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
  </head>
  <body>
    <div class="container-fluid">
      <nav class="navbar navbar-expand-sm bg-light navbar-light">
        <a class="navbar-brand" href="#">
          
        </a>

        <button class="navbar-toggler" data-toggle="collapse" data-target="#collapsibleNavbar">
          <span class="navbar-toggler-icon"></span>
        </button>

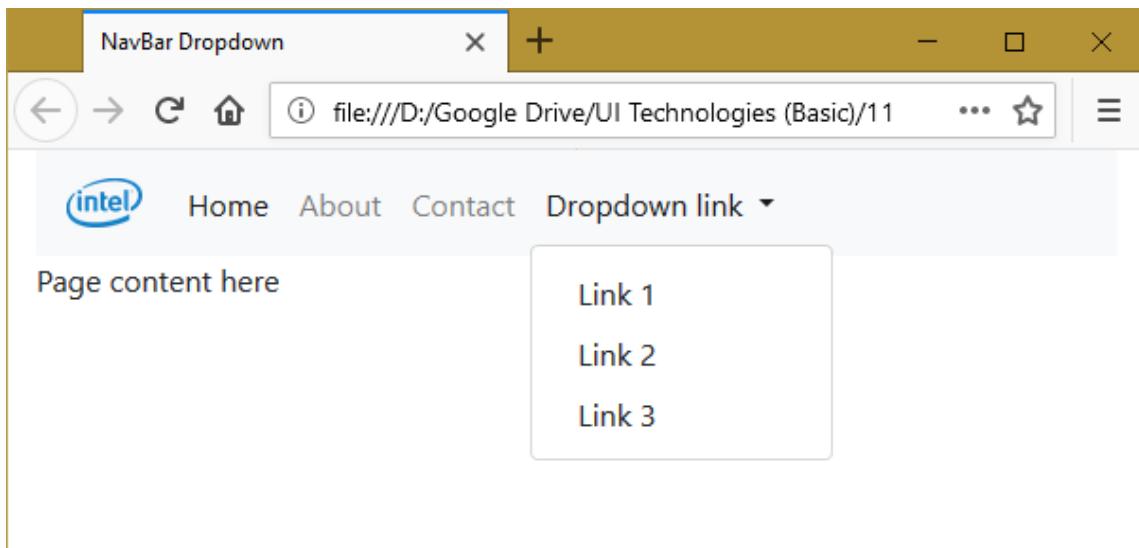
        <div class="collapse navbar-collapse" id="collapsibleNavbar">
          <ul class="navbar-nav">
            <li class="nav-item">
              <a class="nav-link active" href="#">Home</a>
            </li>
            <li class="nav-item">
              <a class="nav-link" href="#">About</a>
            </li>
            <li class="nav-item">
              <a class="nav-link" href="#">Contact</a>
            </li>

            <li class="nav-item dropdown">
              <a class="nav-link dropdown-toggle" href="#" data-toggle="dropdown">
                Dropdown link
              </a>
              <div class="dropdown-menu">
                <a class="dropdown-item" href="#">Link 1</a>
                <a class="dropdown-item" href="#">Link 2</a>
                <a class="dropdown-item" href="#">Link 3</a>
              </div>
            </li>
          </ul>
        </div>
      </nav>
    </div>
  </body>
</html>

```

Page content here

```
</div>
</body>
</html>
```



NavBar Search

- It is used to display a search box for the navigation bar.

List of Classes

- form-inline
- form-control
- mr-sm-n

Example on NavBar Search

```
<html>
  <head>
    <title>NavBar Search</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
  </head>
  <body>
    <div class="container-fluid">
      <nav class="navbar navbar-expand-sm bg-light navbar-light">
        <a class="navbar-brand" href="#">
          
        </a>
      </nav>
    </div>
  </body>
</html>
```

```

<button class="navbar-toggler" data-toggle="collapse" data-target="#collapsibleNavbar">
  <span class="navbar-toggler-icon"></span>
</button>

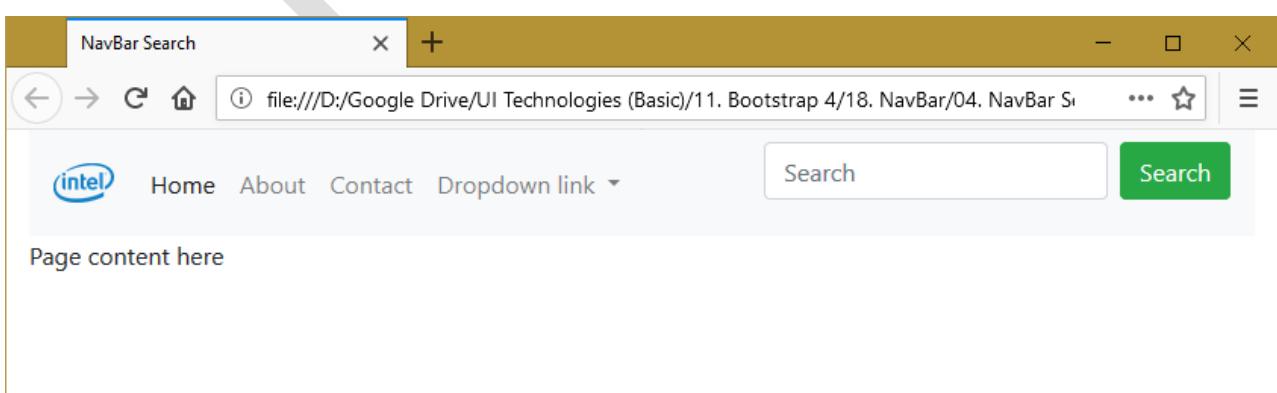
<div class="collapse navbar-collapse" id="collapsibleNavbar">
  <ul class="navbar-nav">
    <li class="nav-item">
      <a class="nav-link active" href="#">Home</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">About</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="#">Contact</a>
    </li>

    <li class="nav-item dropdown">
      <a class="nav-link dropdown-toggle" href="#" data-toggle="dropdown">
        Dropdown link
      </a>
      <div class="dropdown-menu">
        <a class="dropdown-item" href="#">Link 1</a>
        <a class="dropdown-item" href="#">Link 2</a>
        <a class="dropdown-item" href="#">Link 3</a>
      </div>
    </li>
  </ul>
</div>

<form class="form-inline">
  <input type="text" class="form-control mr-sm-2" placeholder="Search">
  <button class="btn btn-success">Search</button>
</form>

</nav>
Page content here
</div>
</body>
</html>

```



NavBar FixedTop

- It is used to display a navbar always at the top of the page, even though the user has scrolled the page up / down.

List of Classes

- fixed-top

Example on NavBar FixedTop

```

<html>
  <head>
    <title>NavBar FixedTop</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
  </head>
  <body>
    <div class="container-fluid">
      <nav class="navbar navbar-expand-sm bg-light navbar-light fixed-top">
        <a class="navbar-brand" href="#">
          
        </a>

        <button class="navbar-toggler" data-toggle="collapse" data-target="#collapsibleNavbar">
          <span class="navbar-toggler-icon"></span>
        </button>

        <div class="collapse navbar-collapse" id="collapsibleNavbar">
          <ul class="navbar-nav">
            <li class="nav-item">
              <a class="nav-link active" href="#">Home</a>
            </li>
            <li class="nav-item">
              <a class="nav-link" href="#">About</a>
            </li>
            <li class="nav-item">
              <a class="nav-link" href="#">Contact</a>
            </li>

            <li class="nav-item dropdown">
              <a class="nav-link dropdown-toggle" href="#" data-toggle="dropdown">
                Dropdown link
              </a>
              <div class="dropdown-menu">
                <a class="dropdown-item" href="#">Link 1</a>
                <a class="dropdown-item" href="#">Link 2</a>
                <a class="dropdown-item" href="#">Link 3</a>
              </div>
            </li>
          </ul>
        </div>
      </nav>
    </div>
  </body>
</html>

```

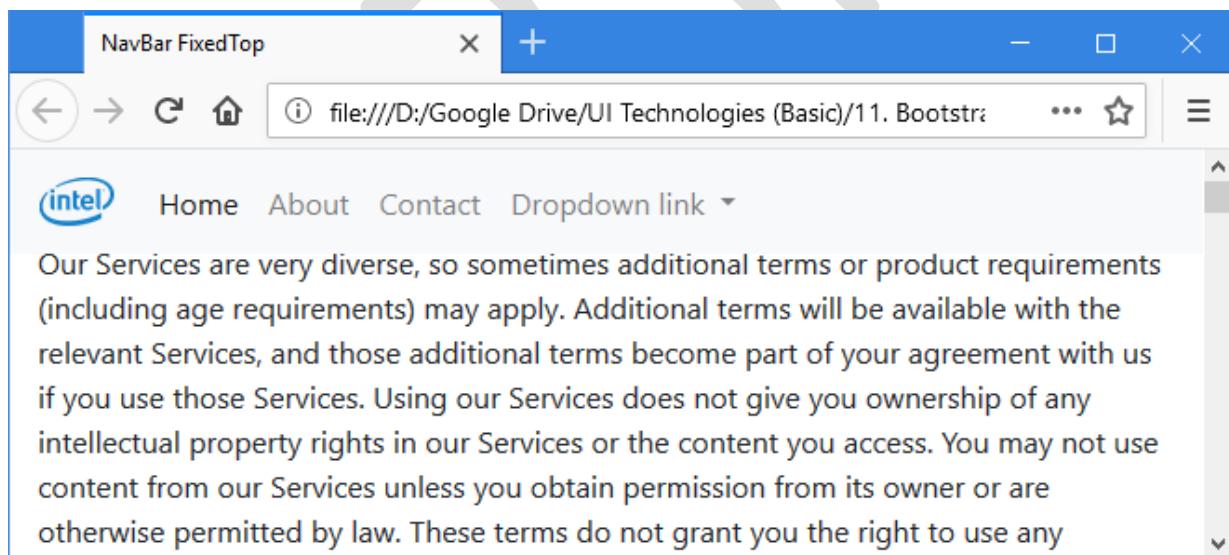
```

</div>
</li>
</ul>
</div>
</nav>


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</div>
</body>
</html>

```



NavBar Sticky Top

- By default, the navbar appears in the middle of the page; and the navbar will be displayed always at the top of the page, only when the user has scrolled the page up / down.

List of Classes

- sticky-top

Example on NavBar Sticky-Top

```
<html>
<head>
<title>NavBar Sticky Top</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="bootstrap.css">
<script src="jquery-3.3.1.js"></script>
<script src="popper.js"></script>
<script src="bootstrap.js"></script>
</head>
<body>
<div class="container-fluid">
<div class="jumbotron">
<h1>Welcome</h1>
<p>Thanks for visiting the website</p>
</div>

<nav class="navbar navbar-expand-sm bg-light navbar-light sticky-top">
<a class="navbar-brand" href="#">

</a>

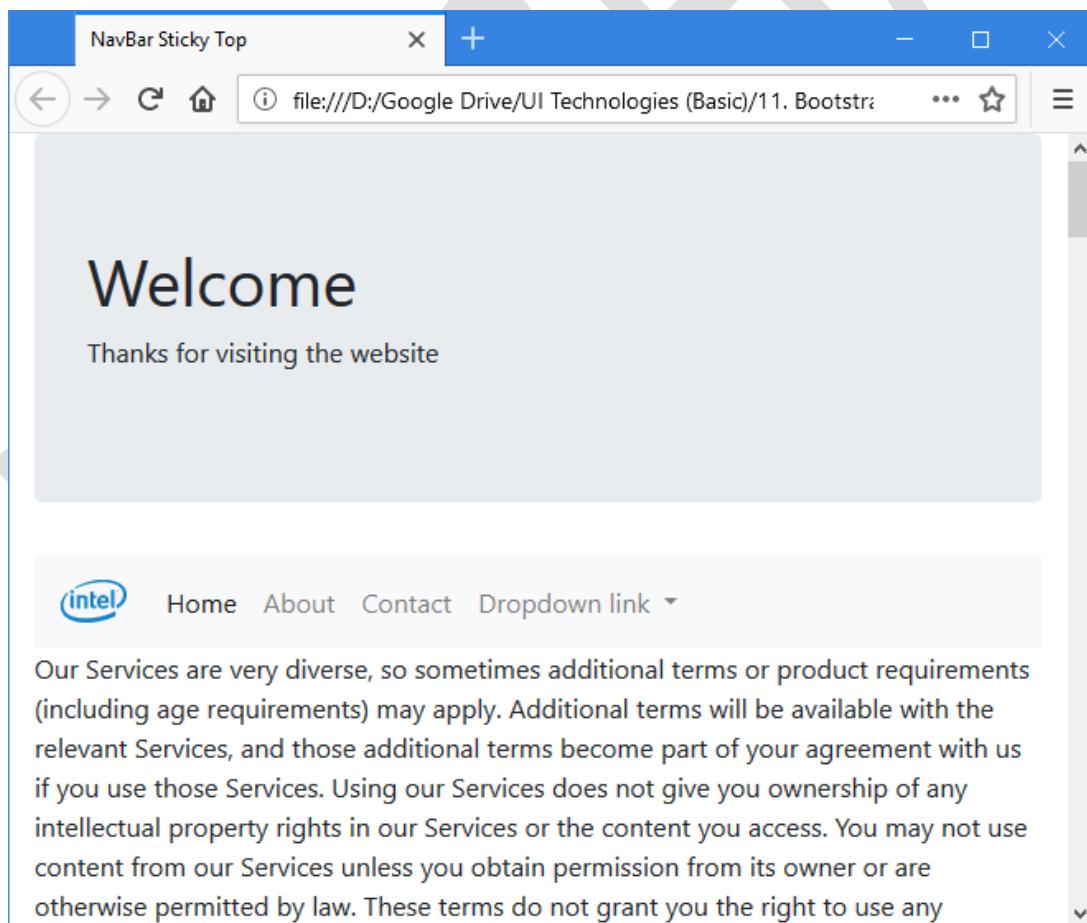
<button class="navbar-toggler" data-toggle="collapse" data-target="#collapsibleNavbar">
<span class="navbar-toggler-icon"></span>
</button>

<div class="collapse navbar-collapse" id="collapsibleNavbar">
<ul class="navbar-nav">
<li class="nav-item">
<a class="nav-link active" href="#">Home</a>
</li>
<li class="nav-item">
<a class="nav-link" href="#">About</a>
</li>
<li class="nav-item">
<a class="nav-link" href="#">Contact</a>
</li>

<li class="nav-item dropdown">
<a class="nav-link dropdown-toggle" href="#" data-toggle="dropdown">
Dropdown link
</a>
<div class="dropdown-menu">
<a class="dropdown-item" href="#">Link 1</a>
<a class="dropdown-item" href="#">Link 2</a>
<a class="dropdown-item" href="#">Link 3</a>
</div>
</li>
</ul>
</div>
</nav>
```

<p>Our Services are very diverse, so sometimes additional terms or product requirements (including age requirements) may apply. Additional terms will be available with the relevant Services, and those additional terms become part of your agreement with us if you use those Services. Using our Services does not give you ownership of any intellectual property rights in our Services or the content you access. You may not use content from our Services unless you obtain permission from its owner or are otherwise permitted by law. These terms do not grant you the right to use any branding or logos used in our Services. Don't remove, obscure, or alter any legal notices displayed in or along with our Services. Using our Services does not give you ownership of any intellectual property rights in our Services or the content you access. You may not use content from our Services unless you obtain permission from its owner or are otherwise permitted by law. These terms do not grant you the right to use any branding or logos used in our Services. Don't remove, obscure, or alter any legal notices displayed in or along with our Services. Using our Services does not give you ownership of any intellectual property rights in our Services or the content you access. You may not use content from our Services unless you obtain permission from its owner or are otherwise permitted by law. These terms do not grant you the right to use any branding or logos used in our Services. Don't remove, obscure, or alter any legal notices displayed in or along with our Services.</p>

```
</div>
</body>
</html>
```



Scrollspy

- It is used to change the "active" class to the current menu item, when the web page is scrolled vertically.

List of Classes

- data-spy="scroll"
- data-target=".navbar"
- data-offset="pixels"

Example on ScrollSpy

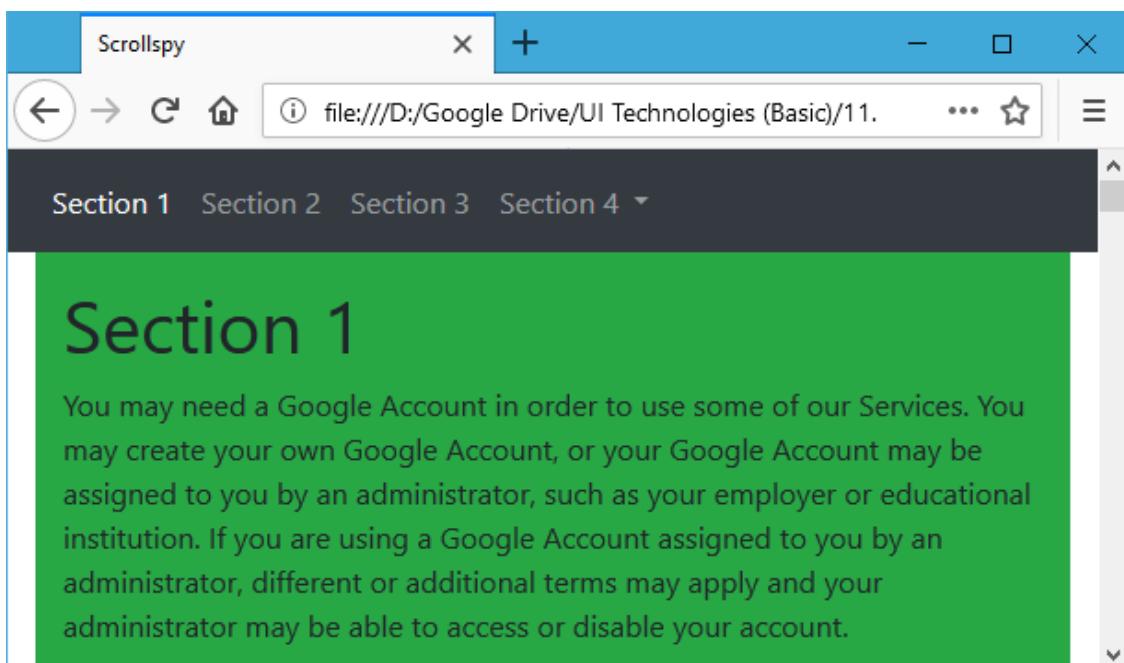
```

<html>
  <head>
    <title>Scrollspy</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
  </head>
  <body data-spy="scroll" data-target=".navbar" data-offset="50">
    <div class="container-fluid">
      <nav class="navbar navbar-expand-sm bg-dark navbar-dark fixed-top">
        <ul class="navbar-nav">
          <li class="nav-item">
            <a class="nav-link" href="#section1">Section 1</a>
          </li>
          <li class="nav-item">
            <a class="nav-link" href="#section2">Section 2</a>
          </li>
          <li class="nav-item">
            <a class="nav-link" href="#section3">Section 3</a>
          </li>
          <li class="nav-item dropdown">
            <a class="nav-link dropdown-toggle" href="#" id="navbardrop" data-toggle="dropdown">
              Section 4
            </a>
            <div class="dropdown-menu">
              <a class="dropdown-item" href="#section41">Link 1</a>
              <a class="dropdown-item" href="#section42">Link 2</a>
            </div>
          </li>
        </ul>
      </nav>

      <div id="section1" class="container-fluid bg-success" style="padding-top:70px;padding-bottom:70px">
        <h1>Section 1</h1>
        <p>You may need a Google Account in order to use some of our Services. You may create your own Google Account, or your Google Account may be assigned to you by an administrator, such as your employer or educational institution. If you are using a Google Account assigned to you by an administrator, different or additional terms may apply and your administrator may be able to access or disable your account.</p>
      </div>
    </div>
  </body>
</html>

```

```
<div id="section2" class="container-fluid bg-warning" style="padding-top:70px;padding-bottom:70px">
  <h1>Section 2</h1>
  <p>You may need a Google Account in order to use some of our Services. You may create your own Google Account, or your Google Account may be assigned to you by an administrator, such as your employer or educational institution. If you are using a Google Account assigned to you by an administrator, different or additional terms may apply and your administrator may be able to access or disable your account.</p>
</div>
<div id="section3" class="container-fluid bg-secondary" style="padding-top:70px;padding-bottom:70px">
  <h1>Section 3</h1>
  <p>You may need a Google Account in order to use some of our Services. You may create your own Google Account, or your Google Account may be assigned to you by an administrator, such as your employer or educational institution. If you are using a Google Account assigned to you by an administrator, different or additional terms may apply and your administrator may be able to access or disable your account.</p>
</div>
<div id="section41" class="container-fluid bg-danger" style="padding-top:70px;padding-bottom:70px">
  <h1>Section 4 Submenu 1</h1>
  <p>You may need a Google Account in order to use some of our Services. You may create your own Google Account, or your Google Account may be assigned to you by an administrator, such as your employer or educational institution. If you are using a Google Account assigned to you by an administrator, different or additional terms may apply and your administrator may be able to access or disable your account.</p>
</div>
<div id="section42" class="container-fluid bg-info" style="padding-top:70px;padding-bottom:70px">
  <h1>Section 4 Submenu 2</h1>
  <p>You may need a Google Account in order to use some of our Services. You may create your own Google Account, or your Google Account may be assigned to you by an administrator, such as your employer or educational institution. If you are using a Google Account assigned to you by an administrator, different or additional terms may apply and your administrator may be able to access or disable your account.</p>
</div>
</div>
</body>
</html>
```



Carousel

Carousel

- It is used to display image slide show with / without text.

List of Classes

- carousel
- slide
- data-ride="carousel"
- data-interval="milli seconds"
- carousel-indicators
- data-target="#id"
- data-slide-to="n"
- active
- carousel-inner
- carousel-item
- carousel-caption
- carousel-control-prev
- carousel-control-prev-icon
- data-slide="prev"
- data-slide="next"

Example on Carousel

```

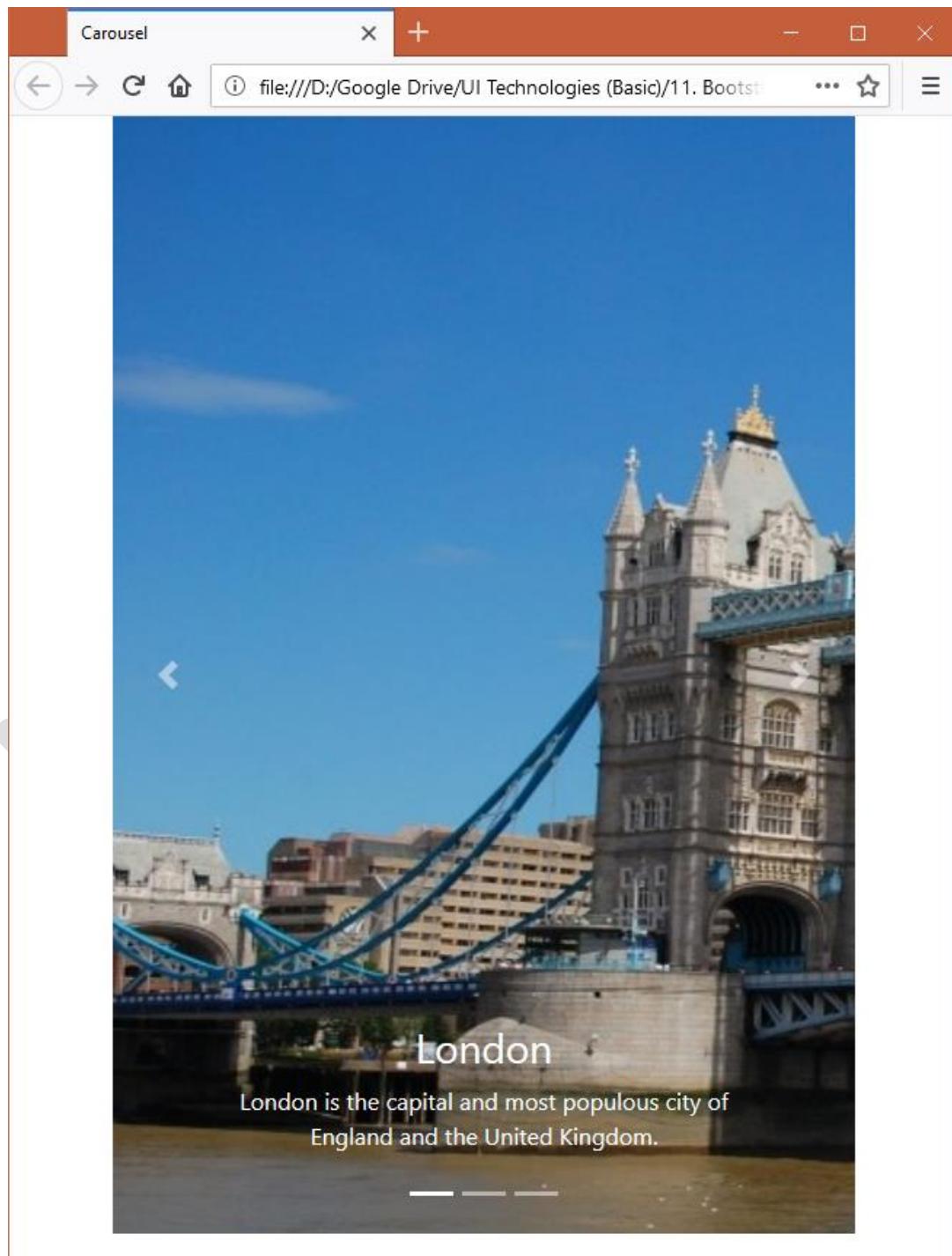
<html>
  <head>
    <title>Carousel</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
  </head>
  <body>
    <div class="container">
      <div id="demo" class="carousel slide" data-ride="carousel" data-interval="3000">

        <ul class="carousel-indicators">
          <li data-target="#demo" data-slide-to="0" class="active"></li>
          <li data-target="#demo" data-slide-to="1"></li>
          <li data-target="#demo" data-slide-to="2"></li>
        </ul>

        <div class="carousel-inner">
          <div class="carousel-item active">
            
            <div class="carousel-caption">
              <h3>London</h3>
              <p>London is the capital and most populous city of England and the United Kingdom.</p>
            </div>
          </div>
          <div class="carousel-item">
            
            <div class="carousel-caption">
              <h3>New York</h3>
              <p>The City of New York, often called New York City (NYC) or simply New York, is the most populous city in the United States.[</p>
                </div>
              </div>
            <div class="carousel-item">
              
              <div class="carousel-caption">
                <h3>Singapore</h3>
                <p>Singapore, officially the Republic of Singapore, is a sovereign city-state and island country in Southeast Asia.</p>
              </div>
            </div>
          </div>
        <a class="carousel-control-prev" href="#demo" data-slide="prev">
          <span class="carousel-control-prev-icon"></span>
        </a>
      </div>
    </div>
  </body>
</html>

```

```
</a>
<a class="carousel-control-next" href="#demo" data-slide="next">
  <span class="carousel-control-next-icon"></span>
</a>
</div>
</div>
</body>
</html>
```



Modal

Modal

- It is used to display modal popup box with desired content.

List of Classes

- data-toggle="modal"
- data-target="#id"
- modal
- fade
- modal-dialog
- modal-lg
- modal-dialog-centered
- modal-content
- modal-header
- modal-body
- modal-footer
- close
- data-dismiss="modal"

Example on Modal

```
<html>
  <head>
    <title>Modal</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="bootstrap.css">
    <script src="jquery-3.3.1.js"></script>
    <script src="popper.js"></script>
    <script src="bootstrap.js"></script>
  </head>
  <body>
    <div class="container-fluid">
      <button type="button" class="btn btn-primary" data-toggle="modal" data-target="#myModal">
        Open modal
      </button>

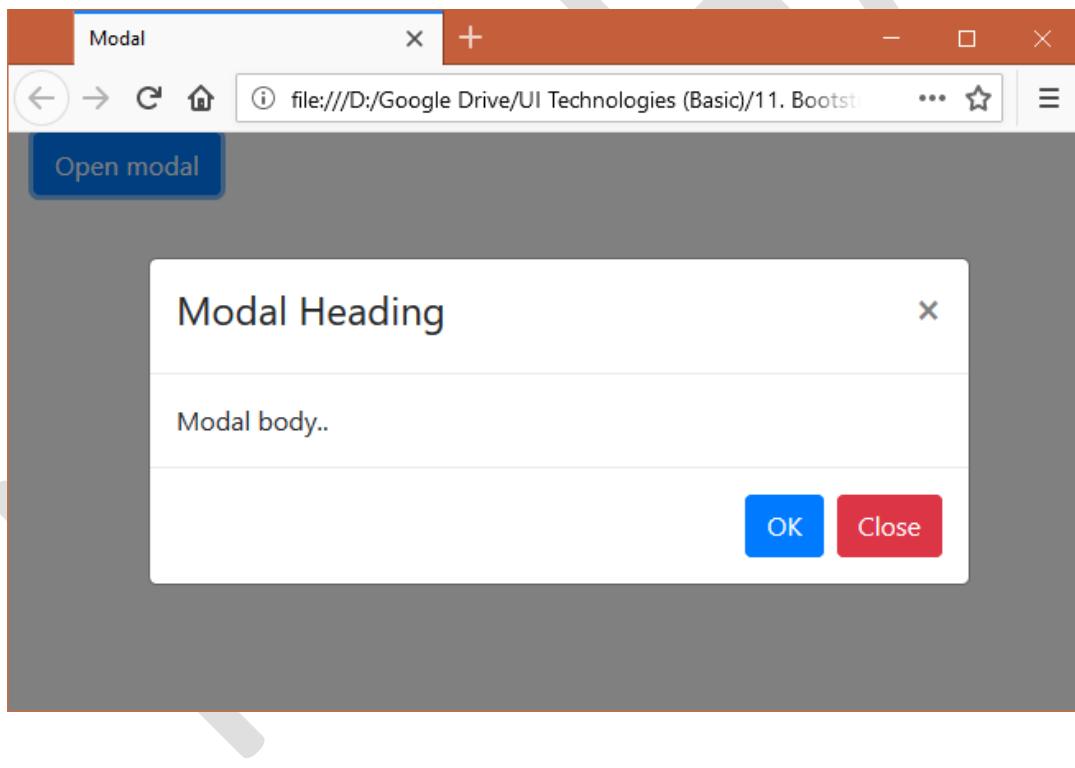
      <div class="modal fade" id="myModal">
        <div class="modal-dialog modal-lg modal-dialog-centered">
          <div class="modal-content">

            <div class="modal-header">
              <h4>Modal Heading</h4>
```

```
<button type="button" class="close" data-dismiss="modal">&times;</button>
</div>

<div class="modal-body">
  Modal body..
</div>

<div class="modal-footer">
  <button type="button" class="btn btn-primary" data-dismiss="modal">OK</button>
  <button type="button" class="btn btn-danger" data-dismiss="modal">Close</button>
</div>
</div>
</div>
</div>
</body>
</html>
```



LESS

Fundamentals of LESS

Introduction to LESS

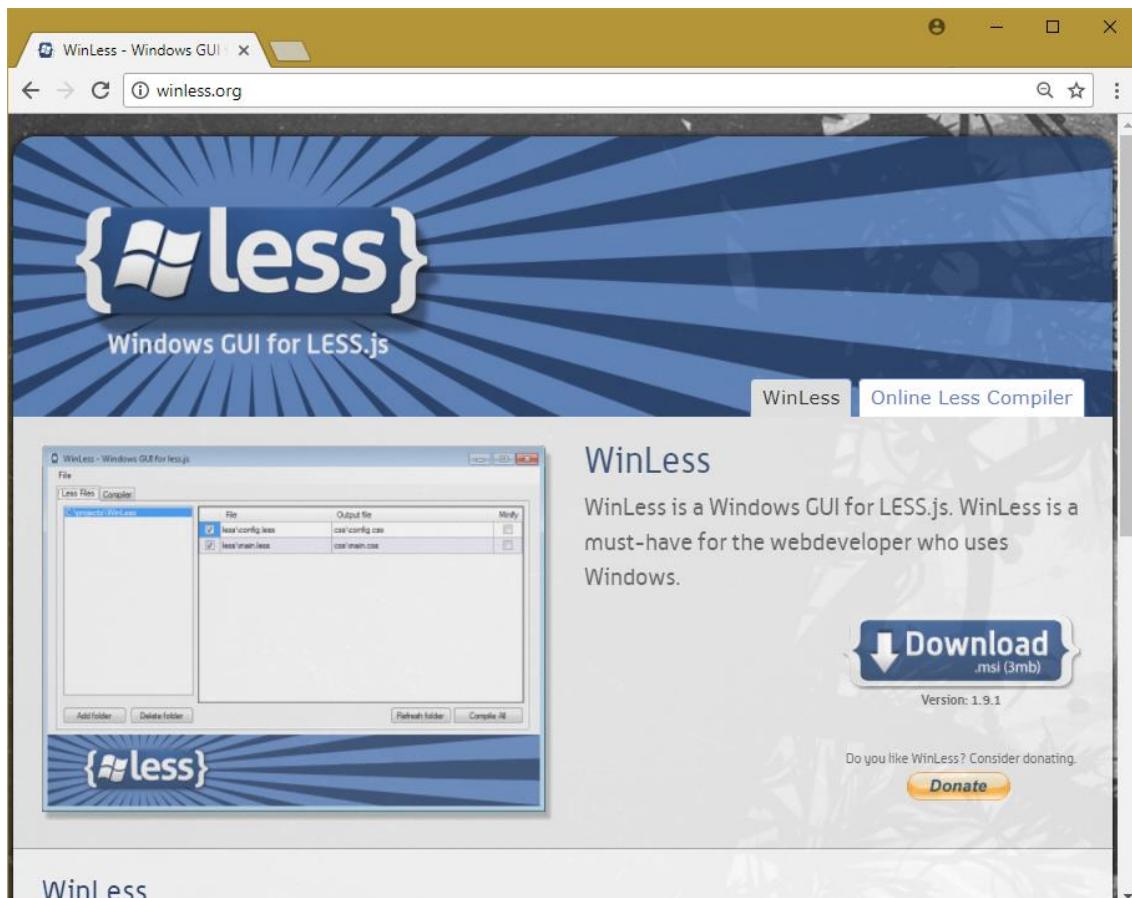
- LESS stands for "LEAN CSS".
- "LESS" makes it easy to modify the CSS file. If you make the change in one place, the same will be automatically effected in multiple places.
- The LESS code is written in ".less" files and will be converted into "css" files, as the browser supports only CSS, but not LESS.
- If you modify the LESS file and compile it into CSS file, the change will be effected in multiple places in CSS.
- Additionally, LESS supports some additional features such as variables, operators, mixins, color functions etc., which are not supported by CSS. LESS is the superset of CSS, which supports all concepts of CSS along with the specified additional features.

Steps to Prepare First Example in LESS

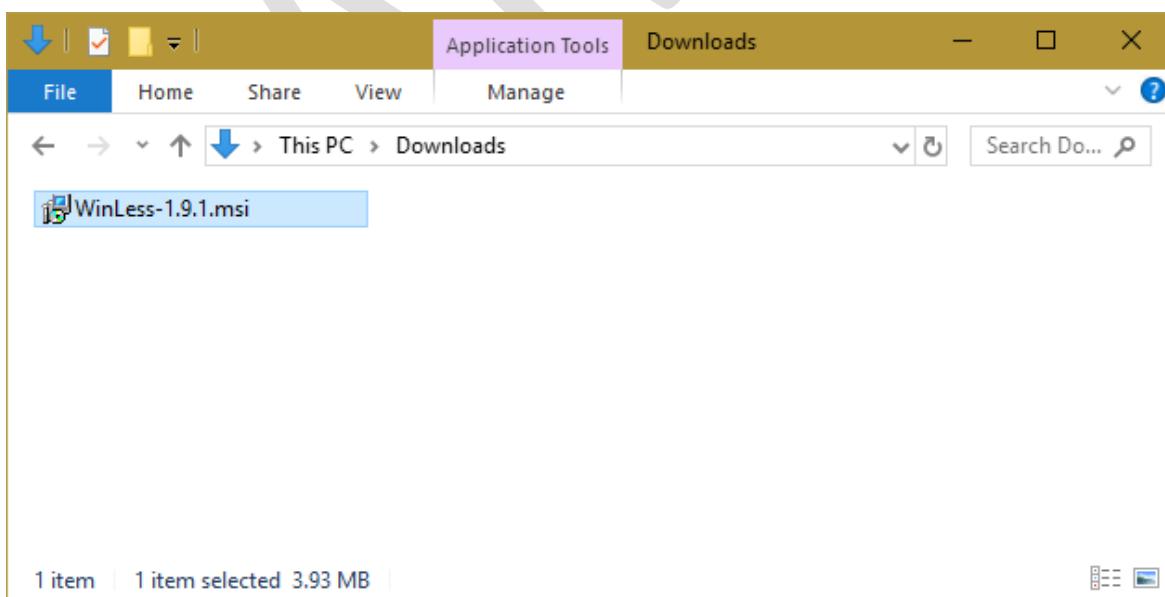
1. Download and Install WinLess
2. Create LESS file
3. Compile LESS file to CSS file
4. Import CSS file into HTML file
5. Run the HTML file

1. Downloading and Installing WinLess

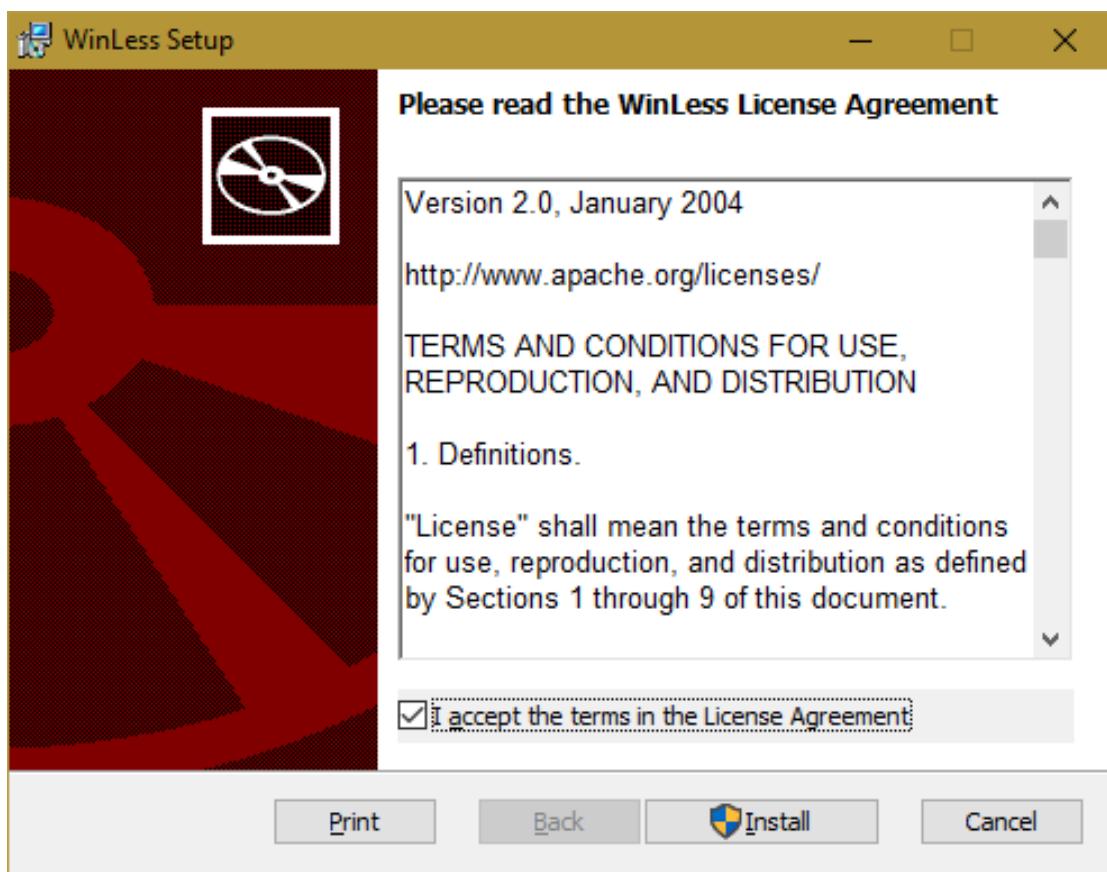
- Go to "<http://winless.org>".



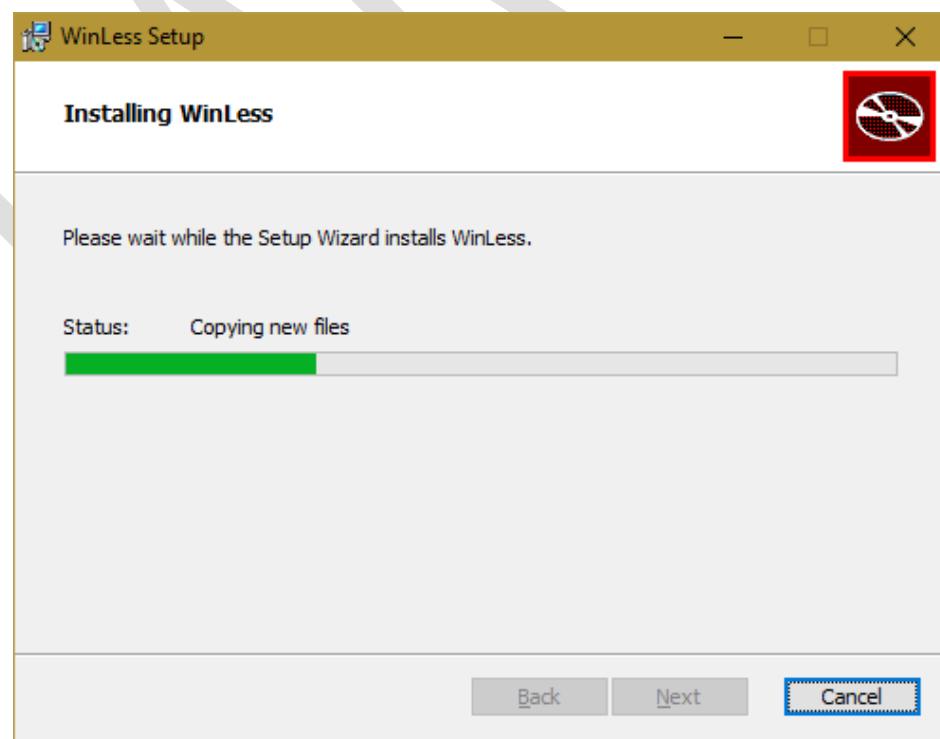
- Click on "Download".
- You will get a file called "WinLess-1.9.1.msi".



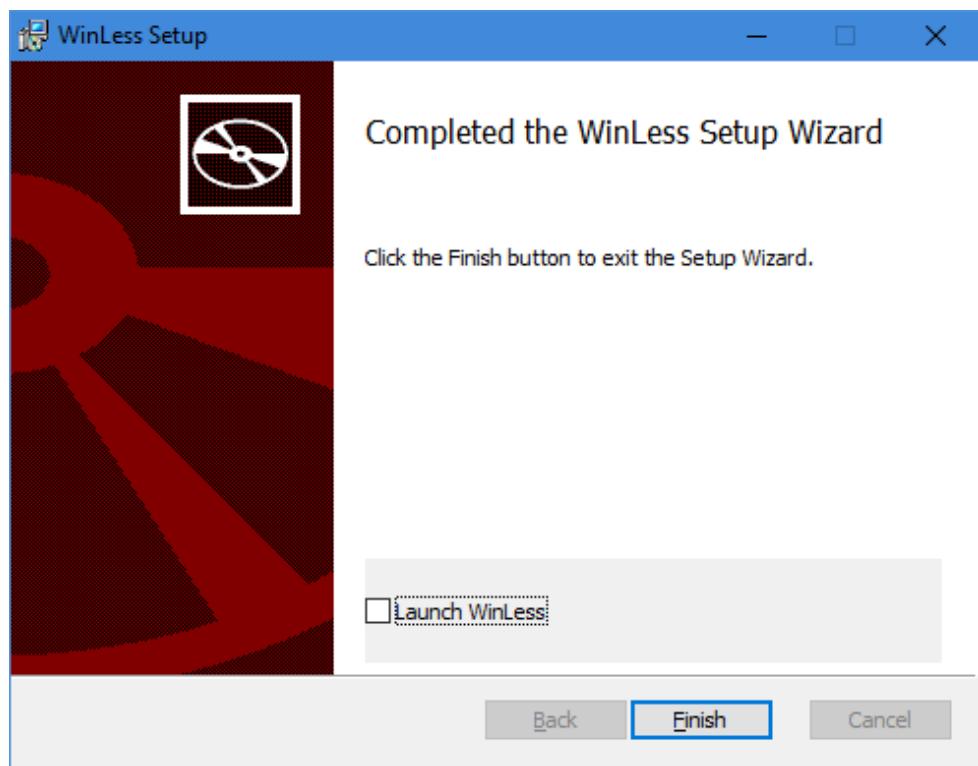
- Double click on "WinLess-1.9.1.msi".



- Check the checkbox "I accept the terms in the License Agreement".
- Click on "Install".



- Click on "Finish".



2. Creating LESS File

- Open Visual Studio Code.
- Go to "File" > "New File".
- Write the following program:



A screenshot of Visual Studio Code showing a CSS file named "Untitled-1". The code defines three CSS rules: h1, p, and span, each using variables @mycolor and @x. The code is as follows:

```
@mycolor: darkgreen;
@x: bold;

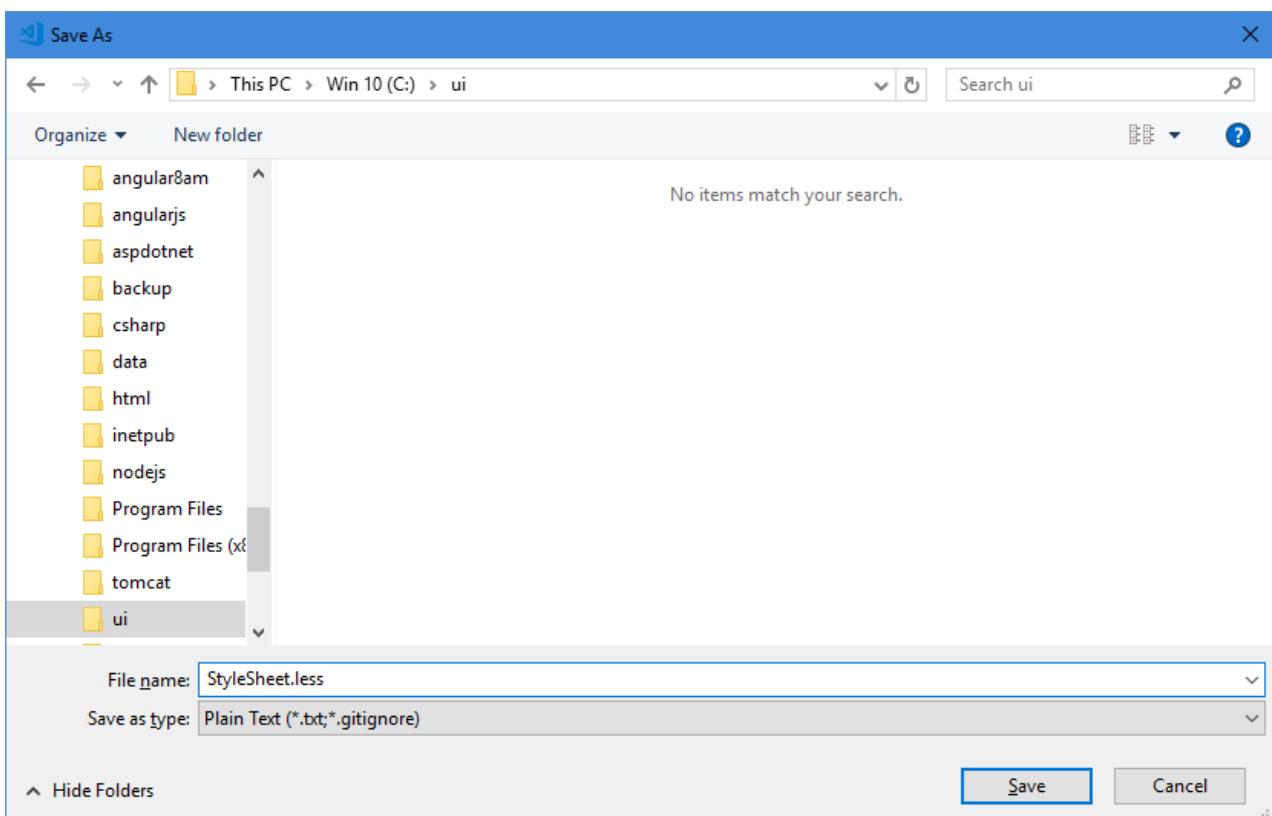
h1
{
    background-color: @mycolor;
}

p
{
    color: @mycolor;
    font-weight: @x;
}

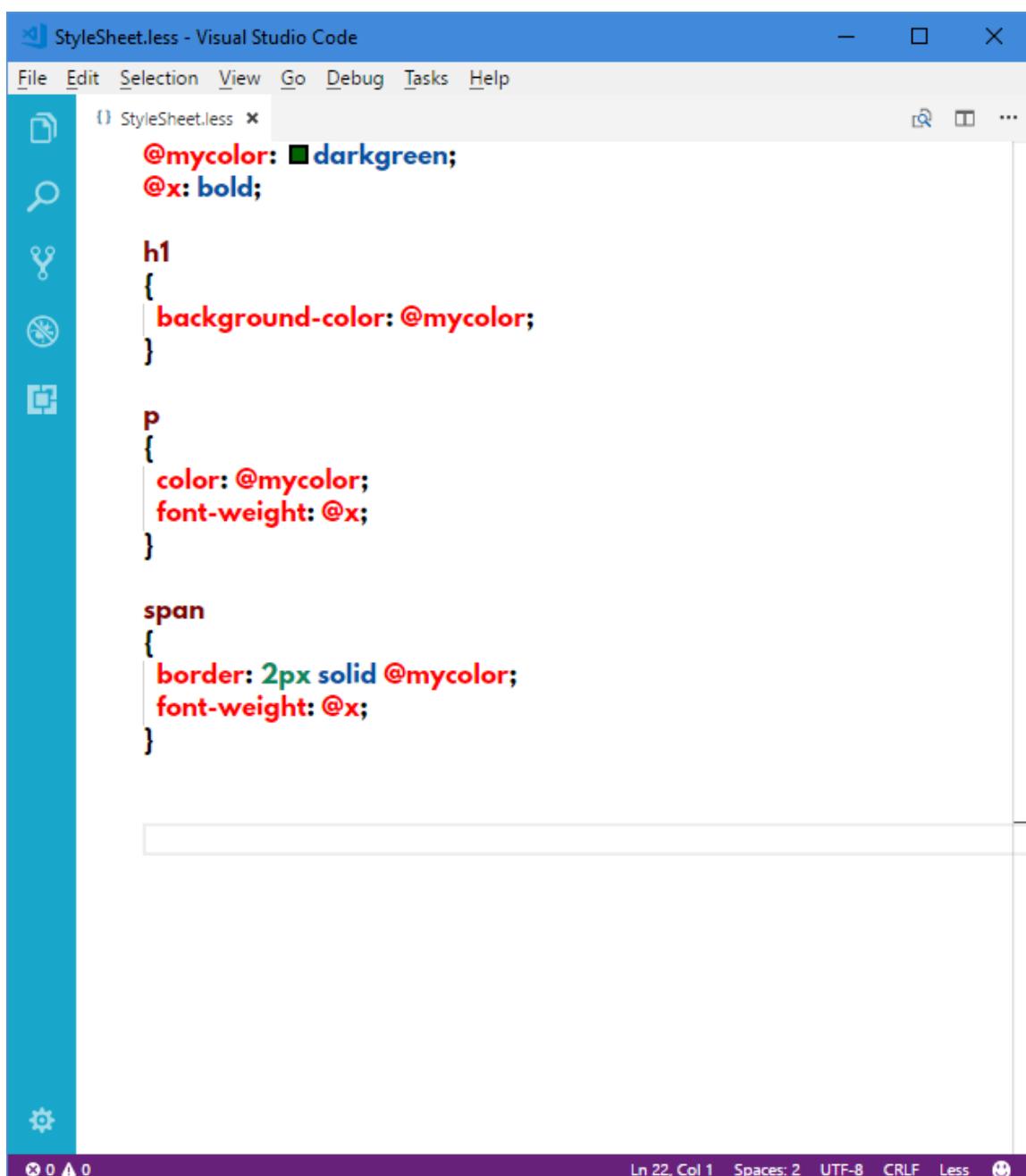
span
{
    border: 2px solid @mycolor;
    font-weight: @x;
}
```

The status bar at the bottom shows: Ln 22, Col 1 | Spaces: 2 | UTF-8 | CRLF | Plain Text | 😊

- Go to "File" menu – "Save".



- Enter filename as "StyleSheet.less".
- Select the folder "c:\ui".
- Click on "Save".



```
StyleSheet.less - Visual Studio Code
File Edit Selection View Go Debug Tasks Help
() StyleSheet.less x
@mycolor: darkgreen;
@x: bold;

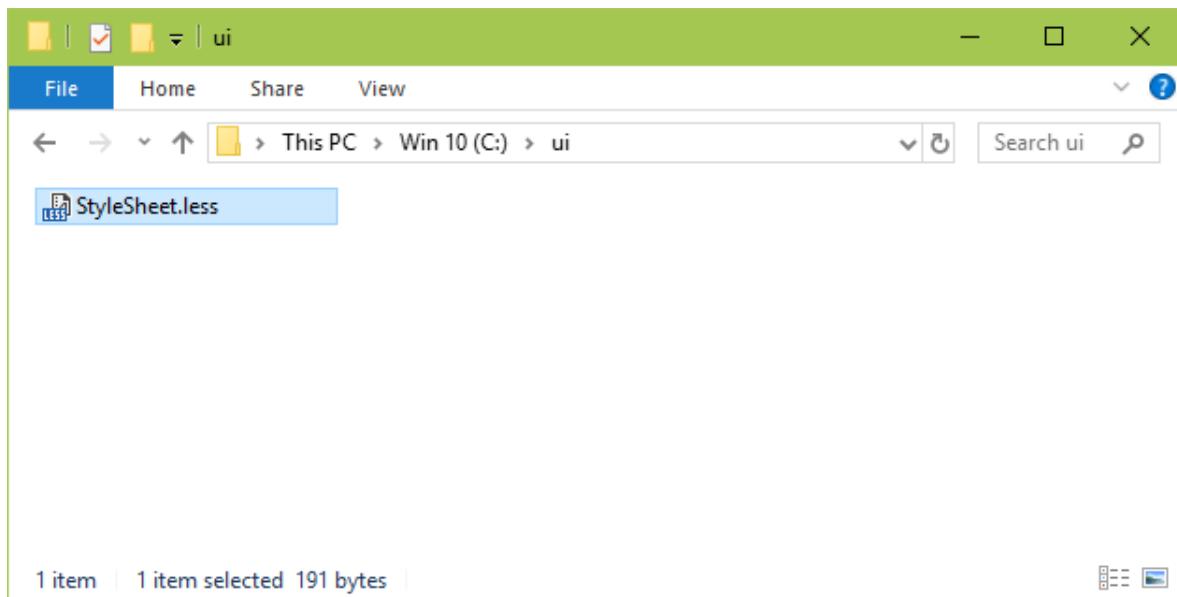
h1
{
background-color: @mycolor;
}

p
{
color: @mycolor;
font-weight: @x;
}

span
{
border: 2px solid @mycolor;
font-weight: @x;
}

Ln 22, Col 1  Spaces: 2  UTF-8  CRLF  Less  ⚙
```

- Now the "c:\ui\StyleSheet.less" file is ready.

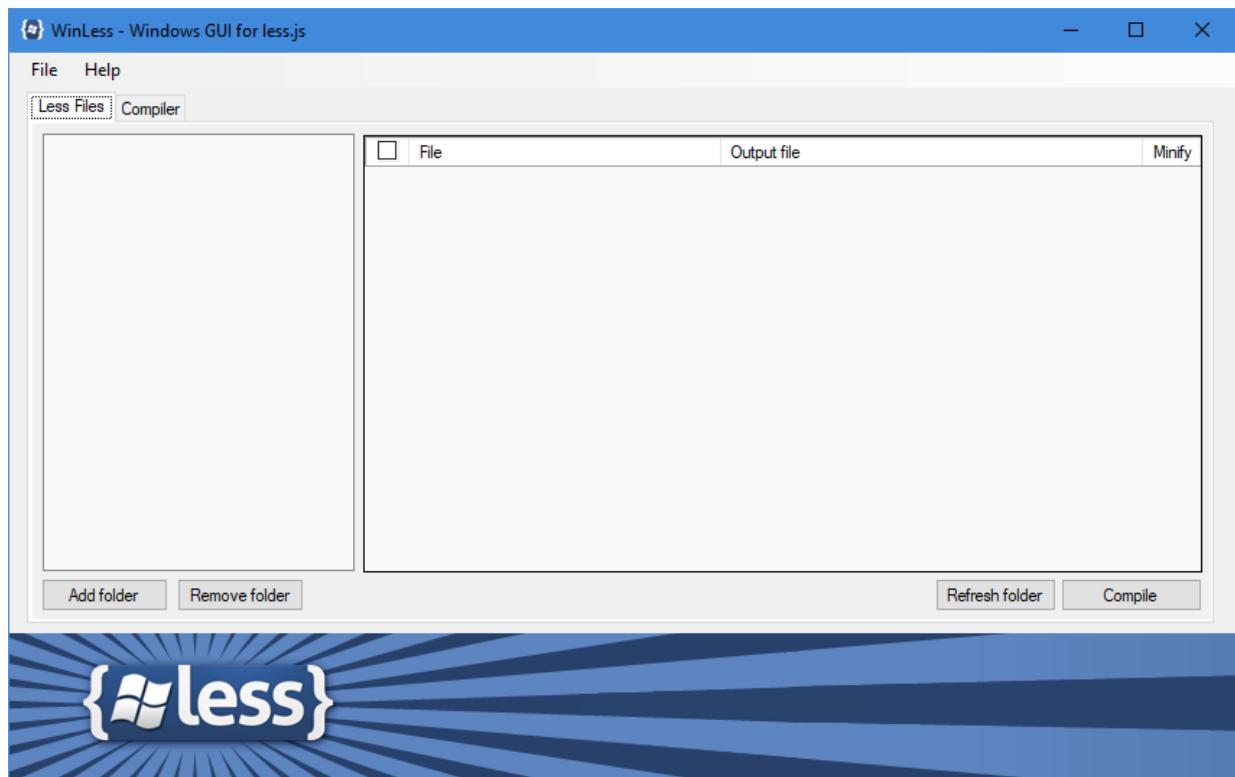


3. Compile LESS File into CSS File

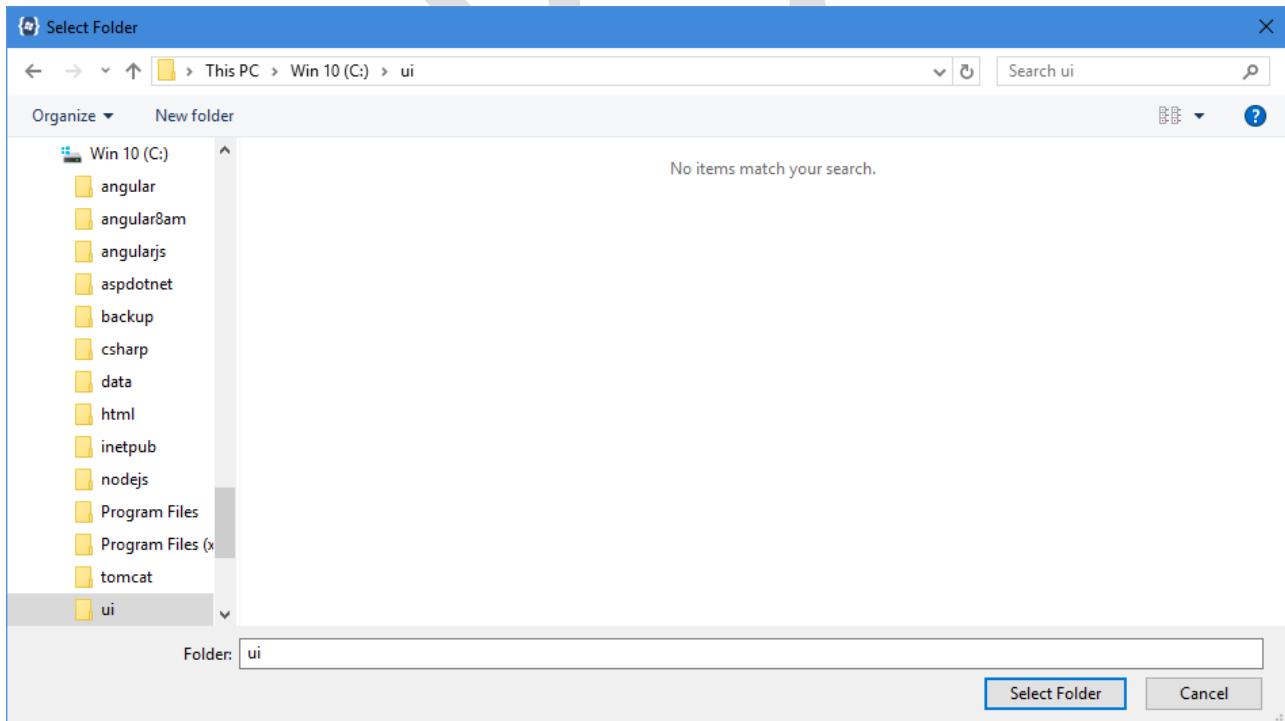
- Go to "Start" > "WinLess" > "WinLess".



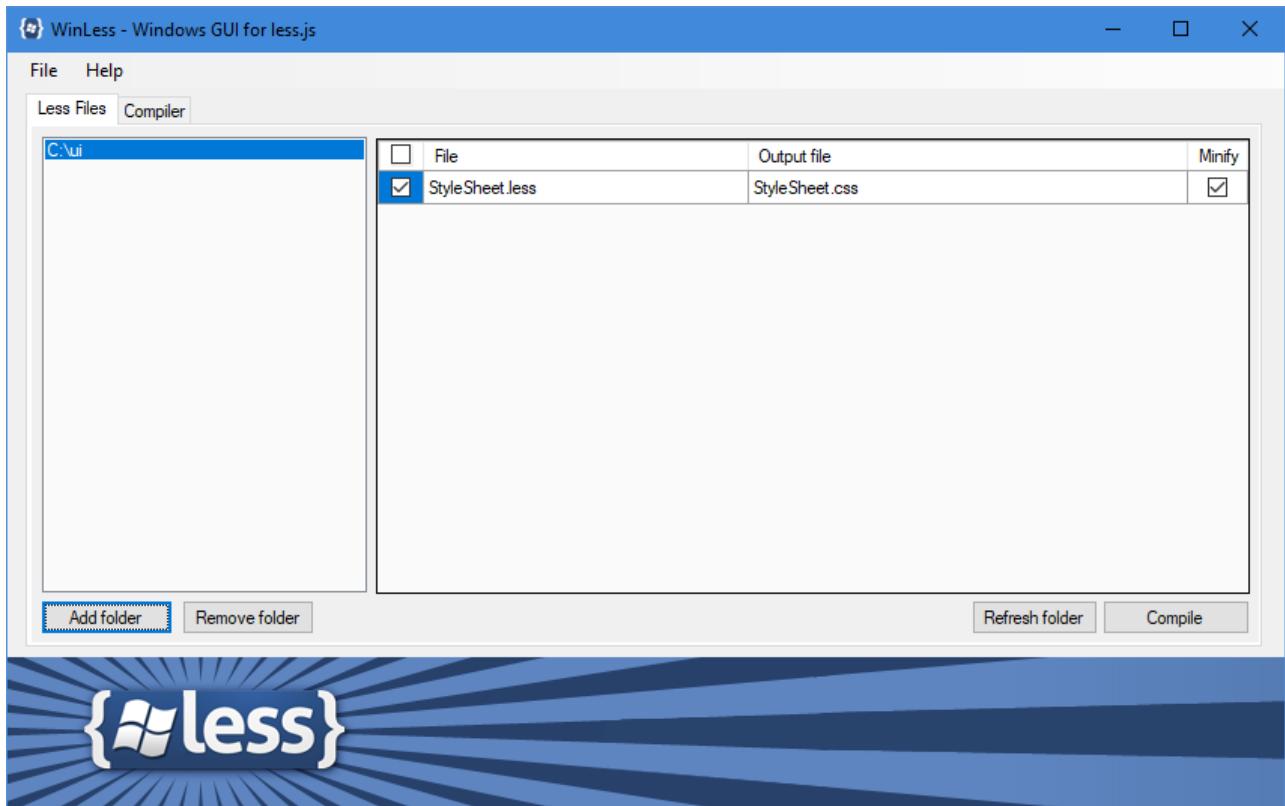
- WinLess opened.



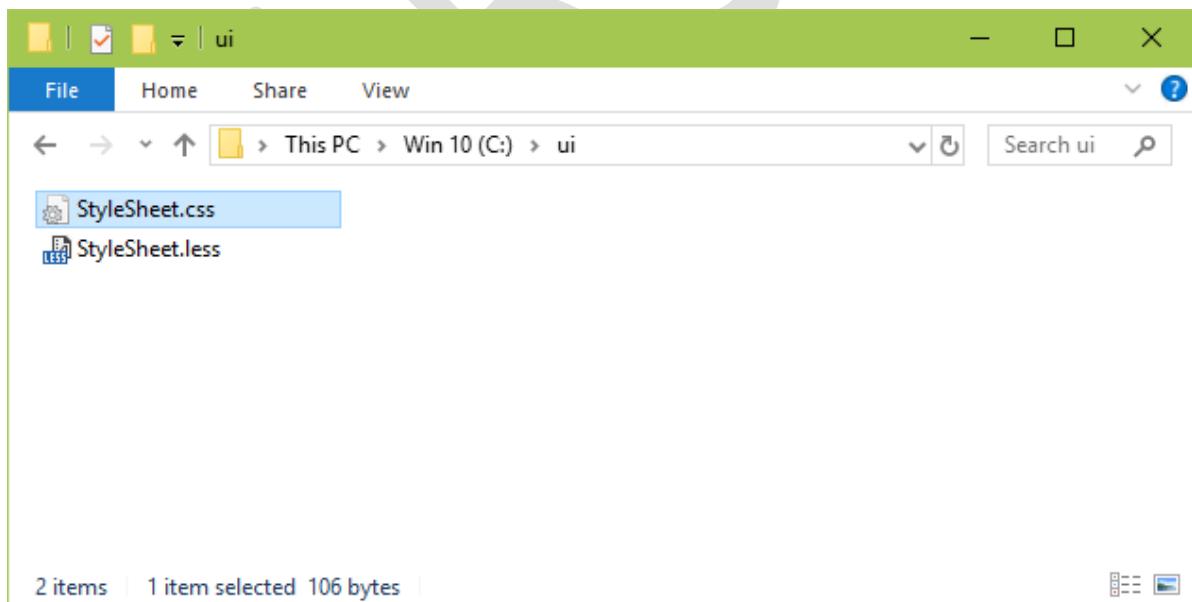
- Click on "Add folder".



- Select "c:\ui". Click on "Select Folder".



- It shows the list of LESS files automatically. It also generates CSS filename automatically.
- Click on "Compile".



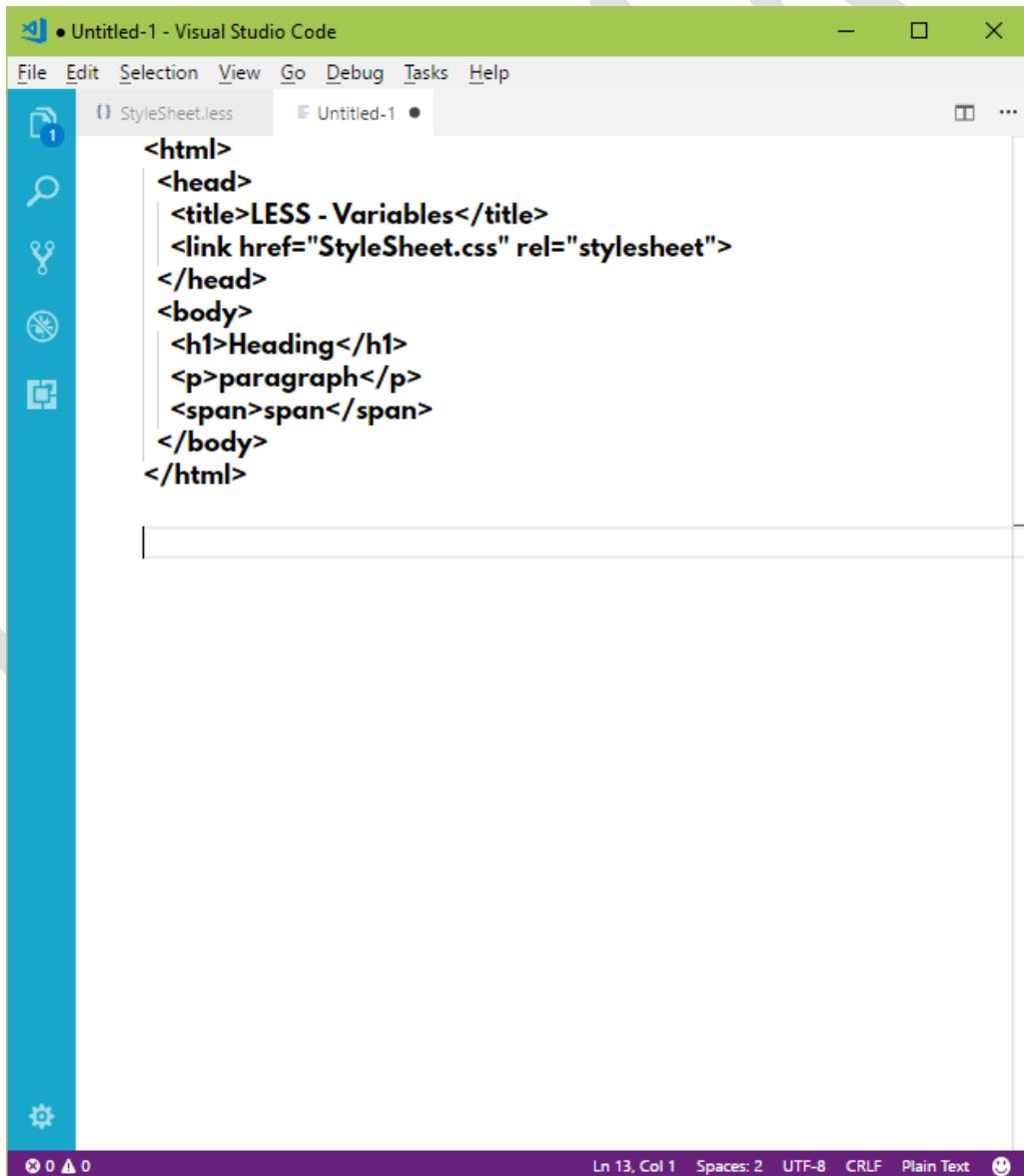
- It compiles the LESS file and generates CSS file automatically.
- The compiled CSS code (automatically generated):

```
h1{
  background-color: darkgreen;
}
```

```
p {  
    color: darkgreen;  
    font-weight: bold;  
}  
span {  
    border: 2px solid darkgreen;  
    font-weight: bold;  
}
```

4. Import the CSS File into HTML File

- Open Visual Studio Code.
- Go to "File" > "New File".
- Write the following program:

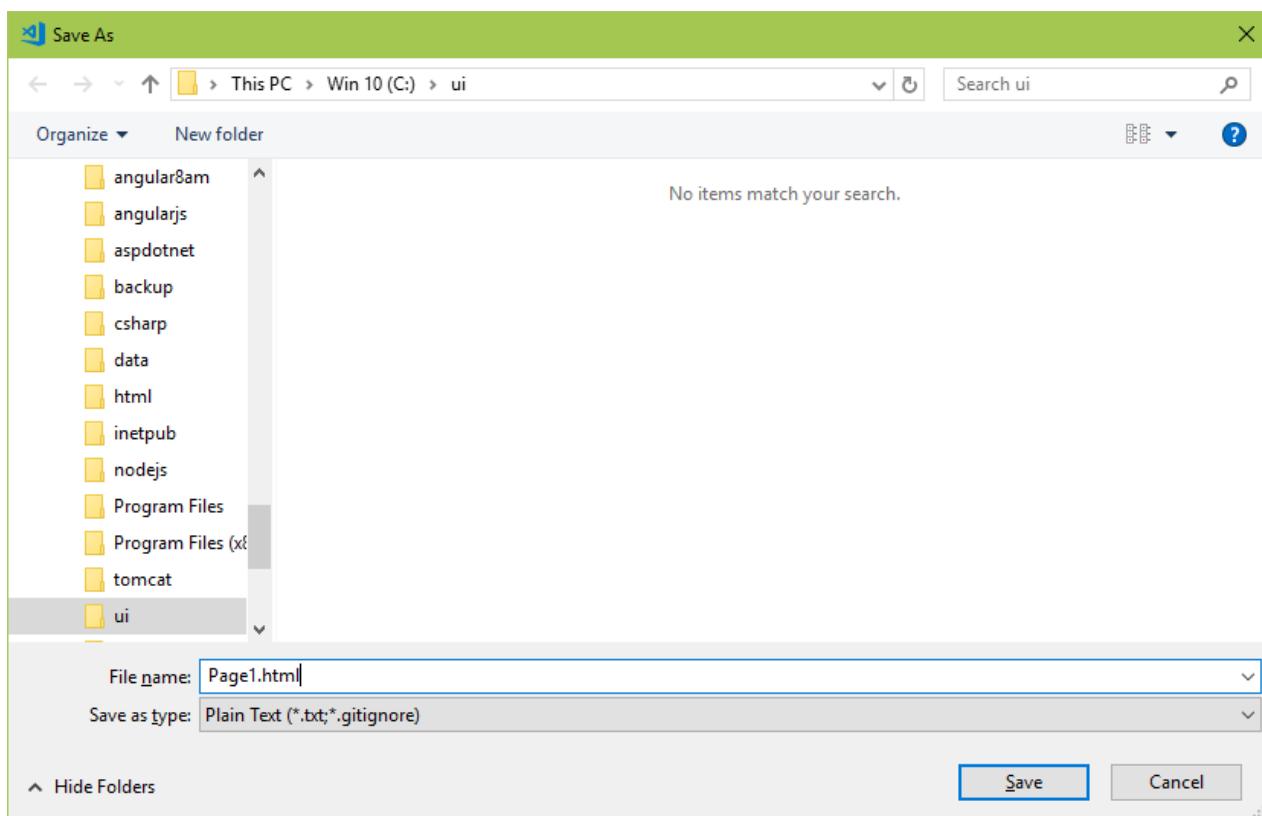


The screenshot shows the Visual Studio Code interface. The title bar says "Untitled-1 - Visual Studio Code". The left sidebar has icons for file operations like New, Open, Save, Find, and Settings. There are two tabs: "StyleSheet.less" and "Untitled-1". The "Untitled-1" tab contains the following HTML code:

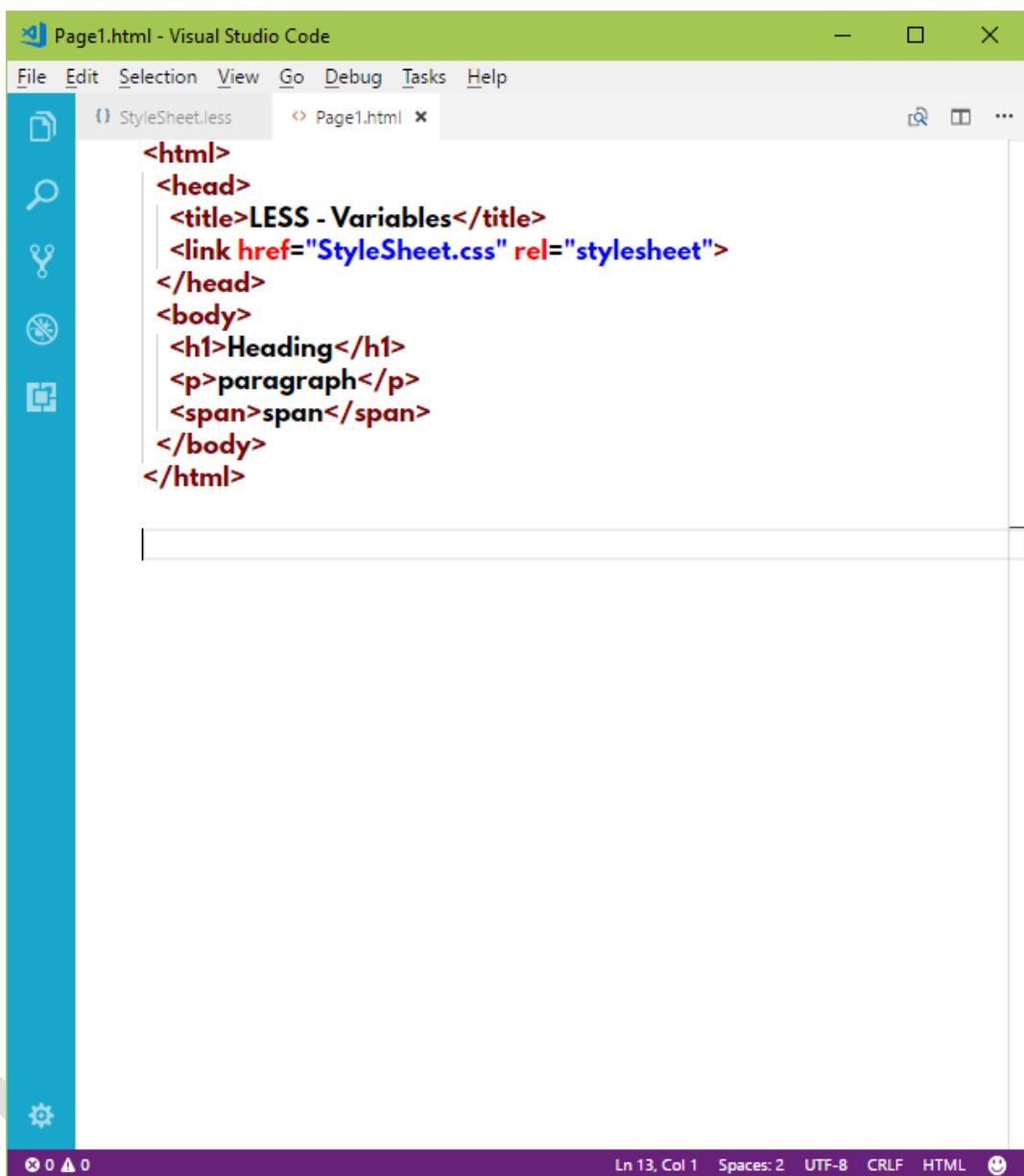
```
<html>  
  <head>  
    <title>LESS - Variables</title>  
    <link href="StyleSheet.css" rel="stylesheet">  
  </head>  
  <body>  
    <h1>Heading</h1>  
    <p>paragraph</p>  
    <span>span</span>  
  </body>  
</html>
```

The status bar at the bottom shows "Ln 13, Col 1" and other settings like "Spaces: 2", "UTF-8", "CRLF", "Plain Text", and a smiley face icon.

- Go to "File" menu – "Save".



- Enter filename as "Page1.html".
- Select the folder "c:\ui".
- Click on "Save".

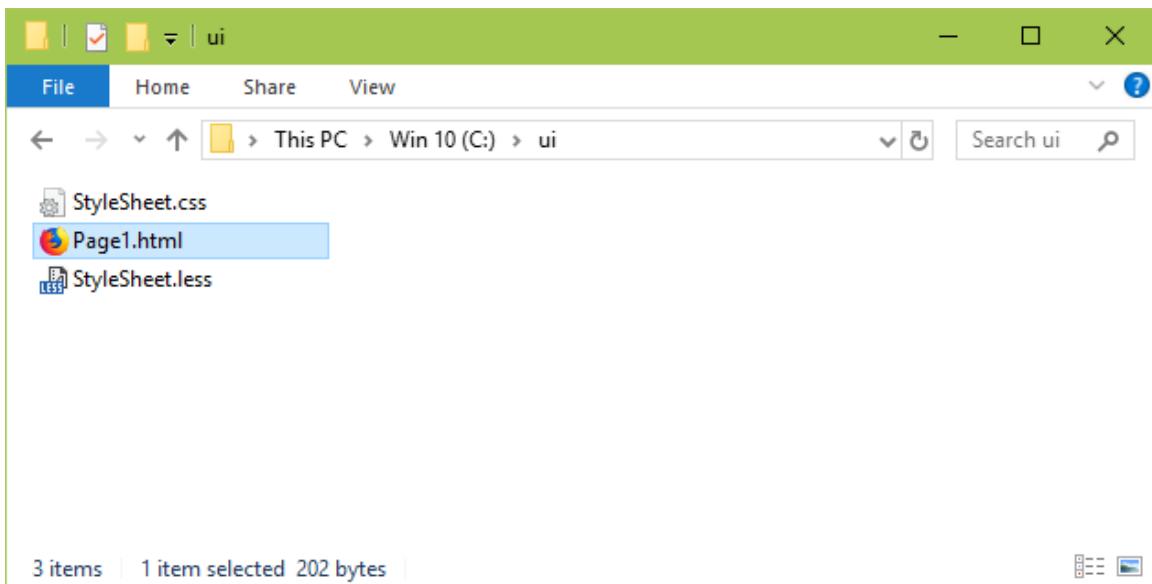


The screenshot shows the Visual Studio Code interface with the title bar "Page1.html - Visual Studio Code". The menu bar includes File, Edit, Selection, View, Go, Debug, Tasks, and Help. The left sidebar has icons for File, Find, Save, and others. There are two tabs open: "StyleSheet.less" and "Page1.html". The "Page1.html" tab contains the following HTML code:

```
<html>
<head>
<title>LESS - Variables</title>
<link href="StyleSheet.css" rel="stylesheet">
</head>
<body>
<h1>Heading</h1>
<p>paragraph</p>
<span>span</span>
</body>
</html>
```

The status bar at the bottom shows "Ln 13, Col 1" and "Spaces: 2" and "UTF-8" and "CRLF" and "HTML".

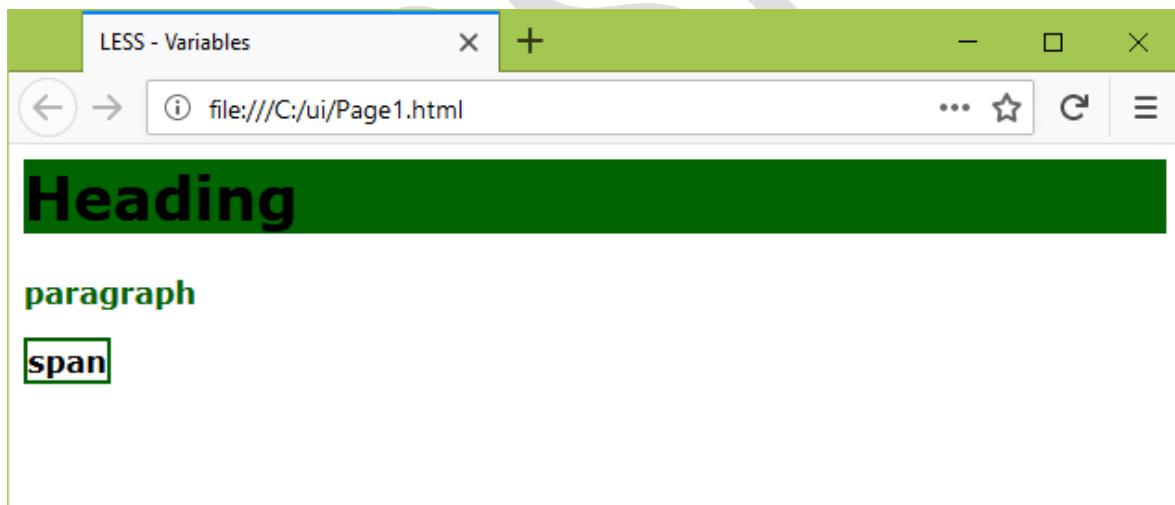
- Now the "c:\ui\Page1.html" file is ready.



5. Run the HTML File

- Go to "c:\ui" folder and double click on "Page1.html".

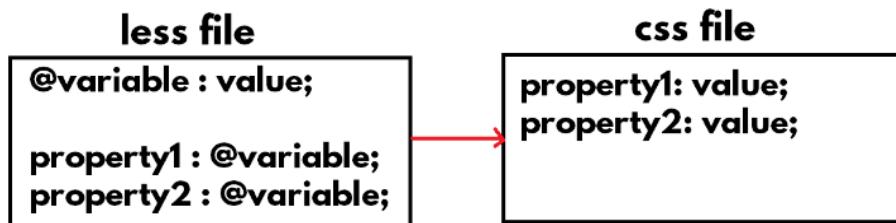
Output:



Basic LESS

Variables

- In LESS, variables are used to store a value.
- The variable create once, can be used many times within the same less file. While converting into CSS, the variables will be replaced with actual value.
- Variable names must be started with "@".



Mixins

- Mixins are used to mix a CSS class with another style.

Syntax (LESS File):

```

.classname
{
    property1: value;
    property2: value;
}
selector
{
    .classname;
    property3: value;
    property3: value;
}

```

Result (CSS File):

```

.classname
{
    property1: value;
    property2: value;
}
selector
{
    property1: value;
    property2: value;
    property3: value;
    property3: value;
}

```

```
}
```

Example on Mixins

c:\ui\StyleSheet.less

```
.class1
{
    background-color: #006633;
    border: 3px solid #ff3333;
    padding: 10px;
    font-family: 'Segoe UI';
}

h1
{
    .class1;
    color: #0066ff;
}

p
{
    .class1;
    color: #ffff99;
}

span
{
    .class1;
    color: #ccffcc;
}
```

c:\ui\Page1.html

```
<html>
    <head>
        <title>LESS - Mixins</title>
        <link href="StyleSheet.css" rel="stylesheet">
    </head>
    <body>
        <h1>Heading</h1>
        <p>paragraph</p>
        <span>span</span>
    </body>
</html>
```

Mixins With Parameters

- Mixins can receive one or more parameters (arguments), and utilize those values into the styles. Everytime when you call the mixin, you can pass different values to the mixin.

Syntax (LESS File):

```
.classname(@parameter1, @parameter2, ...)
{
    property1: value;
    property2: value;
}
```

Example on Mixins with Parameters**c:\ui\StyleSheet.less**

```
.class1(@borderwidth:3px)
{
    background-color: #006633;
    border: @borderwidth solid #ff3333;
    padding: 10px;
    font-family: 'Segoe UI';
}

h1
{
    .class1(5px);
    color: #0066ff;
}

p
{
    .class1(10px);
    color: #ffff99;
}

span
{
    .class1;
    color: #ccffcc;
}
```

c:\ui\Page1.html

```
<html>
    <head>
        <title>LESS - Mixins</title>
        <link href="StyleSheet.css" rel="stylesheet">
    </head>
    <body>
        <h1>Heading</h1>
        <p>paragraph</p>
        <span>span</span>
    </body>
```

</html>

Nested Rules

- These are used to apply CSS styles for the child elements of a specific parent tag.

Syntax (LESS File):

```
parenttag
{
    child1
    {
        styles here
    }
    child2
    {
        styles here
    }
}
```

Result (CSS File):

```
parenttag child1
{
}
parenttag child2
{
}
```

Example on Nested Rules

```
c:\ui\StyleSheet.less
#div1
{
    h1
    {
        background-color: #0099ff;
    }
    p
```

```

{
    background-color: #99ff99;
}

span
{
    background-color: #ff3399;
}

}

```

c:\ui\Page1.html

```

<html>
    <head>
        <title>LESS - Nested Rules</title>
        <link href="StyleSheet.css" rel="stylesheet">
    </head>
    <body>
        <div id="div1">
            <h1>Heading</h1>
            <p>paragraph</p>
            <span>span</span>
        </div>
    </body>
</html>

```

Advanced LESS**Operators**

- In LESS, we can use all the arithmetical operators such as +, -, *, / etc.
- The LESS compiler calculates the operators and generates the result.

Syntax (LESS File):

```

selector
{
    property: a+b;
}

```

Result (CSS File):

```

selector
{
    property: sum;
}

```

```
}
```

Example on Operators

c:\ui\StyleSheet.less

```
@defaultFontSize: 40px;

h1
{
    background-color: #0099ff;
    font-size: @defaultFontSize * 2;
}

p
{
    background-color: #99ff99;
    font-size: @defaultFontSize;
}

span
{
    background-color: #ff3399;
    font-size: @defaultFontSize + 2;
}
```

c:\ui\Page1.html

```
<html>
<head>
    <title>LESS - Operators</title>
    <link href="StyleSheet.css" rel="stylesheet">
</head>
<body>
    <div>
        <h1>Heading</h1>
        <p>paragraph</p>
        <span>span</span>
    </div>
</body>
</html>
```

Color Functions

- These are used to make the color darker / lighter.

Syntax (LESS File):

darken(color, percentage);

lighten(color, percentage);

Result (CSS File):

```
#ffffff  
#000000
```

Example on Operators

c:\ui\StyleSheet.less

```
@baseColor: #0033cc;  
  
h1  
{  
    background-color: darken(@baseColor,10%);  
}  
  
p  
{  
    background-color: @baseColor;  
}  
  
span  
{  
    background-color: lighten(@baseColor,10%);  
}
```

c:\ui\Page1.html

```
<html>  
  <head>  
    <title>LESS - Color Functions</title>  
    <link href="StyleSheet.css" rel="stylesheet">  
  </head>  
  <body>  
    <div>  
      <h1>Heading</h1>  
      <p>paragraph</p>  
      <span>span</span>  
    </div>  
  </body>  
</html>
```