

Font Styling

- Choosing the right font and style is very crucial for the readability of text on a page.
- CSS Font property is used to control the look of texts.
- With CSS font property we can change the text size, color, style and more.

There are several properties that are used for styling fonts are mentioned below :-

a) font-family

- A font family is a set of fonts that have a common design.
- An example of a font family is Times New Roman, which consists of a roman, italic, bold and bold italic version of the same typeface.

Types of font-family names

Generally there are two types of font-families :-

a) Family-name

The name of a font family. For example, "Times New Roman" and "Helvetica" are font families. Font family names containing whitespace should be quoted.

b) Generic-family

The name of a generic-family, like "serif", "sans-serif", "cursive", "fantasy", "monospace".

Syntax

```
p
{
    font-family:value;
}
```

where,

value = arial/ times new roman etc.

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    p:nth-child(4)
    {
      font-family: 'Courier New', Courier, monospace;
    }
  </style>
</head>
<body>

  <h1>Before</h1>

  <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Perspiciatis, laboriosam
commodi? Adipisci porro, harum veniam architecto ratione quas repellendus maxime
preferendis aperiam optio. Commodi officiis sit maxime delectus? Laboriosam, esse!
Lorem ipsum dolor sit amet consectetur adipisicing elit. Veniam cumque expedita,
reiciendis incidunt voluptates saepe accusantium maxime? Eum repudiandae maiores
illum, cupiditate ipsa fugiat molestiae fugit et voluptatum similique labore?</p>

  <h1>After</h1>

  <p>Lorem ipsum dolor sit, amet consectetur adipisicing elit. Sit facilis hic tenetur vel,
tempore, recusandae blanditiis eaque repudiandae dolore magnam dicta adipisci.
Architecto odit, quod at debitis iusto fuga repellat? Lorem ipsum dolor sit amet
consectetur adipisicing elit. Officia alias, cupiditate illum preferendis sit necessitatibus
quasi nemo? Repellat molestias pariatur sed eligendi eius ullam deserunt et veritatis
sunt! Labore, quasi.</p>

</body>
</html>
```

b) font-size

- The font-size property is used to set the size of font for the text content of an element.
- There are several ways to specify the font size values e.g. with keywords, percentage, pixels, ems, etc.

Syntax

```
p
{
    font-size:value;
}
```

where,

value = xx-small, x-small, small, medium, large, x-large, xx-large, pixels, smaller, larger, percentages etc.



Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    p:nth-child(4)
    {
      font-size: 50px;
    }
  </style>
</head>
<body>

  <h1>Before</h1>

  <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Perspiciatis, laboriosam
commodi? Adipisci porro, harum veniam architecto ratione quas repellendus maxime
preferendis aperiam optio. Commodi officiis sit maxime delectus? Laboriosam, esse!
Lorem ipsum dolor sit amet consectetur adipisicing elit. Veniam cumque expedita,
reiciendis incidunt voluptates saepe accusantium maxime? Eum repudiandae maiores
illum, cupiditate ipsa fugiat molestiae fugit et voluptatum similique labore? </p>

  <h1>After</h1>

  <p>Lorem ipsum dolor sit, amet consectetur adipisicing elit. Sit facilis hic tenetur vel,
tempore, recusandae blanditiis eaque repudiandae dolore magnam dicta adipisci.
Architecto odit, quod at debitis iusto fuga repellat? Lorem ipsum dolor sit amet
consectetur adipisicing elit. Officia alias, cupiditate illum preferendis sit necessitatibus
quasi nemo? Repellat molestias pariatur sed eligendi eius ullam deserunt et veritatis
sunt! Labore, quasi.</p>

</body>
</html>
```

c) font-style

- The font-style property is used to set the font face style for the text content of an element.

Syntax

```
p
{
  font-style:value;
}
```

where,

value = Normal, Italic, Oblique, unset etc.



Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    p:nth-child(4)
    {
      font-style: italic;
    }
  </style>
</head>
<body>

  <h1>Before</h1>

  <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Perspiciatis, laboriosam
commodi? Adipisci porro, harum veniam architecto ratione quas repellendus maxime
preferendis aperiam optio. Commodi officiis sit maxime delectus? Laboriosam, esse!
Lorem ipsum dolor sit amet consectetur adipisicing elit. Veniam cumque expedita,
reiciendis incidunt voluptates saepe accusantium maxime? Eum repudiandae maiores
illum, cupiditate ipsa fugiat molestiae fugit et voluptatum similique labore?</p>

  <h1>After</h1>

  <p>Lorem ipsum dolor sit, amet consectetur adipisicing elit. Sit facilis hic tenetur vel,
tempore, recusandae blanditiis eaque repudiandae dolore magnam dicta adipisci.
Architecto odit, quod at debitis iusto fuga repellat? Lorem ipsum dolor sit amet
consectetur adipisicing elit. Officia alias, cupiditate illum preferendis sit necessitatibus
quasi nemo? Repellat molestias pariatur sed eligendi eius ullam deserunt et veritatis
sunt! Labore, quasi.</p>

</body>
</html>
```

d) font-weight

- The font-weight property specifies the weight or boldness of the font.

Syntax

```
p
{
  font-weight:value;
}
```

where,

value = normal, bold, bolder, lighter, 100, 200, 300,... so on etc.



Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    p:nth-child(4)
    {
      font-weight: bold;
    }
  </style>
</head>
<body>

  <h1>Before</h1>

  <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Perspiciatis, laboriosam
commodi? Adipisci porro, harum veniam architecto ratione quas repellendus maxime
preferendis aperiam optio. Commodi officiis sit maxime delectus? Laboriosam, esse!
Lorem ipsum dolor sit amet consectetur adipisicing elit. Veniam cumque expedita,
reiciendis incidunt voluptates saepe accusantium maxime? Eum repudiandae maiores
illum, cupiditate ipsa fugiat molestiae fugit et voluptatum similique labore?</p>

  <h1>After</h1>

  <p>Lorem ipsum dolor sit, amet consectetur adipisicing elit. Sit facilis hic tenetur vel,
tempore, recusandae blanditiis eaque repudiandae dolore magnam dicta adipisci.
Architecto odit, quod at debitis iusto fuga repellat? Lorem ipsum dolor sit amet
consectetur adipisicing elit. Officia alias, cupiditate illum preferendis sit necessitatibus
quasi nemo? Repellat molestias pariatur sed eligendi eius ullam deserunt et veritatis
sunt! Labore, quasi.</p>

</body>
</html>
```


e) font-variant

- The font-variant property allows the text to be displayed in a special small-caps variation.
- Small-caps or small capital letters are slightly different to normal capital letters, in which lowercase letters appear as smaller versions of the corresponding uppercase letters.

Syntax

```
p
{
    font-variant:value;
}
```

where,

value = Normal, small-caps. etc.



Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    p:nth-child(4)
    {
      font-variant: small-caps;
    }
  </style>
</head>
<body>

  <h1>Before</h1>

  <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Perspiciatis, laboriosam
commodi? Adipisci porro, harum veniam architecto ratione quas repellendus maxime
preferendis aperiam optio. Commodi officiis sit maxime delectus? Laboriosam, esse!
Lorem ipsum dolor sit amet consectetur adipisicing elit. Veniam cumque expedita,
reiciendis incidunt voluptates saepe accusantium maxime? Eum repudiandae maiores
illum, cupiditate ipsa fugiat molestiae fugit et voluptatum similique labore?</p>

  <h1>After</h1>

  <p>Lorem ipsum dolor sit, amet consectetur adipisicing elit. Sit facilis hic tenetur vel,
tempore, recusandae blanditiis eaque repudiandae dolore magnam dicta adipisci.
Architecto odit, quod at debitis iusto fuga repellat? Lorem ipsum dolor sit amet
consectetur adipisicing elit. Officia alias, cupiditate illum preferendis sit necessitatibus
quasi nemo? Repellat molestias pariatur sed eligendi eius ullam deserunt et veritatis
sunt! Labore, quasi.</p>

</body>
</html>
```

f) font-variant-caps

The font-variant-caps CSS property controls the usage of alternate glyphs for capital letters.

Syntax

```
p
{
    font-variant-caps:value;
}
```

where,

value = normal, small-caps, all-small-caps,unicase, petite-caps,titling-caps, uncase etc.



Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    p:nth-child(4)
    {
      font-variant-caps: all-small-caps;
    }
  </style>
</head>
<body>

  <h1>Before</h1>

  <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Perspiciatis, laboriosam
commodi? Adipisci porro, harum veniam architecto ratione quas repellendus maxime
preferendis aperiam optio. Commodi officiis sit maxime delectus? Laboriosam, esse!
Lorem ipsum dolor sit amet consectetur adipisicing elit. Veniam cumque expedita,
reiciendis incidunt voluptates saepe accusantium maxime? Eum repudiandae maiores
illum, cupiditate ipsa fugiat molestiae fugit et voluptatum similique labore?</p>

  <h1>After</h1>

  <p>Lorem ipsum dolor sit, amet consectetur adipisicing elit. Sit facilis hic tenetur vel,
tempore, recusandae blanditiis eaque repudiandae dolore magnam dicta adipisci.
Architecto odit, quod at debitis iusto fuga repellat? Lorem ipsum dolor sit amet
consectetur adipisicing elit. Officia alias, cupiditate illum preferendis sit necessitatibus
quasi nemo? Repellat molestias pariatur sed eligendi eius ullam deserunt et veritatis
sunt! Labore, quasi.</p>

</body>
</html>
```

Styling Links

- Links or hyperlinks are an essential part of a website.
- It allows visitors to navigate through the site. Therefore, styling the links properly is an important aspect of building a user-friendly website.

States of links

A link has four different states according to CSS :-

a) Unvisited State

- This state can be achieved by "a:link" pseudo class.
- By this state we define styles for normal or unvisited links.

b) Active State

- This state can be achieved by "a:active" pseudo class.
- By this state we define styles for active links.
- This state could be achieved during clicked state.

c) Visited State

- This state can be achieved by "a:visited" pseudo class.
- By this state we define styles for visited links.
- Visited links are those links that the user has already been visited.

d) Hovering State

- This state can be achieved by "a:hover" pseudo class.
- By this state we define styles for a link when the user place the mouse pointer over it.

Modifying Links Styles

- In all major browsers the appearance of active, visited, unvisited links are same. However, we can change these styles by using CSS properties.

Example -- Changing links color

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    a:link {
      color: #1ebba3;
    }
    a:visited {
      color: #ff00f4;
    }
    a:hover {
      color: blueviolet;
    }
    a:active {
      color: #ff9800;
    }
  </style>
</head>
<body>

  <h1><a href="#helloW">Hello Link</a></h1>

</body>
</html>
```

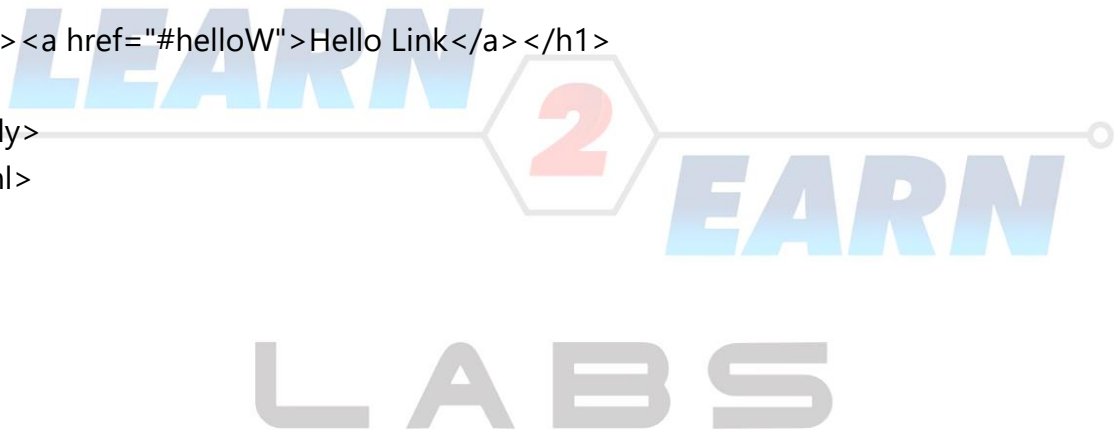


Example -- Removing underline from links

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    a
    {
      text-decoration: none;
    }
  </style>
</head>
<body>

  <h1><a href="#helloW">Hello Link</a></h1>

</body>
</html>
```



Transforming links to button

We can also make your ordinary text links look like button using CSS.

Example -- Bordered Button

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    a
    {
      border: 2px solid black;
      padding: 7px;
      text-decoration: none;
      font-size: 20px;
      cursor: pointer;
    }
  </style>
</head>
<body>

  <h1 align="center">Modify links to button using css</h1>
  <br>
  <br>
  <center>
    <a href="#helloW">Button Link</a>
  </center>

</body>
</html>
```


Example -- Colored Button

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    a
    {
      padding: 7px;
      text-decoration: none;
      font-size: 18px;
      cursor: pointer;
      background-color: blueviolet;
      color: white;
    }
    a:hover,a:active
    {
      background-color: white;
      border: 2px solid black;
      color: blueviolet;
    }
  </style>
</head>
<body>

  <h1 align="center">Modify links to button using css</h1>
  <br>
  <br>
  <center>
    <a href="#helloW">Button Link</a>
  </center>

</body>
</html>
```

Lists in CSS

Types of lists

There are three types of lists in HTML :-

a) Unordered Lists

A list of items, where every list items are marked with bullets.

b) Ordered Lists

A list of items, where each list items are marked with numbers.

c) Description Lists

A list of items, with a description of each item.

Styling lists

- CSS provides the several properties for styling and formatting the most commonly used unordered and ordered lists.
- By these CSS properties for styling lists we can :-
 - a) Control the shape or appearance of the marker.
 - b) Specify an image for the marker rather than a bullet point or number.
 - c) Set the distance between a marker and the text in the list.
 - d) Specify whether the marker would appear inside or outside of the box containing the list items.

CSS lists styling properties

We have few properties for styling list items includes :-

a) list-style-type

- We know that items in an ordered list are numbered with Arabic numerals (1, 2, 3, 4, 5, and so on), whereas in an unordered list, items are marked with round bullets (•).
- So we can change this default list marker type to any other type such as roman numerals, latin letters, circle, square, and so on using the list-style-type property.

Syntax

```
li  
{  
  list-style-type : value;  
}
```



where,

value = Disc, Armenian, Circle, Decimal, decimal-leading-zero, Georgian, Hebrew, hiragana, hiragana-iroha, katakana, lower-alpha, katakana-iroha, lower-alpha, lower-greek, lower-latin, upper-roman, lower-roman, None, Square, upper-alpha, upper-greek, upper-latin etc.

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    .ol
    {
      list-style-type: square;
    }
  </style>
</head>
<body>

  <h1>Ordered List -- Before</h1>
  <ol>
    <li>item1</li>
    <li>item2</li>
    <li>item3</li>
  </ol>

  <h1>Ordered List -- After</h1>
  <ol class="ol">
    <li>item1</li>
    <li>item2</li>
    <li>item3</li>
  </ol>

</body>
</html>
```

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    .ul
    {
      list-style-type: lower-roman;
    }
  </style>
</head>
<body>

  <h1>Unordered List -- Before</h1>
  <ul>
    <li>item1</li>
    <li>item2</li>
    <li>item3</li>
  </ul>

  <h1>Unordered List -- After</h1>
  <ul class="ul">
    <li>item1</li>
    <li>item2</li>
    <li>item3</li>
  </ul>

</body>
</html>
```

b) list-style-position

- Since lists item markers are positioned outside of their display boxes.
- So we, can also position these markers or bullet points inside of the list item's display boxes using the list-style-position property along with the value inside.

Syntax

```
li
{
  list-style-position : value;
}
```

where,

value = inside, outside etc.



Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    .ul
    {
      list-style-position: inside;
    }
  </style>
</head>
<body>

<h1>Unordered List -- Before</h1>
<ul>
  <li>item1</li>
  <li>item2</li>
  <li>item3</li>
</ul>

<h1>Unordered List -- After</h1>
<ul class="ul">
  <li>item1</li>
  <li>item2</li>
  <li>item3</li>
</ul>

</body>
</html>
```

c) list-style-image

We can also set an image as a list marker using the list-style-image property.

Syntax

```
li
{
  list-style-image : url(image_path);
}
```

where,

image_path = path of image.



Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    .ul
    {
      list-style-image: url("image.png");
    }
  </style>
</head>
<body>

  <h1>Unordered List -- Before</h1>
  <ul>
    <li>item1</li>
    <li>item2</li>
    <li>item3</li>
  </ul>

  <h1>Unordered List -- After</h1>
  <ul class="ul">
    <li>item1</li>
    <li>item2</li>
    <li>item3</li>
  </ul>

</body>
</html>
```

d) list-style

The list-style property is a shorthand property for defining all the three properties "list-style-type", "list-style-image", and "list-style-position" of a list in one place.

Syntax

```
li
{
  list-style : list-style-type list-style-position list-style-image;
}
```



Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    .ul
    {
      list-style:square inside url("image.png");
    }
  </style>
</head>
<body>

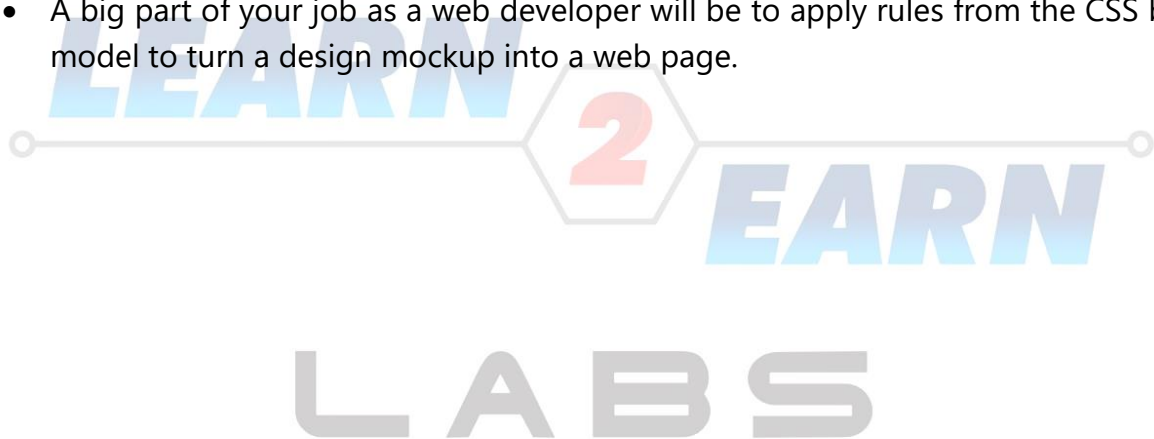
  <h1>Unordered List -- Before</h1>
  <ul>
    <li>item1</li>
    <li>item2</li>
    <li>item3</li>
  </ul>

  <h1>Unordered List -- After</h1>
  <ul class="ul">
    <li>item1</li>
    <li>item2</li>
    <li>item3</li>
  </ul>

</body>
</html>
```

CSS Box Model

- The “CSS box model” is a set of rules that define how every web page on the Internet is rendered.
- When laying out a document, the browser's rendering engine represents each element as a rectangular box according to the standard CSS basic box model.
- CSS box model is a container which contains multiple properties including borders, margin, padding and the content itself.
- It is used to create the design and layout of web pages.
- CSS treats each element in your HTML document as a “box” with a bunch of different properties that determine where it appears on the page. These boxes can have different properties and can interact with each other in different ways, but every box has a content area and optional surrounding padding, border, and margin.
- A big part of your job as a web developer will be to apply rules from the CSS box model to turn a design mockup into a web page.



CSS Box Model Properties

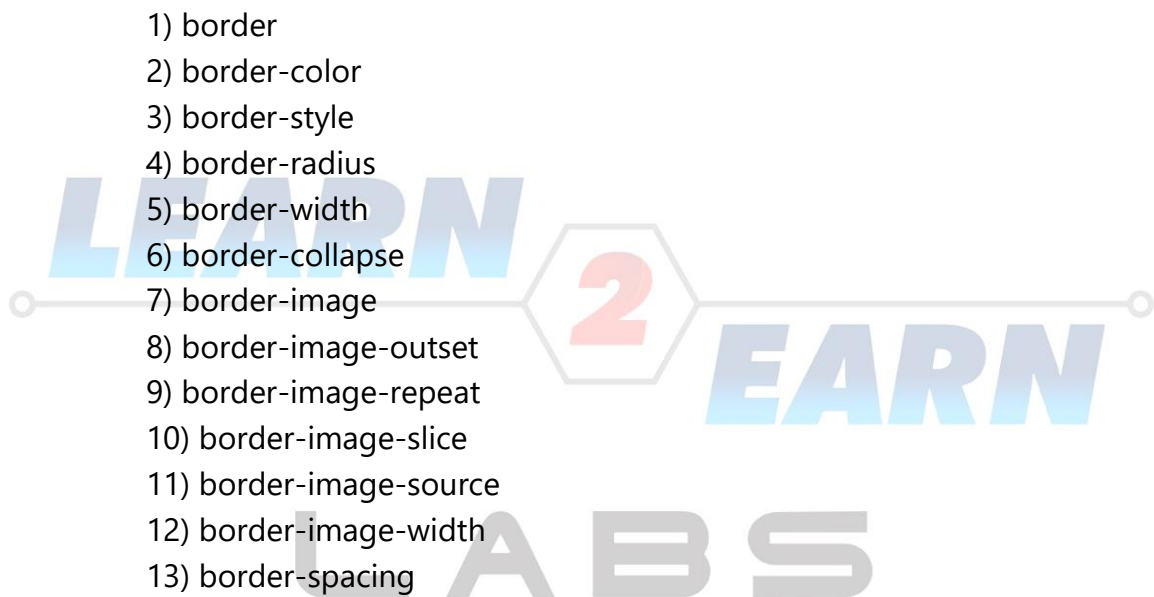
Box-Model has multiple properties in CSS. Some of them are given below :-

a) Borders

It is the area between the box's padding and margin. Its dimensions are given by the width and height of border.

We have following properties related to border in CSS box model includes :-

- 1) border
- 2) border-color
- 3) border-style
- 4) border-radius
- 5) border-width
- 6) border-collapse
- 7) border-image
- 8) border-image-outset
- 9) border-image-repeat
- 10) border-image-slice
- 11) border-image-source
- 12) border-image-width
- 13) border-spacing



1) border

- This property sets all the border properties in one declaration.
- It is a Shorthand Property.

Syntax

```
p {  
  border: border-width border-style border-color;  
}
```



Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    div
    {
      width: 200px;
      height: 200px;
      border: 2px solid black;
    }
  </style>
</head>
<body>
  <center>
    <div></div>
  </center>
</body>
</html>
```



2) border-width

- The border-width property specifies the width of the border area.
- It is a shorthand property for setting the thickness of all the four sides of an element's border at the same time.

We have properties that relates with border-width includes :-

- a) border-top-width
- b) border-right-width
- c) border-bottom-width
- d) border-left-width

Syntax

div

{

border-width : border-top-width border-right-width border-bottom-width border-left-width;

}

LABS

Different Approaches

i) For four values

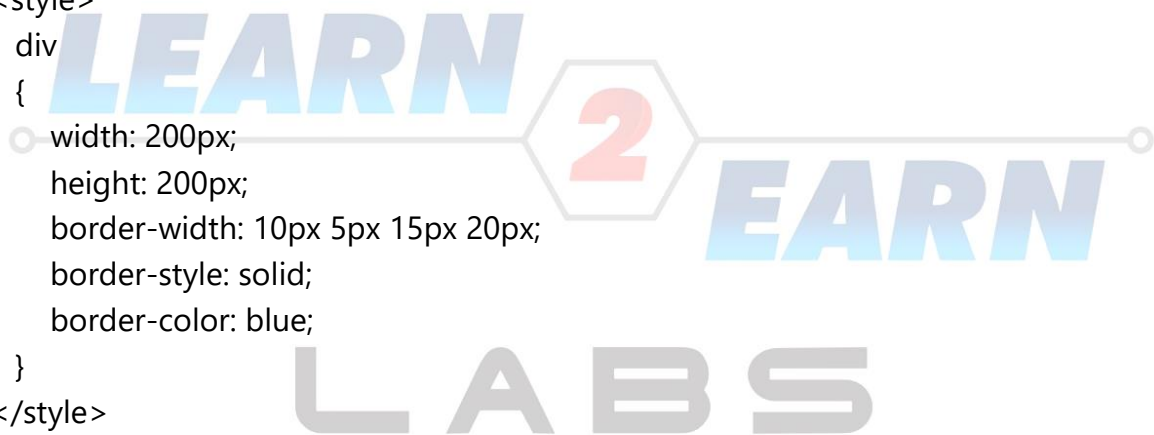
first value applies to top-left border width, second value applies to top-right border width, third value applies to bottom-right border width, and fourth value applies to bottom-left border width.

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    div
    {
      width: 200px;
      height: 200px;
      border-width: 10px 5px 15px 20px;
      border-style: solid;
      border-color: blue;
    }
  </style>
</head>
<body>

  <center>
    <div></div>
  </center>

</body>
</html>
```



ii) For three values

first value applies to top-left border width, (second value applies to top-right and bottom-left border width), and third value applies to bottom-right border width.

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    div
    {
      width: 200px;
      height: 200px;
      border-width: 10px 5px 20px;
      border-style: solid;
      border-color: blue;
    }
  </style>
</head>
<body>

  <center>
    <div></div>
  </center>

</body>
</html>
```

LABS

iii) For two values

(first value applies to top-left and bottom-right border width), and (the second value applies to top-right and bottom-left border width).

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    div
    {
      width: 200px;
      height: 200px;
      border-width: 10px 20px;
      border-style: solid;
      border-color: blue;
    }
  </style>
</head>
<body>

  <center>
    <div></div>
  </center>

</body>
</html>
```

LABS

iv) For one values

The value applies to all four border width.

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    div
    {
      width: 200px;
      height: 200px;
      border-width: 20px;
      border-style: solid;
      border-color: blue;
    }
  </style>
</head>
<body>

  <center>
    <div> </div>
  </center>

</body>
</html>
```

LABS

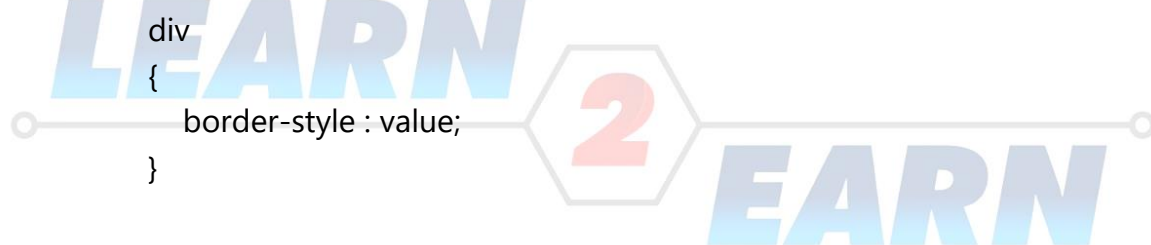
3) border-style

- The border-style property sets the style of a box's border such as: solid, dotted, etc.
- It is a shorthand property for setting the line style for all four sides of the elements border.

We have properties that relates with border-style includes :-

- a) border-top-style
- b) border-right-style
- c) border-bottom-style
- d) border-left-style

Syntax



where,

value = none, hidden, dashed, dotted, double, groove, inset, outset, ridge and solid.

LABS

i) For four values

first value applies to top-border style, second value applies to right-border style, third value applies to bottom-border style, and fourth value applies to left-border style.

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    div
    {
      width: 200px;
      height: 200px;
      border-width: 10px;
      border-style: solid dotted double dashed;
      border-color: blue;
    }
  </style>
</head>
<body>

  <center>
    <div></div>
  </center>

</body>
</html>
```

LABS

ii) For three values

first value applies to top-border style, (second value applies to right-border & left-border style), and third value applies to bottom-border style.

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    div
    {
      width: 200px;
      height: 200px;
      border-width: 10px;
      border-style: solid dotted dashed;
      border-color: blue;
    }
  </style>
</head>
<body>

  <center>
    <div></div>
  </center>

</body>
</html>
```

LABS

iii) For two values

first value applies to top & bottom border style), and (the second value applies to right & left border style.

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    div
    {
      width: 200px;
      height: 200px;
      border-width: 10px;
      border-style: solid dotted;
      border-color: blue;
    }
  </style>
</head>
<body>

  <center>
    <div></div>
  </center>

</body>
</html>
```

LABS

iv) For one values

The value applies to all four border style.

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    div
    {
      width: 200px;
      height: 200px;
      border-width: 10px;
      border-style: solid;
      border-color: blue;
    }
  </style>
</head>
<body>

  <center>
    <div></div>
  </center>

</body>
</html>
```

LABS

4) border-color

- The border-color property specifies the color of a box's border.
- This is also a shorthand property for setting the color of all the four sides of an element's border.

We have properties that relates with border-color includes :-

- a) border-top-color
- b) border-right-color
- c) border-bottom-color
- d) border-left-color

Syntax

```
div
{
  border-color : border-top-color border-right-color border-bottom-color
border-left-color;
}
```

LABS

Different Approaches

i) For four values

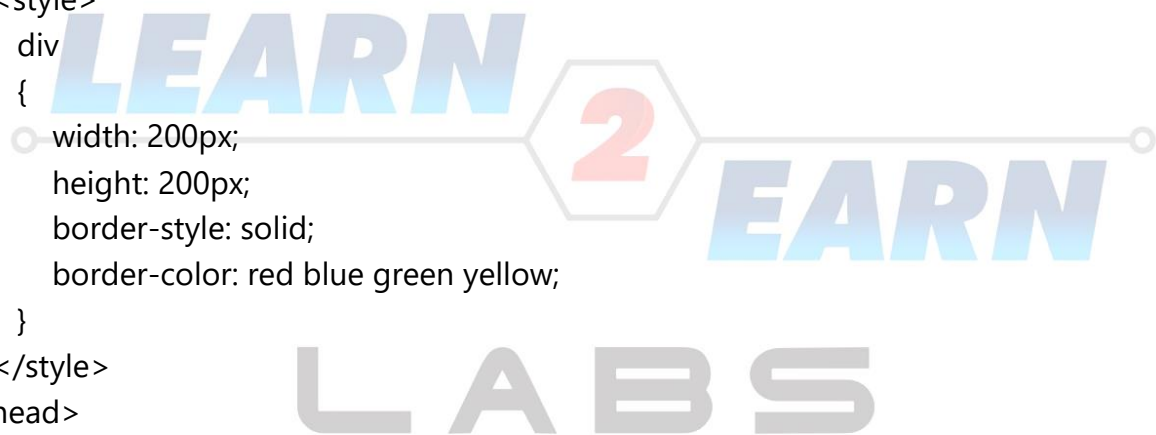
first value applies to top-border color, second value applies to right-border-color, third value applies to bottom-border-color, and fourth value applies to left-border-color.

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    div
    {
      width: 200px;
      height: 200px;
      border-style: solid;
      border-color: red blue green yellow;
    }
  </style>
</head>
<body>

  <center>
    <div></div>
  </center>

</body>
</html>
```



ii) For three values

first value applies to top-border color, (second value applies to right-border & left-border color), and third value applies to bottom-border color.

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    div
    {
      width: 200px;
      height: 200px;
      border-style: solid;
      border-color: red blue yellow;
    }
  </style>
</head>
<body>

  <center>
    <div></div>
  </center>

</body>
</html>
```

LABS

iii) For two values

first value applies to top-border & bottom-border color), and (the second value applies to right-border & left-border color.

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    div
    {
      width: 200px;
      height: 200px;
      border-style: solid;
      border-color: red blue;
    }
  </style>
</head>
<body>

  <center>
    <div> </div>
  </center>

</body>
</html>
```

LABS

iv) For one values

The value applies to all four border colors.

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    div
    {
      width: 200px;
      height: 200px;
      border-style: solid;
      border-color: blue;
    }
  </style>
</head>
<body>

  <center>
    <div> </div>
  </center>

</body>
</html>
```

LABS

5) border-radius

- The border-radius property is used to add rounded borders to an element.
- This property makes border edges curvy.
- This property allows you to add rounded corners to elements.

We have properties that relates with border-radius includes :-

- a) border-top-left-radius
- b) border-top-right-radius
- c) border-bottom-right-radius
- d) border-bottom-left-radius

Syntax

```
div
{
border-radius : border-top-left-radius border-top-right-radius border-
bottom-right-radius border-bottom-left-radius;
}
```

LABS

Different Approaches

i) For four values

first value applies to top-left corner, second value applies to top-right corner, third value applies to bottom-right corner, and fourth value applies to bottom-left corner.

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    div
    {
      width: 200px;
      height: 200px;
      border-width: 10;
      border-style: solid;
      border-color: blue;
      border-radius: 7px 20px 30px 40px;
    }
  </style>
</head>
<body>

  <center>
    <div> </div>
  </center>

</body>
</html>
```


ii) For three values

first value applies to top-left corner, (second value applies to top-right and bottom-left corners), and third value applies to bottom-right corner.

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    div
    {
      width: 200px;
      height: 200px;
      border-width: 10;
      border-style: solid;
      border-color: blue;
      border-radius: 7px 20px 40px;
    }
  </style>
</head>
<body>

  <center>
    <div></div>
  </center>

</body>
</html>
```

LABS

iii) For two values

first value applies to top-left and bottom-right corners, and (the second value applies to top-right and bottom-left corners).

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    div
    {
      width: 200px;
      height: 200px;
      border-width: 10;
      border-style: solid;
      border-color: blue;
      border-radius: 7px 40px;
    }
  </style>
</head>
<body>

  <center>
    <div></div>
  </center>

</body>
</html>
```

LABS

iv) For one values

The value applies to all four corners, which are rounded equally.

Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    div
    {
      width: 200px;
      height: 200px;
      border-width: 10;
      border-style: solid;
      border-color: blue;
      border-radius: 40px;
    }
  </style>
</head>
<body>

  <center>
    <div> </div>
  </center>

</body>
</html>
```

LABS

6) border-collapse

The border-collapse property sets whether table borders should collapse into a single border or be separated as in standard HTML.

Syntax

```
table
{
    border-collapse : value;
}
```

where,

value = separate, collapse.



Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    .table
    {
      border-collapse: collapse;
    }
  </style>
</head>
<body>

<h1>Before</h1>

<table align="center" border="2" height="200" width="400">
  <tr>
    <td>Data1</td>
    <td>Data2</td>
  </tr>
  <tr>
    <td>Data1</td>
    <td>Data2</td>
  </tr>
</table>

<h1>After</h1>

<table class="table" align="center" border="2" height="200" width="400">
  <tr>
    <td>Data1</td>
    <td>Data2</td>
  </tr>
  <tr>
    <td>Data1</td>
```

```
<td>Data2</td>  
</tr>  
</table>
```

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



7) border-image

- The border-image property allows you to specify an image to be used as the border around an element.
- The border-image property is a shorthand property.

Link to download border image –

<https://pngtree.com/so/border/>
<https://pngtree.com/so/border-frame>

Link for border-image-generator –

<https://border-image.com/>

Syntax -- For image

```
div
{
    border-image: border-image-source border-image-slice border-image-
width border-image-outset border-image-repeat;
}
```

Syntax -- For gradient

```
div
{
    border-image: border-image-source border-image-slice border-image-
width border-image-outset border-image-repeat;
}
```

Example -- For image

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    #box1
    {
      width: 800px;
      height: 150px;
      border: 30px solid black;
      text-align: justify;
      padding: 20px;
    }
    #box
    {
      width: 800px;
      height: 150px;
      border: 30px solid black;
      text-align: justify;
      padding: 20px;
      background-color: aqua;
      border-image: url(bg.png) 129 / 15px / 50px round ;
    }
  </style>
</head>
<body>

<h1 align="center">Before</h1>

  <center>
    <div id="box1">
      Lorem ipsum, dolor sit amet consectetur adipisicing elit. Temporibus molestias
      sed error illum autem labore voluptatum optio eligendi explicabo! Sunt natus, ratione
      accusamus tempora quasi libero facere explicabo distinctio quibusdam accusantium
      enim placeat neque ut suscipit. Deleniti eligendi reprehenderit sequi quam, voluptates
```


asperiores officiis iste aperiam nostrum numquam non impedit ex unde repellat quae
odit iusto soluta magni rerum in magnam, debitis maxime. Alias cum optio soluta sunt
nam expedita, sequi velit porro preferendis saepe totam ab impedit, iste molestias
inventore dolorem repudiandae vitae eum at esse dolores. Rerum, alias. Ipsam
assumenda quae, nam sit delectus a neque exercitationem sapiente.

</div>

</center>

<h1 align="center">After</h1>

<center>

<div id="box">

Lorem ipsum, dolor sit amet consectetur adipisicing elit. Temporibus molestias
sed error illum autem labore voluptatum optio eligendi explicabo! Sunt natus, ratione
accusamus tempora quasi libero facere explicabo distinctio quibusdam accusantium
enim placeat neque ut suscipit. Deleniti eligendi reprehenderit sequi quam, voluptates
asperiores officiis iste aperiam nostrum numquam non impedit ex unde repellat quae
odit iusto soluta magni rerum in magnam, debitis maxime. Alias cum optio soluta sunt
nam expedita, sequi velit porro preferendis saepe totam ab impedit, iste molestias
inventore dolorem repudiandae vitae eum at esse dolores. Rerum, alias. Ipsam
assumenda quae, nam sit delectus a neque exercitationem sapiente.

</div>

</center>

</body>

</html>

LABS

Example -- For gradient

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    #box1
    {
      width: 800px;
      height: 150px;
      border: 30px solid black;
      text-align: justify;
      padding: 20px;
    }
    #box
    {
      width: 800px;
      height: 150px;
      border: 30px solid black;
      text-align: justify;
      padding: 20px;
      border-image: linear-gradient(to right,red,blue) 21 / 30px / 50px;
    }
  </style>
</head>
<body>
```

```
<h1 align="center">Before</h1>
```

```
<center>
```

```
<div id="box1">
```

Lorem ipsum, dolor sit amet consectetur adipisicing elit. Temporibus molestias sed error illum autem labore voluptatum optio eligendi explicabo! Sunt natus, ratione accusamus tempora quasi libero facere explicabo distinctio quibusdam accusantium enim placeat neque ut suscipit. Deleniti eligendi reprehenderit sequi quam, voluptates asperiores officiis iste aperiam nostrum numquam non impedit ex unde repellat quae

odit iusto soluta magni rerum in magnam, debitis maxime. Alias cum optio soluta sunt nam expedita, sequi velit porro perferendis saepe totam ab impedit, iste molestias inventore dolorem repudiandae vitae eum at esse dolores. Rerum, alias. Ipsam assumenda quae, nam sit delectus a neque exercitationem sapiente.

</div>

</center>

<h1 align="center">After</h1>

<center>

<div id="box">

Lorem ipsum, dolor sit amet consectetur adipisicing elit. Temporibus molestias sed error illum autem labore voluptatum optio eligendi explicabo! Sunt natus, ratione accusamus tempora quasi libero facere explicabo distinctio quibusdam accusantium enim placeat neque ut suscipit. Deleniti eligendi reprehenderit sequi quam, voluptates asperiores officiis iste aperiam nostrum numquam non impedit ex unde repellat quae odit iusto soluta magni rerum in magnam, debitis maxime. Alias cum optio soluta sunt nam expedita, sequi velit porro perferendis saepe totam ab impedit, iste molestias inventore dolorem repudiandae vitae eum at esse dolores. Rerum, alias. Ipsam assumenda quae, nam sit delectus a neque exercitationem sapiente.

</div>

</center>

</body>

</html>

LABS

8) border-image-source

This property specifies the path of the image to be used as a border.

Syntax

```
div
{
  border-image-source : url(image_path);
}
```



Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    #box1
    {
      width: 800px;
      height: 150px;
      border: 30px solid black;
      text-align: justify;
      padding: 20px;
    }
    #box
    {
      width: 800px;
      height: 150px;
      border: 30px solid black;
      text-align: justify;
      padding: 20px;
      border-image-source: url(bg.png);
    }
  </style>
</head>
<body>
```

```
<h1 align="center">Before</h1>
```

```
<center>
  <div id="box1">
```

Lorem ipsum, dolor sit amet consectetur adipisicing elit. Temporibus molestias sed error illum autem labore voluptatum optio eligendi explicabo! Sunt natus, ratione accusamus tempora quasi libero facere explicabo distinctio quibusdam accusantium enim placeat neque ut suscipit. Deleniti eligendi reprehenderit sequi quam, voluptates asperiores officiis iste aperiam nostrum numquam non impedit ex unde repellat quae

odit iusto soluta magni rerum in magnam, debitis maxime. Alias cum optio soluta sunt nam expedita, sequi velit porro perferendis saepe totam ab impedit, iste molestias inventore dolorem repudiandae vitae eum at esse dolores. Rerum, alias. Ipsam assumenda quae, nam sit delectus a neque exercitationem sapiente.

</div>

</center>

<h1 align="center">After</h1>

<center>

<div id="box">

Lorem ipsum, dolor sit amet consectetur adipisicing elit. Temporibus molestias sed error illum autem labore voluptatum optio eligendi explicabo! Sunt natus, ratione accusamus tempora quasi libero facere explicabo distinctio quibusdam accusantium enim placeat neque ut suscipit. Deleniti eligendi reprehenderit sequi quam, voluptates asperiores officiis iste aperiam nostrum numquam non impedit ex unde repellat quae odit iusto soluta magni rerum in magnam, debitis maxime. Alias cum optio soluta sunt nam expedita, sequi velit porro perferendis saepe totam ab impedit, iste molestias inventore dolorem repudiandae vitae eum at esse dolores. Rerum, alias. Ipsam assumenda quae, nam sit delectus a neque exercitationem sapiente.

</div>

</center>

</body>

</html>

LABS

9) border-image-slice

- This property measure the height & width of the border-image entity and we can set this property value by adding (height + width) both.
- This property specifies how to slice the border image.

Syntax

```
div
{
    border-image-slice : width height;
}
```



Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    #box1
    {
      width: 800px;
      height: 150px;
      border: 30px solid black;
      text-align: justify;
      padding: 20px;
    }
    #box
    {
      width: 800px;
      height: 150px;
      border: 30px solid black;
      text-align: justify;
      padding: 20px;
      border-image-source: url(bg.png);
      border-image-slice: 129; /* or width height */
    }
  </style>
</head>
<body>

<h1 align="center">Before</h1>

  <center>
    <div id="box1">
      Lorem ipsum, dolor sit amet consectetur adipisicing elit. Temporibus molestias
      sed error illum autem labore voluptatum optio eligendi explicabo! Sunt natus, ratione
      accusamus tempora quasi libero facere explicabo distinctio quibusdam accusantium
      enim placeat neque ut suscipit. Deleniti eligendi reprehenderit sequi quam, voluptates
```


asperiores officiis iste aperiam nostrum numquam non impedit ex unde repellat quae
odit iusto soluta magni rerum in magnam, debitis maxime. Alias cum optio soluta sunt
nam expedita, sequi velit porro preferendis saepe totam ab impedit, iste molestias
inventore dolorem repudiandae vitae eum at esse dolores. Rerum, alias. Ipsam
assumenda quae, nam sit delectus a neque exercitationem sapiente.

</div>

</center>

<h1 align="center">After</h1>

<center>

<div id="box">

Lorem ipsum, dolor sit amet consectetur adipisicing elit. Temporibus molestias
sed error illum autem labore voluptatum optio eligendi explicabo! Sunt natus, ratione
accusamus tempora quasi libero facere explicabo distinctio quibusdam accusantium
enim placeat neque ut suscipit. Deleniti eligendi reprehenderit sequi quam, voluptates
asperiores officiis iste aperiam nostrum numquam non impedit ex unde repellat quae
odit iusto soluta magni rerum in magnam, debitis maxime. Alias cum optio soluta sunt
nam expedita, sequi velit porro preferendis saepe totam ab impedit, iste molestias
inventore dolorem repudiandae vitae eum at esse dolores. Rerum, alias. Ipsam
assumenda quae, nam sit delectus a neque exercitationem sapiente.

</div>

</center>

</body>

</html>

LABS

8) border-image-repeat

This property specifies whether the border image should be repeated, rounded or stretched.

Syntax

```
div
{
  border-image-repeat : value;
}
```

where,

value = stretch, round, repeat, space.



Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    #box1
    {
      width: 800px;
      height: 150px;
      border: 30px solid black;
      text-align: justify;
      padding: 20px;
    }
    #box
    {
      width: 800px;
      height: 150px;
      border: 30px solid black;
      text-align: justify;
      padding: 20px;
      border-image-source: url(bg.png);
      border-image-slice: 129;
      border-image-repeat: round;
    }
  </style>
</head>
<body>
```

```
<h1 align="center">Before</h1>
```

```
<center>
  <div id="box1">
```

Lorem ipsum, dolor sit amet consectetur adipisicing elit. Temporibus molestias sed error illum autem labore voluptatum optio eligendi explicabo! Sunt natus, ratione accusamus tempora quasi libero facere explicabo distinctio quibusdam accusantium

enim placeat neque ut suscipit. Deleniti eligendi reprehenderit sequi quam, voluptates asperiores officiis iste aperiam nostrum numquam non impedit ex unde repellat quae odit iusto soluta magni rerum in magnam, debitis maxime. Alias cum optio soluta sunt nam expedita, sequi velit porro preferendis saepe totam ab impedit, iste molestias inventore dolorem repudiandae vitae eum at esse dolores. Rerum, alias. Ipsam assumenda quae, nam sit delectus a neque exercitationem sapiente.

</div>

</center>

<h1 align="center">After</h1>

<center>

<div id="box">

Lorem ipsum, dolor sit amet consectetur adipisicing elit. Temporibus molestias sed error illum autem labore voluptatum optio eligendi explicabo! Sunt natus, ratione accusamus tempora quasi libero facere explicabo distinctio quibusdam accusantium enim placeat neque ut suscipit. Deleniti eligendi reprehenderit sequi quam, voluptates asperiores officiis iste aperiam nostrum numquam non impedit ex unde repellat quae odit iusto soluta magni rerum in magnam, debitis maxime. Alias cum optio soluta sunt nam expedita, sequi velit porro preferendis saepe totam ab impedit, iste molestias inventore dolorem repudiandae vitae eum at esse dolores. Rerum, alias. Ipsam assumenda quae, nam sit delectus a neque exercitationem sapiente.

</div>

</center>

</body>

</html>

9) border-image-outset

The border-image-outset property specifies the amount by which the border image area extends beyond the border box.

Syntax

```
div
{
  border-image-outset : value;
}
```

value = length / number.

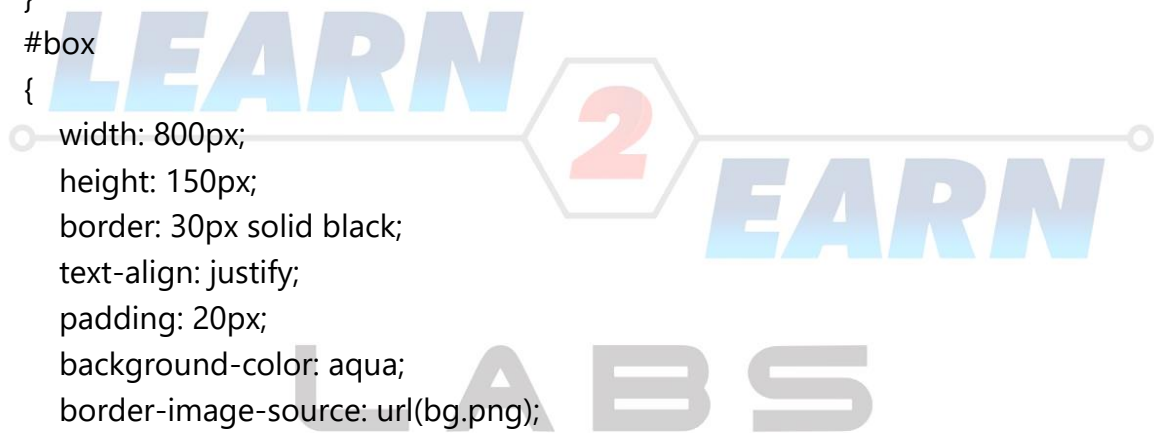


Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    #box1
    {
      width: 800px;
      height: 150px;
      border: 30px solid black;
      text-align: justify;
      padding: 20px;
    }
    #box
    {
      width: 800px;
      height: 150px;
      border: 30px solid black;
      text-align: justify;
      padding: 20px;
      background-color: aqua;
      border-image-source: url(bg.png);
      border-image-slice: 129;
      border-image-repeat: round;
      border-image-outset: 35px;
    }
  </style>
</head>
<body>

<h1 align="center">Before</h1>

  <center>
    <div id="box1">
```



Lorem ipsum, dolor sit amet consectetur adipisicing elit. Temporibus molestias sed error illum autem labore voluptatum optio eligendi explicabo! Sunt natus, ratione accusamus tempora quasi libero facere explicabo distinctio quibusdam accusantium enim placeat neque ut suscipit. Deleniti eligendi reprehenderit sequi quam, voluptates asperiores officiis iste aperiam nostrum numquam non impedit ex unde repellat quae odit iusto soluta magni rerum in magnam, debitis maxime. Alias cum optio soluta sunt nam expedita, sequi velit porro preferendis saepe totam ab impedit, iste molestias inventore dolorem repudiandae vitae eum at esse dolores. Rerum, alias. Ipsam assumenda quae, nam sit delectus a neque exercitationem sapiente.

</div>

</center>

<h1 align="center">After</h1>

<center>

<div id="box">

Lorem ipsum, dolor sit amet consectetur adipisicing elit. Temporibus molestias sed error illum autem labore voluptatum optio eligendi explicabo! Sunt natus, ratione accusamus tempora quasi libero facere explicabo distinctio quibusdam accusantium enim placeat neque ut suscipit. Deleniti eligendi reprehenderit sequi quam, voluptates asperiores officiis iste aperiam nostrum numquam non impedit ex unde repellat quae odit iusto soluta magni rerum in magnam, debitis maxime. Alias cum optio soluta sunt nam expedita, sequi velit porro preferendis saepe totam ab impedit, iste molestias inventore dolorem repudiandae vitae eum at esse dolores. Rerum, alias. Ipsam assumenda quae, nam sit delectus a neque exercitationem sapiente.

</div>

</center>

</body>

</html>

12) border-image-width

The border-image-width property specifies the width of the border image.

Syntax

```
div
{
  border-image-width : value;
}
```

where,

value = length, number, % , auto.

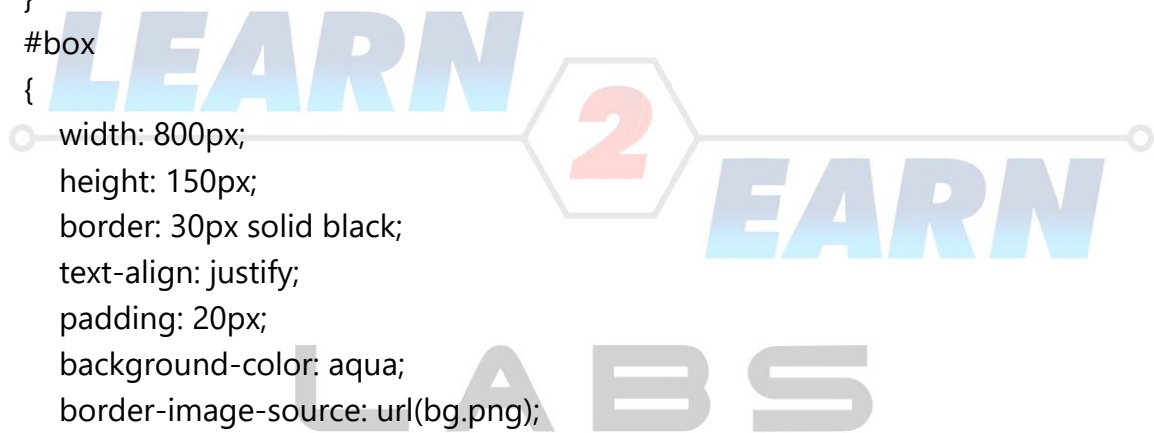


Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    #box1
    {
      width: 800px;
      height: 150px;
      border: 30px solid black;
      text-align: justify;
      padding: 20px;
    }
    #box
    {
      width: 800px;
      height: 150px;
      border: 30px solid black;
      text-align: justify;
      padding: 20px;
      background-color: aqua;
      border-image-source: url(bg.png);
      border-image-slice: 129;
      border-image-repeat: round;
      border-image-width: 15px;
    }
  </style>
</head>
<body>

<h1 align="center">Before</h1>

  <center>
    <div id="box1">
```



Lorem ipsum, dolor sit amet consectetur adipisicing elit. Temporibus molestias sed error illum autem labore voluptatum optio eligendi explicabo! Sunt natus, ratione accusamus tempora quasi libero facere explicabo distinctio quibusdam accusantium enim placeat neque ut suscipit. Deleniti eligendi reprehenderit sequi quam, voluptates asperiores officiis iste aperiam nostrum numquam non impedit ex unde repellat quae odit iusto soluta magni rerum in magnam, debitis maxime. Alias cum optio soluta sunt nam expedita, sequi velit porro preferendis saepe totam ab impedit, iste molestias inventore dolorem repudiandae vitae eum at esse dolores. Rerum, alias. Ipsam assumenda quae, nam sit delectus a neque exercitationem sapiente.

</div>

</center>

<h1 align="center">After</h1>

<center>

<div id="box">

Lorem ipsum, dolor sit amet consectetur adipisicing elit. Temporibus molestias sed error illum autem labore voluptatum optio eligendi explicabo! Sunt natus, ratione accusamus tempora quasi libero facere explicabo distinctio quibusdam accusantium enim placeat neque ut suscipit. Deleniti eligendi reprehenderit sequi quam, voluptates asperiores officiis iste aperiam nostrum numquam non impedit ex unde repellat quae odit iusto soluta magni rerum in magnam, debitis maxime. Alias cum optio soluta sunt nam expedita, sequi velit porro preferendis saepe totam ab impedit, iste molestias inventore dolorem repudiandae vitae eum at esse dolores. Rerum, alias. Ipsam assumenda quae, nam sit delectus a neque exercitationem sapiente.

</div>

</center>

</body>

</html>

13) border-spacing

The border-spacing property sets the distance between the borders of adjacent cells.

Syntax

```
table
{
    border-spacing : value;
}
```

where,

value = length length



Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
  <style>
    .table
    {
      border-spacing: 20px 20px;
    }
  </style>
</head>
<body>

<h1>Before</h1>

<table align="center" border="2" height="200" width="400">
  <tr>
    <td>Data1</td>
    <td>Data2</td>
  </tr>
  <tr>
    <td>Data1</td>
    <td>Data2</td>
  </tr>
</table>

<h1>After</h1>

<table class="table" align="center" border="2" height="200" width="400">
  <tr>
    <td>Data1</td>
    <td>Data2</td>
  </tr>
  <tr>
    <td>Data1</td>
```

```
<td>Data2</td>  
</tr>  
</table>
```

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

