



Introduction to CSS

English Language Department

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CSS Border

- The CSS border properties allow you to specify the style, width, and color of an element's border.

I have borders on all sides.

I have a red bottom border.

I have rounded borders.

I have a blue left border.

CSS Border

Border - Property	Description	Values	Example
border-style	<ul style="list-style-type: none">specifies what kind of border to displayThe border-style property can have from one to four values (for the top border, right border, bottom border, and the left border).	<p>dotted - Defines a dotted border</p> <p>dashed - Defines a dashed border</p> <p>solid - Defines a solid border</p> <p>double - Defines a double border</p> <p>groove - Defines a 3D grooved border. The effect depends on the border-color value</p> <p>ridge - Defines a 3D ridged border. The effect depends on the border-color value</p> <p>inset - Defines a 3D inset border. The effect depends on the border-color value</p> <p>outset - Defines a 3D outset border. The effect depends on the border-color value</p> <p>none - Defines no border</p> <p>hidden - Defines a hidden border</p>	<pre>.con1{ border-style: dashed; } .con1{ border-style: none dashed groove none; }</pre> <p>Border-top: no border Border- right: dashed Border-bottom: groove Border- left: no border</p>

CSS Border

border-width

- Specifies the width of the four borders
- The width can be set as a specific size (in px, pt, cm, em, etc) or by using one of the three pre-defined values: thin, medium, or thick
- The **border-width** property can have from one to four values (for the top border, right border, bottom border, and the left border)

```
.con1{ border-width: 5px;}
```

Means 5 px border width for all sides

```
.con1{border-width: 5px 20px;}
```

5px top and bottom, 20px on the sides

```
.con1{border-width: 25px 10px 4px 35px; }
```

25px top, 10px right, 4px bottom and 35px left.

CSS Border

border-color	<ul style="list-style-type: none">• Is used to set the color of the four borders.• The color can be set by:<ul style="list-style-type: none">✓ name - specify a color name, like "red"✓ HEX - specify a HEX value, like "#ff0000"✓ RGB - specify a RGB value, like "rgb(255,0,0)"✓ HSL - specify a HSL value, like "hsl(0, 100%, 50%)"✓ transparent	<pre>.con1{ border-color: red;} .con1{ border-color: rgb(255,0,0) }</pre>
border-radius	<ul style="list-style-type: none">• Is used to add rounded borders to an element	<pre>.con1{ border-radius: 5px; }</pre>

CSS Border Shorthand property

- The **border** property is a shorthand property for the following individual border properties:
 - **border-width**
 - **border-style** (required), you can assign the border of a side by writing the border side as: Border-bottom, border-right, border-top, border-left
 - **border-color**

```
p {  
  border: 5px solid red;  
}
```



Border of all sides has a style of **solid** with **5px** width and color **red**



Some text

CSS Border

Bottom Border

```
p {  
  border-bottom: 6px solid red;  
  background-color: lightgrey;  
}
```



Some text

Left Border

```
p {  
  border-left: 6px solid red;  
  background-color: lightgrey;  
}
```



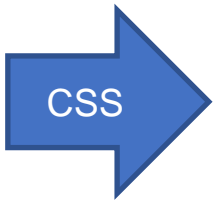
Some text

Example

```
<div class="con1"><h2>border Example</h2></div>  
<br />  
<div class="con2"><h2>Border Example using border property</h2></div>
```



```
.con1{  
  border-style: solid;  
  border-width: 3px;  
  border-radius: 5px;  
  border-color: ■ darkgreen;  
}  
.con2{  
  border: 2px dashed ■ darkred;  
  border-radius: 5px;  
}
```

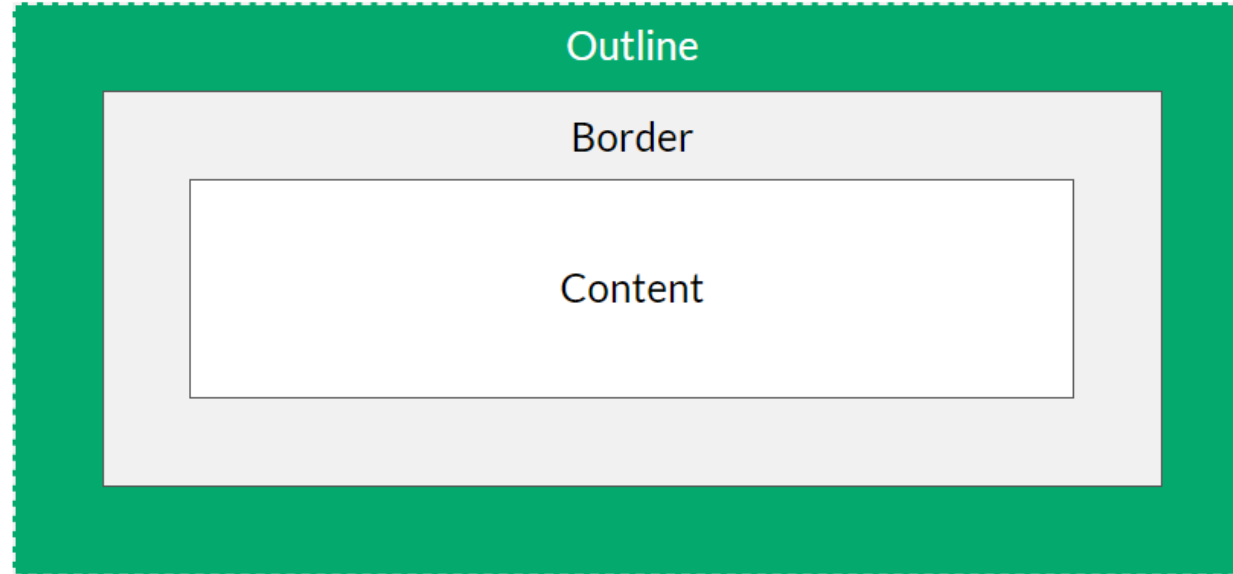


border Example

Border Example using border property

CSS Outline

- An outline is a line that is drawn around elements, OUTSIDE the borders, to make the element "stand out".



Note: Outline differs from **borders**! Unlike border, the outline is drawn outside the element's border, and may overlap other content. Also, the outline is NOT a part of the element's dimensions; the element's total width and height is not affected by the width of the outline.

CSS Outline

outline - Property	Description	Values	Example
outline-style	<ul style="list-style-type: none">Specifies the style of the outline	<p>dotted - Defines a dotted outline dashed - Defines a dashed outline solid - Defines a solid outline double - Defines a double outline groove - Defines a 3D grooved outline. ridge - Defines a 3D ridged outline. inset - Defines a 3D inset outline. outset - Defines a 3D outset outline. none - Defines no outline hidden - Defines a hidden outline</p>	<pre>.con1{ outline-style: dashed; } .con1{ outline-style: none dashed groove none; } outline-top: no border outline- right: dashed outline-bottom: groove outline- left: no border</pre>

CSS Outline

outline-width	<ul style="list-style-type: none">• specifies the width of the outline, and can have one of the following values:• thin (typically 1px)• medium (typically 3px)• thick (typically 5px)• A specific size (in px, pt, cm, em, etc)	<pre>.con1{ outline-width: 5px;}</pre>
outline-color	<ul style="list-style-type: none">• Is used to set the color of the outline.• The color can be set by:• name - specify a color name, like "red"• HEX - specify a hex value, like "#ff0000"• RGB - specify a RGB value, like "rgb(255,0,0)"• HSL - specify a HSL value, like "hsl(0, 100%, 50%)"• invert - performs a color inversion (which ensures that the outline is visible, regardless of color background)	<pre>.con1{ outline-color: red;} .con1{ outline-color: rgb(255,0,0) }</pre>

CSS Outline

outline-offset	<ul style="list-style-type: none">• Adds space between an outline and the edge/border of an element. The space between an element and its outline is transparent.	<pre>.con1{ outline-offset: 15px; }</pre>
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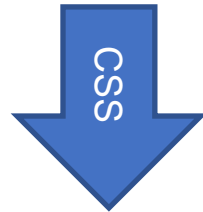
Outline shorthand Property

- The **outline** property is a shorthand property for setting the following individual outline properties:
 - **outline-width**
 - **outline-style** (required)
 - **outline-color**
- The **outline** property is specified as one, two, or three values from the list above. The order of the values does not matter.

```
outline: 7px solid  blue;
```

CSS Outline

```
<div class="con2">  
  <h2>Border and Outline Example using border property</h2>  
</div>
```



```
.con2{  
  border: 5px dashed ■ darkred;  
  outline: 7px solid ■ blue;  
  border-radius: 5px;  
}
```



Border and Outline Example using border property

CSS Margin

- Margins are used to create space around elements, outside of any defined borders.
- The CSS `margin` properties are used to create space around elements, outside of any defined borders.
- CSS has properties for specifying the margin for each side of an element:

Properties

`margin-top`

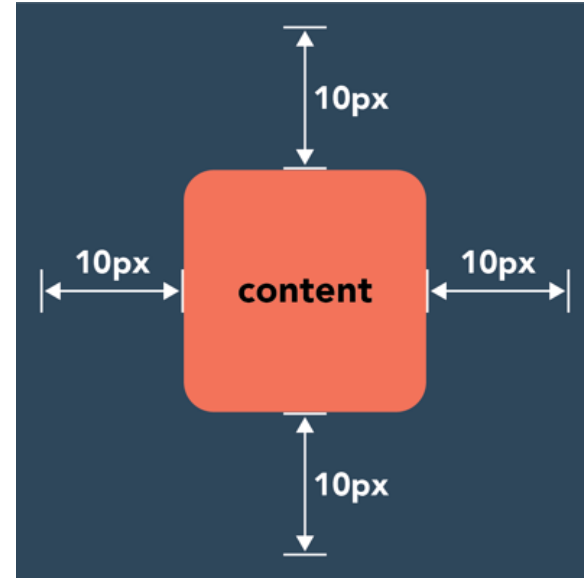
`margin-right`

`margin-bottom`

`margin-left`

Example

```
p {  
  margin-top: 100px;  
  margin-bottom: 100px;  
  margin-right: 150px;  
  margin-left: 80px;  
}
```



CSS Margin

Property	Description
margin	A shorthand property for setting the margin properties in one declaration
margin-bottom	Sets the bottom margin of an element
margin-left	Sets the left margin of an element
margin-right	Sets the right margin of an element
margin-top	Sets the top margin of an element

CSS Margin Values

- All the margin properties can have the following values:
- auto - the browser calculates the margin, Horizontally center the element within its container
- *length* - specifies a margin in px, pt, cm, etc.
- % - specifies a margin in % of the width of the containing element
- inherit - specifies that the margin should be inherited from the parent element

CSS Margin shorthand

- To shorten the code, it is possible to specify all the margin properties in one property.
- The **margin** property is a shorthand property for the following individual margin properties:

```
margin-top: 25px;  
margin-left: 50px;  
margin-right: 75px;  
margin-right: 100px;
```

Can be written as

```
margin: 25px 50px 75px 100px;
```

- If the **margin** property has three values:

- **margin: 25px 50px 75px;**
 - top margin is 25px
 - right and left margins are 50px
 - bottom margin is 75px

- If the **margin** property has two values:

- **margin: 25px 50px;**
 - top and bottom margins are 25px
 - right and left margins are 50px

- If the **margin** property has two values:

- **margin: 25px;**
 - all four margins are 25px

CSS Padding

- The CSS `padding` properties are used to generate space around an element's content, inside of any defined borders.
- CSS has properties for specifying the padding for each side of an element:

Properties

`padding-top`

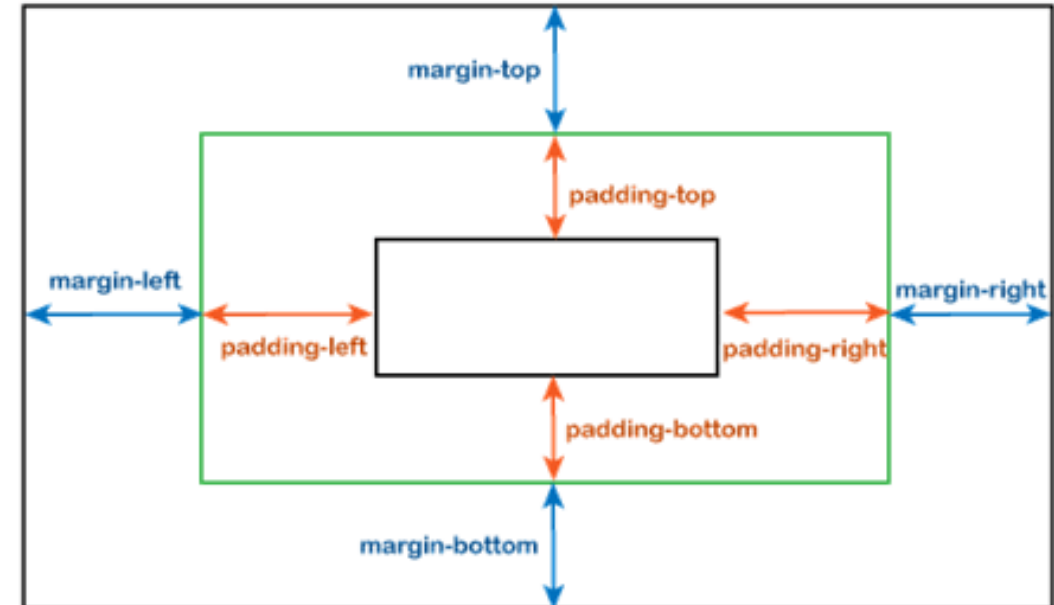
`padding-right`

`padding-bottom`

`padding-left`

Example

```
div {  
  padding-top: 50px;  
  padding-right: 30px;  
  padding-bottom: 50px;  
  padding-left: 80px;  
}
```



CSS Padding shorthand

- To shorten the code, it is possible to specify all the padding properties in one property.
- The **padding** property is a shorthand property for the following individual padding properties:

```
padding-top: 25px;  
padding-right: 30px;  
padding-left: 30px;  
padding-bottom: 100px;
```

Can be written as

```
padding: 25px 30px 30px 100px;
```

- If the **padding** property has three values:

- **padding: 25px 50px 75px;**
 - top padding is 25px
 - right and left paddings are 50px
 - bottom padding is 75px

- If the **padding** property has two values:

- **padding: 25px 50px;**
 - top and bottom paddings are 25px
 - right and left paddings are 50px

- If the **padding** property has two values:

- **padding: 25px;**
 - all four paddings are 25px

CSS Height and Width

- The CSS height and width properties are used to set the height and width of an element.
- The height and width properties do not include padding, borders, or margins. It sets the height/width of the area inside the padding, border, and margin of the element.

Height and Width Values

The **height** and **width** properties may have the following values:

- **auto** - This is default. The browser calculates the height and width
- **length** - Defines the height/width in px, cm etc.
- **%** - Defines the height/width in percent of the containing block
- **initial** - Sets the height/width to its default value
- **inherit** - The height/width will be inherited from its parent value

This element has a height of 200 pixels and a width of 50%



No border, margin and padding is applied in this example

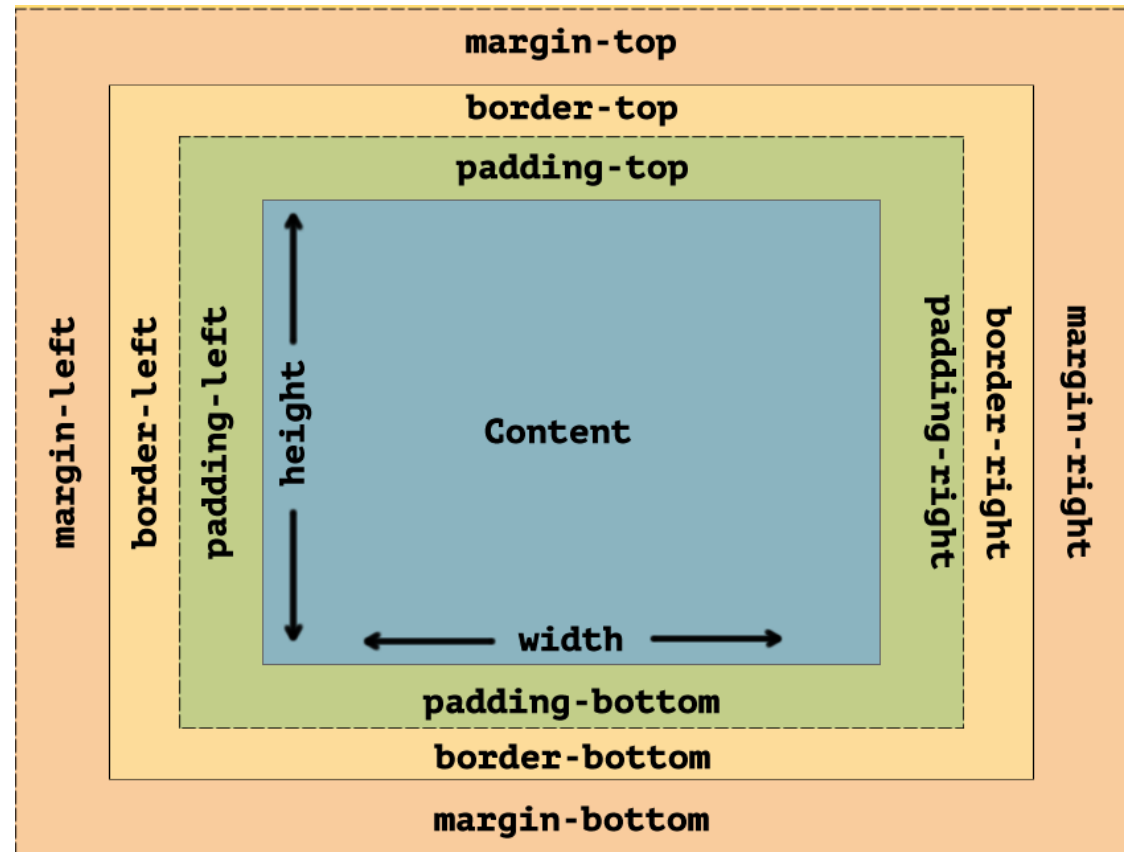
Setting max-width

- The `max-width` property is used to set the maximum width of an element.
- when the browser window is smaller than the width of the element for example (500px). The browser then adds a horizontal scrollbar to the page. To handle this situation Using `max-width` will improve the browser's handling of small windows.

Note: If you for some reason use both the `width` property and the `max-width` property on the same element, and the value of the `width` property is larger than the `max-width` property; the `max-width` property will be used (and the `width` property will be ignored).

Padding and element width

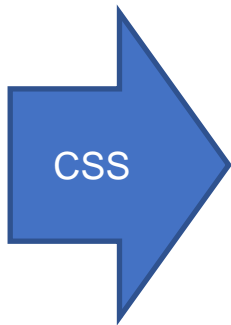
- The CSS **width** property specifies the width of the element's content area. The content area is the portion inside the padding, border, and margin of an element .
- If an element has a specified width, the padding added to that element will be added to the total width of the element. This is often an undesirable result.



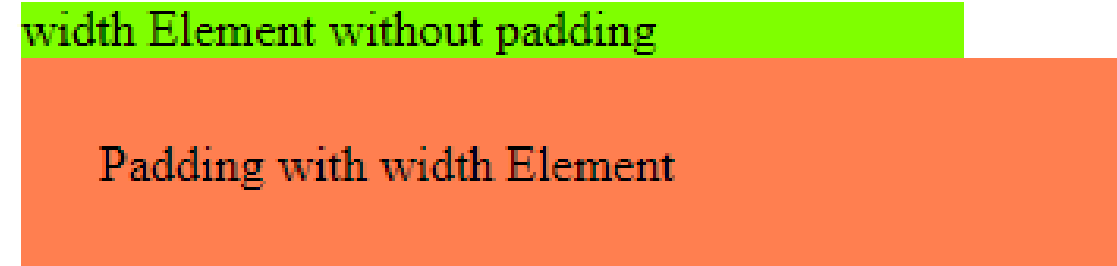
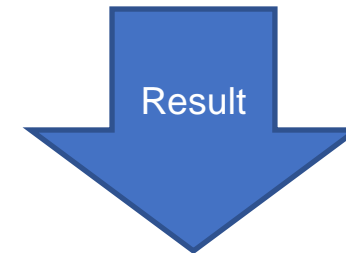
Padding and element width

- For Example: the width of an element is 300px. And the 25px of padding added to the element. The CSS automatically adds 25px of right and left, so the width will be 350px

```
<div class="con1">width Element without padding</div>  
<div class="con2">Padding with width Element</div>
```



```
.con1{  
  background-color: ■ chartreuse;  
  width: 300px;  
}  
.con2{  
  background-color: ■ coral;  
  width: 300px;  
  padding: 25px;  
}
```



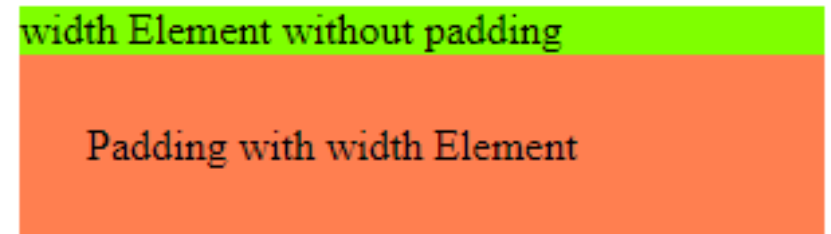
Padding and element width

To keep the width at 300px, no matter the amount of padding, you can use the **box-sizing** property.

```
<div class="con1">width Element without padding</div>  
<div class="con2">Padding with width Element</div>
```

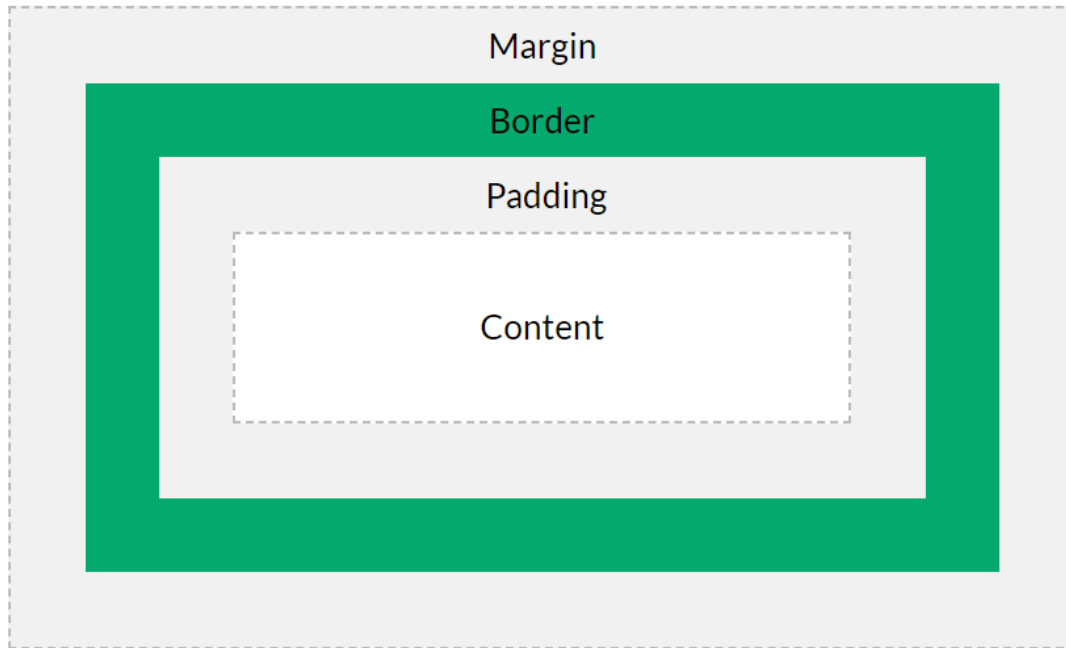


```
.con1{  
  background-color: ■ chartreuse;  
  width: 300px;  
}  
.con2{  
  background-color: ■ coral;  
  width: 300px;  
  padding: 25px;  
  box-sizing: border-box;  
}
```



CSS Box Model

- The CSS box model is essentially a box that wraps around every HTML element
- It consists of: margins, borders, padding, and the actual content. The image below illustrates the box model:



- **Content** - The content of the box, where text and images appear
- **Padding** - Clears an area around the content. The padding is transparent
- **Border** - A border that goes around the padding and content
- **Margin** - Clears an area outside the border. The margin is transparent

Example

```
<div class="boxModel">
```

```
This text is the content of the box. We have added a 50px padding, 20px margin and a 15px green border. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Molestias qui nihil eligendi quis porro. Adipisci voluptates expedita molestias libero sint vitae quas, nam voluptas tempora doloremque voluptatem officia nulla asperiores..
```

```
</div>
```

HTML

Result

CSS

```
.boxModel{
```

```
background-color: lightgrey;
```

```
width: 300px;
```

```
border: 15px solid green;
```

```
padding: 50px;
```

```
margin: 20px;
```

```
}
```

This text is the content of the box. We have added a 50px padding, 20px margin and a 15px green border. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Molestias qui nihil eligendi quis porro. Adipisci voluptates expedita molestias libero sint vitae quas, nam voluptas tempora doloremque voluptatem officia nulla asperiores..