



Box Model

.NET

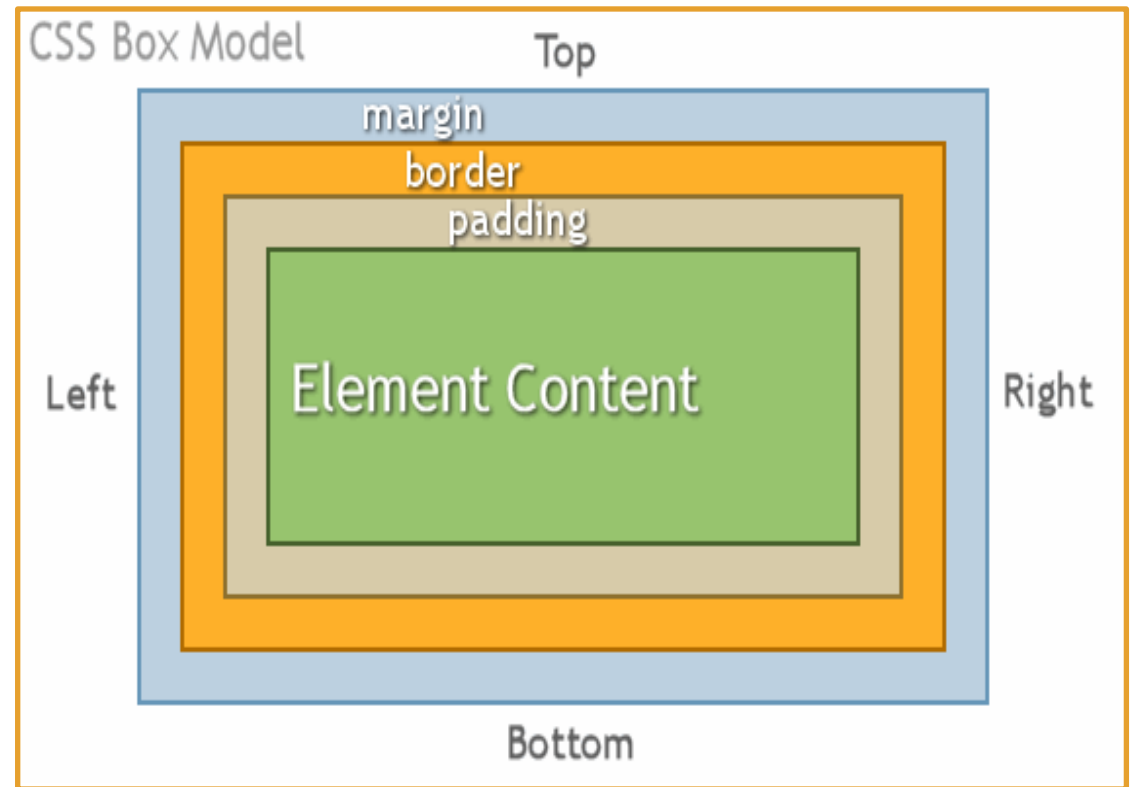
*A browser's rendering engine represents each element as a rectangular box according to the standard **CSS basic box model**. CSS determines the size, position, and properties of these boxes.*

CSS - Box Model

https://www.w3schools.com/css/css_boxmodel.asp

The CSS '**Box Model**' is the way that all HTML *elements* are defined. The **Box Model** is made up of 4 different concentric boxes.

- **Content** - this is the actual text or image
- **Padding** - space between content and border
- **Border** - space between the padding and the margin. The border width, style, and color properties may be set
- **Margin** - the invisible space between the end of one element and the start of another
- Remember:
 - C.P.B.M. => Create Pretty Box Models!



CSS - Box Model Example

https://www.w3schools.com/css/css_boxmodel.asp

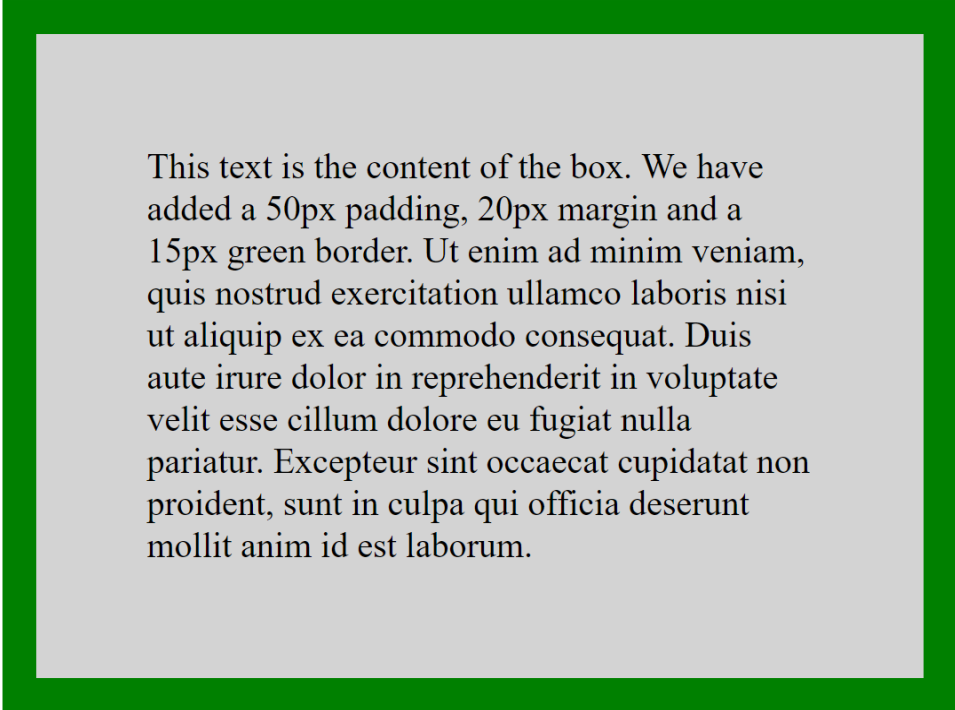
```
<!DOCTYPE html>
<html>
<head>
<style>
div {
  background-color: lightgrey;
  width: 300px;
  border: 15px solid green;
  padding: 50px;
  margin: 20px;
}
</style>
</head>
<body>

<h2>Demonstrating the Box Model</h2>

<p>The CSS box model is essentially a box that wraps around every HTML element. It consists of: borders, padding, margins, and the actual content.
```

Demonstrating the Box Model

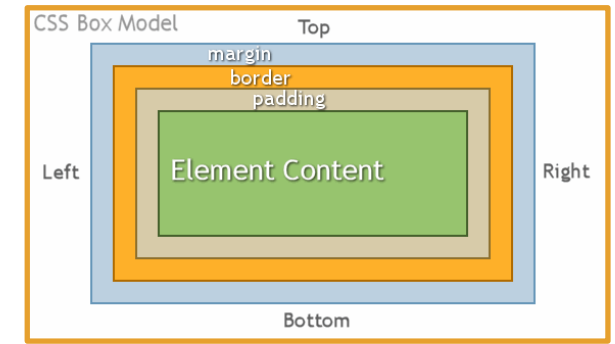
The CSS box model is essentially a box that wraps around every HTML element. It consists of: borders, padding, margins, and the actual content.



This text is the content of the box. We have added a 50px padding, 20px margin and a 15px green border. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

CSS Box Model – Example

https://developer.mozilla.org/en-US/docs/Web/CSS/Shorthand_properties



In order to correctly set the width and height of an element, you must know how the box model works.

```
div {  
  background-color: lightgrey;  
  width: 300px;  
  border: 15px solid green;  
  padding: 50px;  
  margin: 20px;  
}
```

300px (width)
+ 30px (left + right border)
+ 100px (left + right padding)
+ 40px (left + right margin)
= 470px total element width

Margin is the only part of the Box Model that can have a negative value.

margins, and the actual content.

margin

border

padding

This text is the content of the box. We have added a 50px padding, 20px margin and a 15px green border. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

width

CSS Box Model – Sizing Explained

https://developer.mozilla.org/en-US/docs/Web/CSS/Shorthand_properties

In CSS, the sides of an element can be sized and styled individually.

- If there is only one value, that value applies to all sides.
- If there are two values, the Top and Bottom margins are set to the first value and the Right and Left margins are set to the second.

```
.cssdemo{  
  width: 150; /*overall width of element*/  
  background-color: pink; /*content background*/  
  border: 50px solid red;/**/  
  margin: 0px;  
}
```



```
.cssdemo{  
  width: 150;  
  border-style: solid;  
  border-color: red;  
  border-width: 100px 25px;  
}
```



CSS Box Model – Sizing Explained

https://developer.mozilla.org/en-US/docs/Web/CSS/Shorthand_properties

- If there are three values, the first value sets Top, the second value sets the Left and Right, and the third sets the Bottom.
- If there are four values, they apply to the Top, Right, Bottom, and Left, respectively.

```
.cssdemo{  
  width: 150;  
  border-style: solid;  
  border-color: red;  
  border-width: 100px 75px 25px;  
}
```



```
.cssdemo{  
  width: 150;  
  border-style: solid;  
  border-color: red;  
  border-width: 100px 75px 50px 25px;  
}
```



Box Model elements.

Box Element	Additional Information
<u>Content</u>	This is the content that the user sees. The actual content of an element can be changed based on factors like hover, etc
<u>Border</u>	The border doesn't exist if there's no style for it.
<u>Margin</u>	Creates space around elements, outside of any defined borders. Cannot be colored and is the only element that can have a negative value.
<u>Padding</u>	Padding is used to create space around an element's content, inside of any defined borders.
