



CSS

Cascading Style Sheets

Mr. K's Technology



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CSS}



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Introduction - Free CSS Tutorial



CSS is a style language that defines layout of HTML documents Cascading Style Sheets (CSS) is a fantastic tool to add layout to your websites. It can save you a lot of time and it enables you to design websites in a completely new way. CSS is a must for anyone working with web design.

This tutorial will get you started with CSS in just a few hours. It is easy to understand and it will teach you all the sophisticated techniques.

Learning CSS is fun. As you go along through the tutorial, remember to take enough time to properly experiment with what you learn in each lesson.

Using CSS requires basic experience with HTML. If you are not familiar with HTML, please start with our HTML tutorial before moving on to CSS. Which software do I need?

Please avoid using software such as FrontPage, DreamWeaver or Word with this tutorial. Advanced software will not help you learn CSS. Instead, it will limit you and slow down your learning curve significantly.

All you need is a free and simple text editor.

For example, Microsoft Windows comes with a program called Notepad. It is usually located in Accessories in the start menu under Programs. Alternatively, you can use a similar text editor e.g. Pico for Linux or Simple Text for Macintosh.

A simple text editor is ideal for learning HTML and CSS because it doesn't affect or change the codes you type. That way, your successes and errors can only be attributed to yourself - not the software.

You can use any browser with this tutorial. We encourage you to always keep your browser updated and use the latest version.

A browser and a simple text editor is all you need.

Let's get started!



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What is CSS?

-  CSS stands for Cascading Style Sheets
-  Styles define how to display HTML elements
-  Styles are normally stored in Style Sheets
-  Styles were added to HTML 4.0 to solve a problem
-  External Style Sheets can save you a lot of work
-  External Style Sheets are stored in CSS files
-  Multiple style definitions will cascade into one

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Definition

The border property is a shorthand property for setting all of the properties for the four borders in one declaration.



CSS Lesson 5: Borders, Outlines, Margins, Padding

Borders can be used for many things, for example as a decorative element or to underline a separation of two things. CSS gives you endless options when using borders in your pages.

- * border-width
- * border-color
- * border-style
- * border



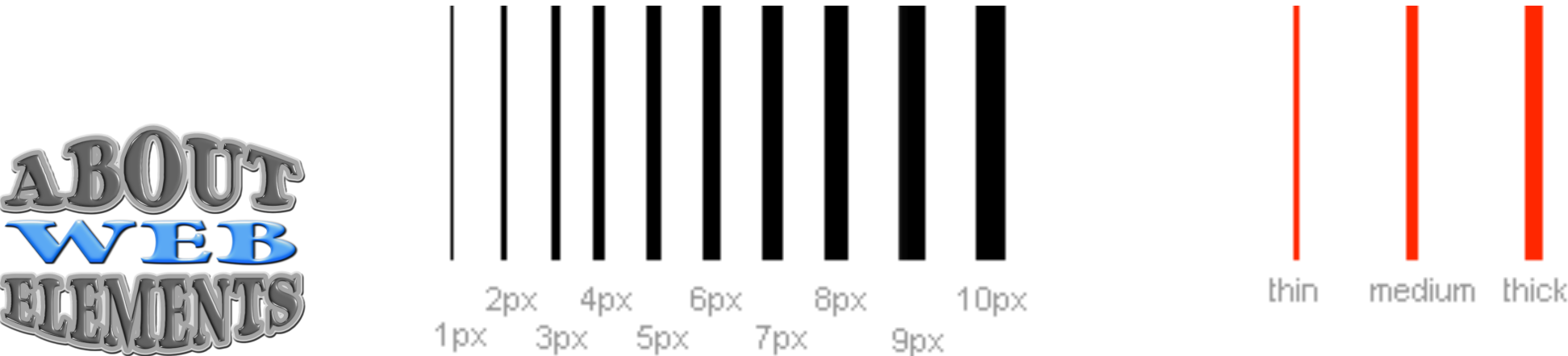
CSS Border Properties

The CSS border properties allow you to specify the style and color of an element's border. In HTML we use tables to create borders around a text, but with the CSS border properties we can create borders with nice effects, and it can be applied to any element.



The width of borders [border-width]

The width of borders is defined by the property border-width, which can obtain the values thin, medium, and thick, or a numeric value, indicated in pixels. The figure below illustrates the system:



Definition

*The border-color property sets the color of the four borders.
This property can take one to four colors.*

Note: Always declare the border-style property before the border-color property. An element must have borders before you change the color of them.

The color of borders [border-color]



The property border-color defines which color the border has. The values are the normal color-values for example "#123456", "rgb(123,123,123)" or "yellow" .

Example

```
table {border-color: red}  
all four borders will be red
```

```
table {border-color: red green}  
top and bottom border will be red, left and right border will be green
```

```
table {border-color: red green blue}  
top border will be red, left and right border will be green, bottom border will be blue
```

```
table {border-color: red green blue yellow}  
top border will be red, right border will be green, bottom border will be blue, left border will be yellow
```



```
<html>
<head>
<style type="text/css">
p.one
{
border-style: solid;
border-color: #0000ff
}
p.two
{
border-style: solid;
border-color: #ff0000 #0000ff
}
p.three
{
border-style: solid;
border-color: #ff0000 #00ff00 #0000ff
}
p.four
{
border-style: solid;
border-color: #ff0000 #00ff00 #0000ff rgb(250,0,255)
}
</style>
</head>
<body>
<p class="one">One-colored border!</p>
<p class="two">Two-colored border!</p>
<p class="three">Three-colored border!</p>
<p class="four">Four-colored border!</p>
<p><b>Note:</b> The "border-color" property does not work if it is used
alone. Use the "border-style" property to set the borders first.</p>
</body>
</html>
```



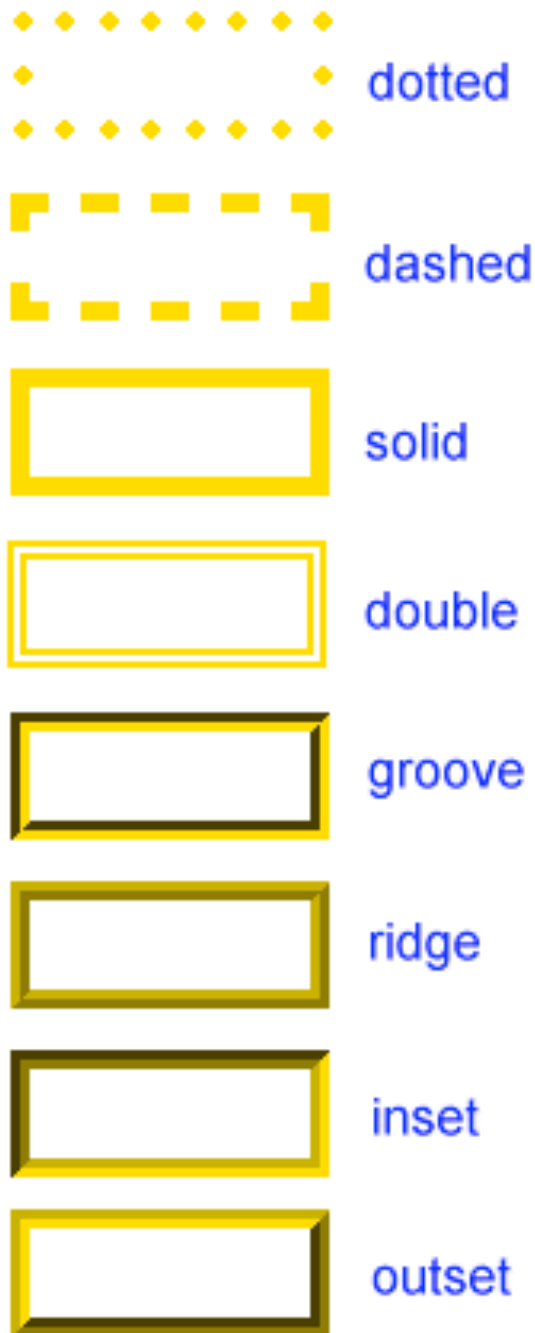
One-colored border!

Two-colored border!

Three-colored border!

Four-colored border!

Note: The "border-color" property does not work if it is used alone. Use the "border-style" property to set the borders first.



Types of borders [border-style]

There are different types of borders to choose from. On the left are shown 8 different types of borders as Internet Explorer 5.5 interprets them. All examples are shown with the color "gold" and the thickness "thick" but can naturally be shown in other colors and thicknesses.

The values [none](#) or [hidden](#) can be used if you do not want any border.

ways of defining borders

The properties described can be put together by each element and thereby produce different borders. To illustrate this, we will take a look at a document where we define different borders for `<h1>`, `<h2>`, `<ul>` and `<p>`. The result may not be that perfect, but it illustrates some of the many possibilities:

border-width: thick;
border-style: dotted;
border-color: gold;

border-width: 20px;
border-style: outset;
border-color: red;

border-width: 1px;
border-style: dashed;
border-color: blue;

border-width: thin;
border-style: solid;
border-color: orange;



Borders

Iste quidem veteres:

- inter ponetur honeste, qui vel mense brevi vel toto est iunior anno.
- Utor permisso, caudaeque pilos ut equinae paulatim vello unum, demo etiam unum, dum cadat elusus
- ratione ruentis acervi, qui redit in fastos et annis miraturque.

Quod si tam Graecis novitas

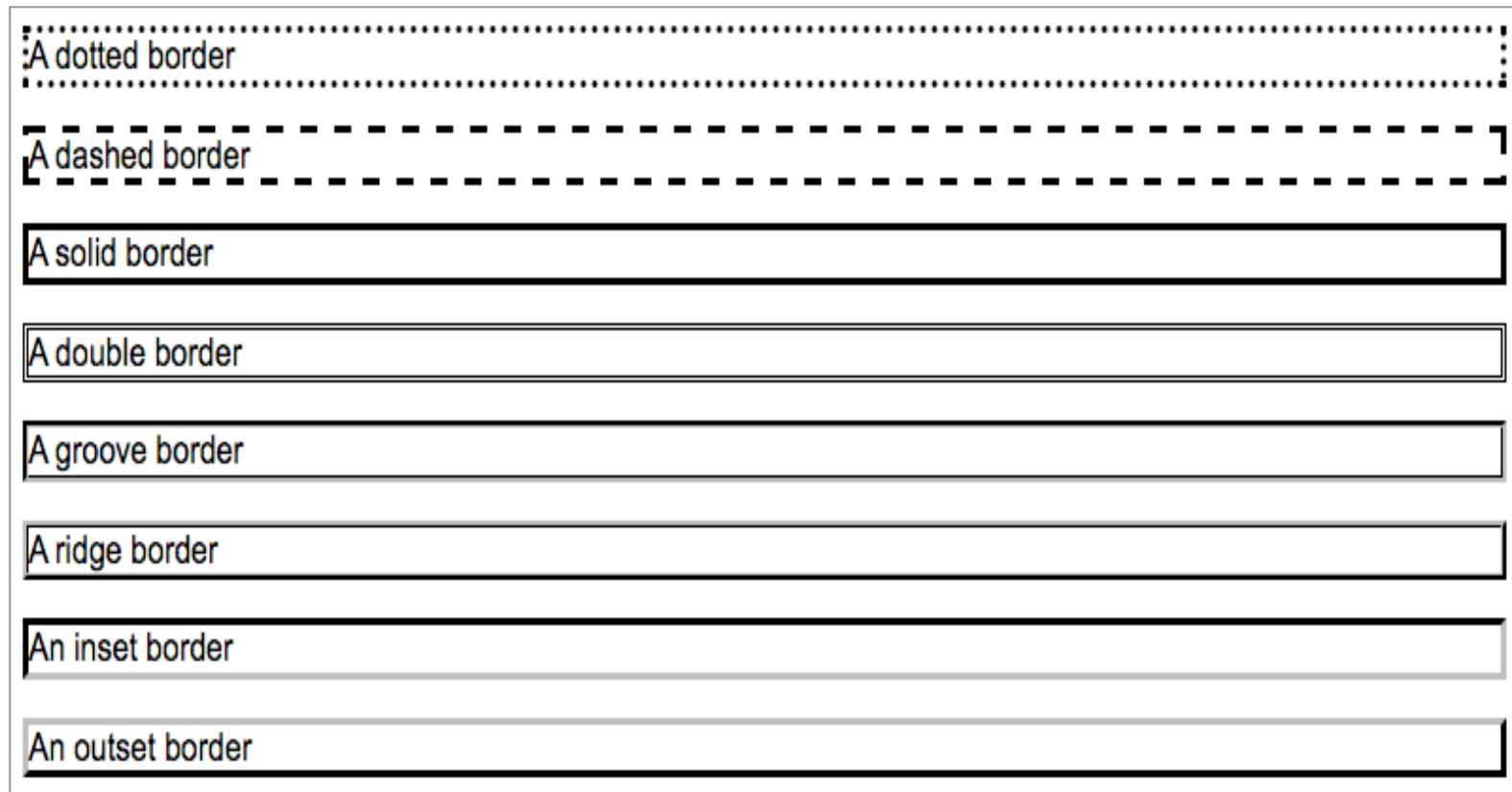
Ennius et sapines et fortis et alter Homerus:

- critici
- dicunt
- leviter curare
- videtur
- quo promissa

Examples



```
<html>
<head>
<style type="text/css">
p.dotted {border-style: dotted}
p.dashed {border-style: dashed}
p.solid {border-style: solid}
p.double {border-style: double}
p.groove {border-style: groove}
p.ridge {border-style: ridge}
p.inset {border-style: inset}
p.outset {border-style: outset}
</style>
</head>
<body>
<p class="dotted">A dotted border</p>
<p class="dashed">A dashed border</p>
<p class="solid">A solid border</p>
<p class="double">A double border</p>
<p class="groove">A groove border</p>
<p class="ridge">A ridge border</p>
<p class="inset">An inset border</p>
<p class="outset">An outset border</p>
</body>
</html>
```



Property	Description	Values	IE	F	N	W3C
<u>outline</u>	A shorthand property for setting all the outline properties in one declaration	<i>outline-color</i> <i>outline-style</i> <i>outline-width</i>	-	1.5	-	2
<u>outline-color</u>	Sets the color of the outline around an element	<i>color</i> <i>invert</i>	-	1.5	-	2
<u>outline-style</u>	Sets the style of the outline around an element	<i>none</i> <i>dotted</i> <i>dashed</i> <i>solid</i> <i>double</i> <i>groove</i> <i>ridge</i> <i>inset</i> <i>outset</i>	-	1.5	-	2
<u>outline-width</u>	Sets the width of the outline around an element	<i>thin</i> <i>medium</i> <i>thick</i> <i>length</i>	-	1.5	-	2



CSS Outline Properties

An outline is a line that is drawn around elements, outside the border edge, to make the element "stand out". The CSS outline properties sets the outlines around elements. You can specify the style, color, and width of the outline.

Note: Outlines do not take up space, and they do not have to be rectangular.

Browser support: IE: Internet Explorer, F: Firefox, N: Netscape, W3C: The number in the "W3C" column indicates in which CSS recommendation the property is defined (CSS1 or CSS2).



Property	Description	Values	IE	F	N	W3C
<u>margin</u>	A shorthand property for setting the margin properties in one declaration	<i>margin-top</i> <i>margin-right</i> <i>margin-bottom</i> <i>margin-left</i>	4	1	4	1
<u>margin-bottom</u>	Sets the bottom margin of an element	auto <i>length</i> %	4	1	4	1
<u>margin-left</u>	Sets the left margin of an element	auto <i>length</i> %	3	1	4	1
<u>margin-right</u>	Sets the right margin of an element	auto <i>length</i> %	3	1	4	1
<u>margin-top</u>	Sets the top margin of an element	auto <i>length</i> %	3	1	4	1

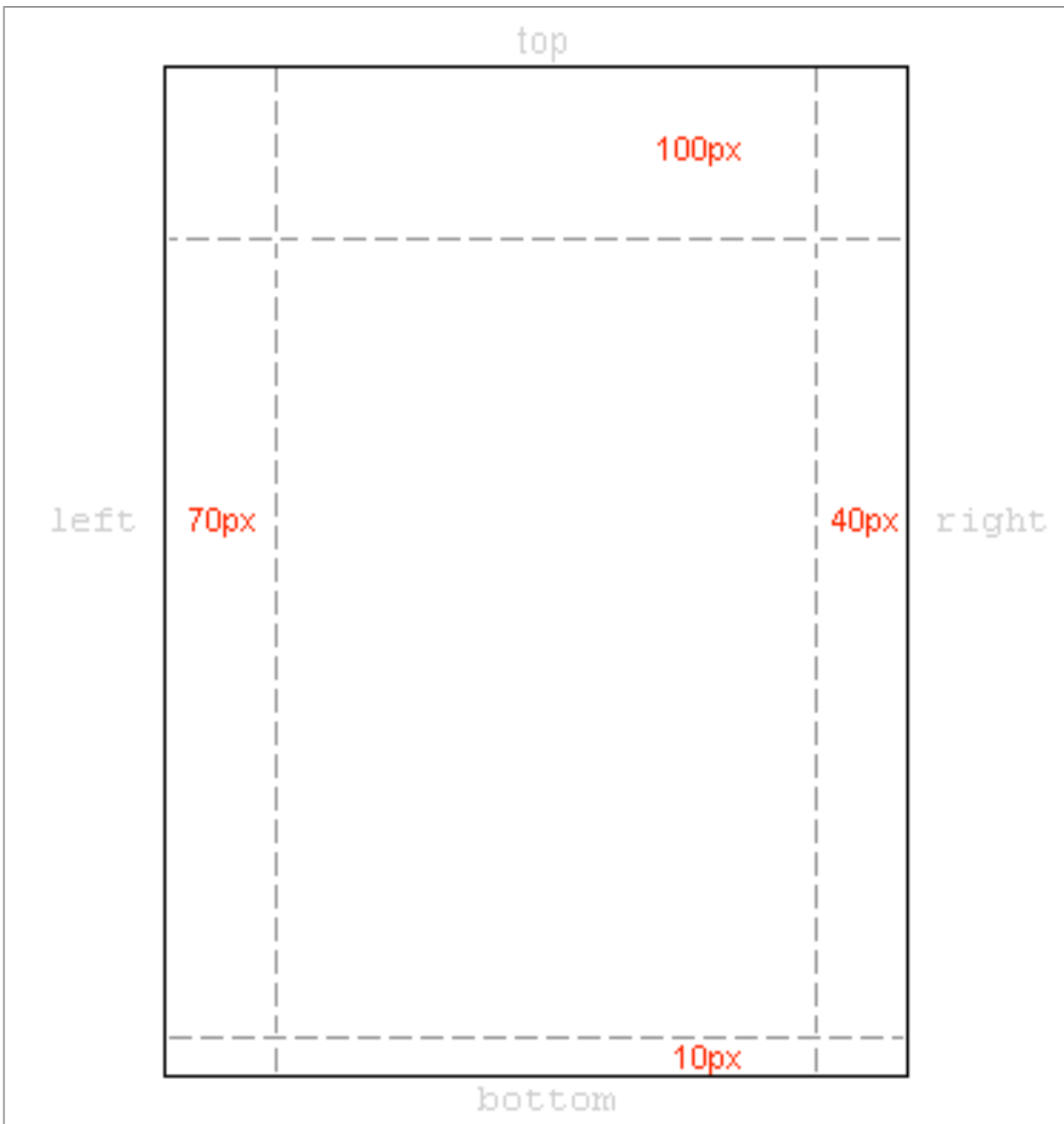


CSS Margin Properties

The CSS margin properties define the space around elements. It is possible to use negative values to overlap content. The top, right, bottom, and left margin can be changed independently using separate properties. A shorthand margin property can also be used to change all of the margins at once.

Note: Netscape and IE give the body tag a default margin of 8px. Opera does not! Instead, Opera applies a default padding of 8px, so if one wants to adjust the margin for an entire page and have it display correctly in Opera, the body padding must be set as well!

Browser support: IE: Internet Explorer, F: Firefox, N: Netscape, W3C: The number in the "W3C" column indicates in which CSS recommendation the property is defined (CSS1 or CSS2).



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Margin and padding

Now we will look at how you can change the presentation of elements by setting the margin and padding properties.

- * Set the margin in an element
- * Set the padding in an element

Set the margin in an element

An element has four sides: right, left, top and bottom. The margin is the distance from each side to the neighboring element (or the borders of the document).

The CSS code for the previous example would look as follow:

```
body {  
    margin-top: 100px;  
    margin-right: 40px;  
    margin-bottom: 10px;  
    margin-left: 70px;  
}
```

Or you could choose a more elegant compilation:

```
body {  
    margin: 100px 40px 10px 70px;  
}
```





You can set the margins in the same way on almost every element. For example, we can choose to define margins for all of our text paragraphs marked with `<p>`:

```
body {  
    margin: 100px 40px 10px 70px;  
}  
  
p {  
    margin: 5px 50px 5px 50px;  
}
```



Property	Description	Values	IE	F	N	W3C
<u>padding</u>	A shorthand property for setting all of the padding properties in one declaration	<i>padding-top padding-right padding-bottom padding-left</i>	4	1	4	1
<u>padding-bottom</u>	Sets the bottom padding of an element	<i>length %</i>	4	1	4	1
<u>padding-left</u>	Sets the left padding of an element	<i>length %</i>	4	1	4	1
<u>padding-right</u>	Sets the right padding of an element	<i>length %</i>	4	1	4	1
<u>padding-top</u>	Sets the top padding of an element	<i>length %</i>	4	1	4	1



CSS Padding Properties

The CSS padding properties define the space between the element border and the element content. Negative values are not allowed. The top, right, bottom, and left padding can be changed independently using separate properties. A shorthand padding property is also created to control multiple sides at once.

Browser support: IE: Internet Explorer, F: Firefox, N: Netscape, W3C: The number in the "W3C" column indicates in which CSS recommendation the property is defined (CSS1 or CSS2).

Headings and paddings

Set padding in an element

Padding can also be understood as "filling". This makes sense as padding does not affect the distance of the element to other elements but only defines the inner distance between the border and the content of the element.

The usage of padding can be illustrated by looking at a simple example where all headlines have background colors:

```
h1 {  
    background: yellow;  
}  
  
h2 {  
    background: orange;  
}
```



Examples of padding

`h1 {padding: 10px}`

the padding will be 10px on all four sides

`h1 {padding: 10px 2%}`

top and bottom padding will be 10px, left and right padding will be 2% of the width of the closest element.

`h1 {padding: 10px 2% 15px}`

top padding will be 10px, left and right padding will be 2% of the width of the closest element, bottom padding will be 15px

`h1 {padding: 10px 2% 15px 20px}`

top padding will be 10px, right padding will be 2% of the width of the closest element, bottom padding will be 15px, left padding will be 20px



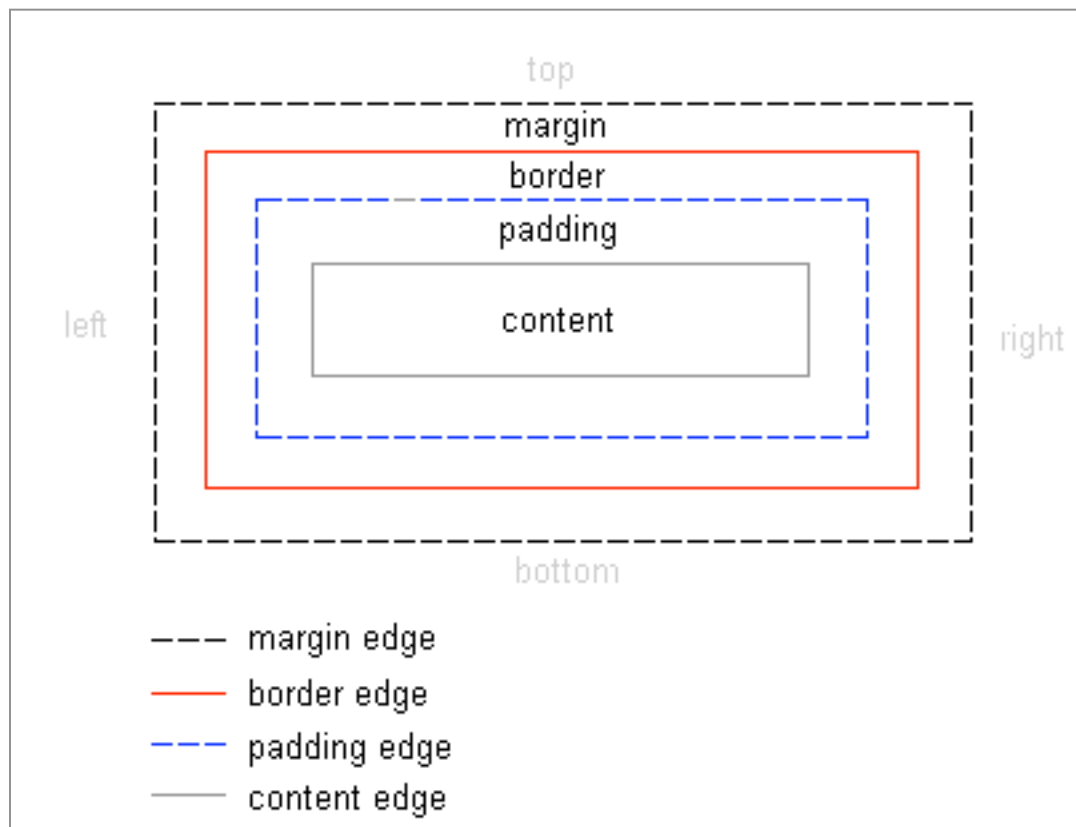
Examples

```
<html>
<head>
<style type="text/css">
td.test1 {padding: 1.5cm}
td.test2 {padding: 0.5cm 2.5cm}
</style>
</head>
<body>
<table border="1">
<tr>
<td class="test1">
This is a tablecell with equal padding on each side.
</td>
</tr>
</table>
<br />
<table border="1">
<tr>
<td class="test2">
This tablecell has a top and bottom padding of 0.5cm and a left and
right padding of 2.5cm.
</td>
</tr>
</table>
</body>
</html>
```



Examples

This is a tablecell with equal padding on each side.
This tablecell has a top and bottom padding of 0.5cm and a left and right padding of 2.5cm.



The box model

The box model in CSS describes the boxes which are being generated for HTML-elements. The box model also contains detailed options regarding adjusting margin, border, padding and content for each element. The diagram above shows how the box model is constructed.



The previous illustration might seem pretty theoretical to look at, so let's try to use the model in an actual case with a headline and some text. The HTML for our example is (from the Universal Declaration of Human Rights):

```
<h1>Article 1:</h1>
```

```
<p>All human beings are born free  
and equal in dignity and rights.  
They are endowed with reason and conscience  
and should act towards one another in a  
spirit of brotherhood</p>
```

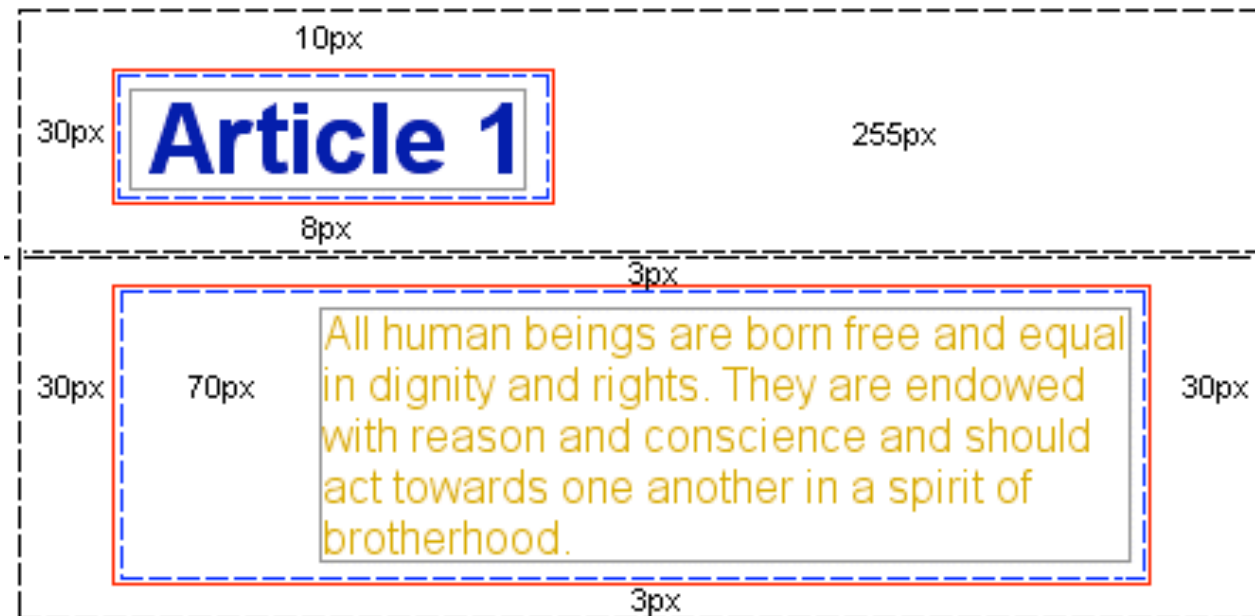
By adding some color and font-information the example could be presented as follows:

Article 1

All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood.



The example contains two elements: `<h1>` and `<p>`. The box model for the two elements can be illustrated as follows:



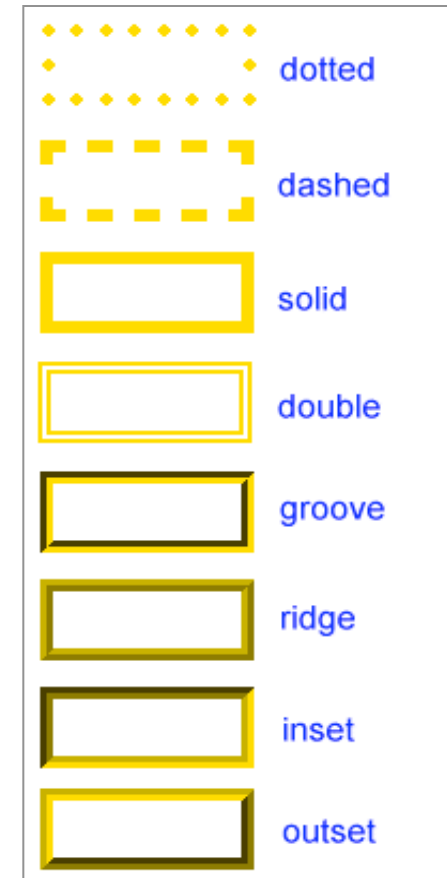
Even though it may look a bit complicated, the illustration shows how each HTML-element is surrounded by boxes. Boxes which we can adjust using CSS.



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Your Project

Open your CSS editor and create a css/html document that displays all types of borders. Half of your examples must have an outline around the border. Use multiple colors. All css coding may be inline. Save often, naming this document “borders” + your initials.



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