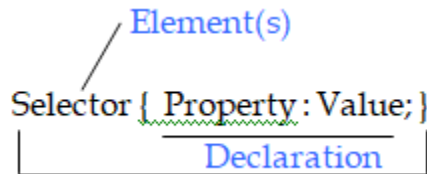# CSS (Cascading Style Sheets)

What is CSS

- CSS **stands** for Cascading Style Sheets

- **Styles define** how to display HTML elements

- CSS is a **presentation definition language** that is used to control the layout of HTML documents by attaching styles.

- CSS was **developed** by W3C in 1997 and supported by all browsers.

- CSS comes in different **versions** including CSS1, CSS2, CS2.1, CSS3

CSS Rules

Eg: p {color: Red;}
    h1 { font-style:italic;   color: green;}
    body
        {
          color: #FF00FF;
          font-size: 16pt;
          font-family: Arial;
        }

Calling Method of CSS

The **element** Selector

Applied at every similar tag

```
<head>

<style type="text/css">
    P {color:#F00; font-size:24px;}
    p.right{text-align:right; color:#FF0; font-size:14px;}
    p.left{text-align:left; color:#F0F; font-size:10px;}
    p.Center{text-align:center; color:#F0F; font-size:10px;}
    h1{color:#00F; font-style:italic; font-size:14px;}
    hr{color:#FF0;}
    h2{background-color:#0FF;}
</style>
</head>
```

```
<body>
<p>This is the first CSS Program</p>
<p class="right">This is the first CSS Program</p>
<p class="Center">This is the first CSS Program</p>
<p class="left">This is the first CSS Program</p>
<h1>Hi This is Dr. Sanjay Tejasvee</h1>
<hr />
<h2>Welcome MCA III Sem to CSS</h2>
</body>
```

The class Selector

With the class selector we can define different styles for the same type of HTML element. Eg. If we would like to have two types of paragraphs in our document: one right-aligned paragraph, and one center-aligned paragraph.

p.right   { text-align : right; }
p.center { text-align : center; }

We have to use the **class attribute** in our HTML document:

```
 <p class="right">This paragraph will be right-aligned.</p>
<p class="center">This paragraph will be center-aligned.</p>
```

The id Selector

We can also define styles for HTML elements with the id selector. The id selector is defined as a #. The style rule below will match the element that has an id attribute with a value of "yellow":

#yellow {color:yellow}

Note: Do NOT start an ID name with a number! It will not work in Mozilla/Firefox.

CSS Comments

Comments are used to explain our code, and may help us when we edit the source code at a later date. A comment will be ignored by browsers. A CSS comment begins with "/*", and ends with "*/", like this:

```
/*This is a comment*/
p
{
text-align:center;
/*This is another comment*/
color:black;
font-family:arial
}
```

CSS How To Use CSS

There are three ways of inserting a style sheet:

- **Inline style**
- **Internal style sheet**
- **External style sheet**
- **Imported sytle Sheet**

Inline Styles

- An inline style loses many of the advantages of style sheets by mixing content with presentation. To use inline styles we use the style attribute in the relevant tag. The style attribute can contain any CSS property. The example shows how to change the color and the left margin of a paragraph:

<p style="color:sienna; margin-left:20px">This is a CSS demo of Pragraph</p>

- **Note:** If the link to the external style sheet is placed after the **internal** style sheet in HTML <head>, the **external** style sheet will **override** the internal style sheet!

Internal Style Sheet

An internal style sheet should be used when a single document has a unique style. We define internal styles in the head section of an HTML page, by using the <style> tag, like this:-

```
<head>
<style type="text/css">
        hr {color:sienna}
        p {margin-left:20px}
        body {background-image:url("images/back40.gif")}
</style>
</head>
```

External Style Sheet

An external style sheet is ideal when the style is applied to many pages. With an external style sheet, we can change the look of an entire Web site by changing one file. **Each page must link to the style sheet using the <link> tag.**
The <link> tag goes inside the head section.
<head>
<link type="text/css" href="try.css" rel="stylesheet" >
</head>

An external style sheet can be written in any text editor. The file should not contain any html tags. Our style sheet should be saved with a **.css** extension. An example of a style sheet file is shown below:

hr {color:sienna}
p {margin-left:20px}
body {background-image:url("images/back40.gif")}

Do not leave spaces between the property value and the units! "margin-left:20 px" (instead of "margin-left:20px") will work in IE, but not in Firefox or Opera.

Imported Style Sheet

In addition to linking an external style sheet using <link> element, we can also use **@Import rule. The @ Import rule allow us to import style rules from other style sheet. Such as:**

```
<head>
<style type="text/css">
      @ import URL (cssfilenamewithpath.css);
       h1 (color:Red;}

        ….
</head>
</style>
```

CSS Background

CSS background properties are used to define the background effects of an element.

 CSS properties used for background effects

- background-color

- background-image

- background-repeat

- background-attachment

- background-position

Background Color

The background-color property specifies the background color of an element.The background color of a page is defined in the body selector:

body {background-color:#b0c4de}

The background color can be specified by:

- name - a color name, like "red"
- RGB - an RGB value, like "rgb(255,0,0)"
- Hex - a hex value, like "#ff0000"

In the example below, the h1, p, and div elements have different background colors:

h1 {background-color:#6495ed}
p {background-color:#e0ffff}
div {background-color:#b0c4de}

Example:

```
<html>
<head>
<style type="text/css">
body
{
background-color:#b0c4de;
}
</style>
</head>
<body>
<h1>My CSS web page!</h1>
<p>Hello world! This is a W3Schools.com example.</p>
</body>
</html>
```

Background Image

The background-image property specifies an image to use as the background of an element. By default, the image is repeated so it covers the entire element.

The background image for a page can be set like this:

body {background-image:url('bgdesert.jpg')}

```
<html>
<head>
<style type="text/css">
body {background-image:url('paper.gif')}
</style>
</head>
<body>
<h1>Hello World!</h1>
</body>
</html>
```

Background Image - Repeat Horizontally or Vertically

By default, the background-image property repeats an image both horizontally and vertically.

```
<html>
<head>
<style type="text/css">
body
{
background-image:url('gradient2.png');
}
</style>
</head>
<body>
<h1>Hello World!</h1>
</body>
</html>
```

If the image is repeated only horizontally (repeat-x), the background will look better:

```
body
{
background-image:url('gradient2.png');
background-repeat:repeat-x;
}
```

```
<html>
```

```
<head>
<style type="text/css">
body
{
background-image:url('gradient2.png');
background-repeat:repeat-x;
}
</style>
</head>
<body>
<h1>Hello World!</h1>
</body>
</html>
```

Background Image - Set position and no-repeat

When using a background image, use an image that does not disturb the text.

Showing the image only once is specified by the background-repeat property:

```
body
{
background-image:url('img_tree.png');
background-repeat:no-repeat;
}
```

The position of the image is specified by the background-position property:

```
body
{
background-image:url('img_tree.png');
background-repeat:no-repeat;
background-position:top right;
}
```

```
<html>
<head>
<style type="text/css">
body
{
Background-image:url('img.png');
Background-repeat: no-repeat;
Background-position: top right;
Margin-right: 200px;
}
</style>
</head>
<body>
<h1>Hello World!</h1>
```

```
<p>set background no-repeat, set postion example.</p>
<p>Now the background image is only show once, and positioned away from the text.</p>
<p>In this example we have also added a margin on the right side, so the background image will never disturb the text.</p>
</body>
</html>
```

All CSS Background Properties

The number in the "CSS" column indicates in which CSS version the property is defined (CSS1 or CSS2).

Property	Description	Values	CSS
background	Sets all the background properties in one declaration	*background-color* *background-image* *background-repeat* *background-attachment* *background-position* inherit	1
background-attachment	Sets whether a background image is fixed or scrolls with the rest of the page	scroll fixed inherit	1
background-color	Sets the background color of an element	*color-rgb* *color-hex* *color-name* transparent inherit	1
background-image	Sets the background image for an element	url(*URL*) none inherit	1
background-position	Sets the starting position of a background image	top left top center top right center left center center center right bottom left bottom center bottom right *x% y%* *xpos ypos* inherit	1
background-repeat	Sets if/how a background image	repeat	1

	will be repeated	repeat-x repeat-y no-repeat inherit	

CSS Text

The CSS text properties define the appearance of text:

text example

Text Color

The color property is used to set the color of the text. The color can be specified by:

- name - a color name, like "red"
- RGB - an RGB value, like "rgb(255,0,0)"
- Hex - a hex value, like "#ff0000"

The default color for a page is defined in the body selector.

body {color:blue}
h1 {color:#00ff00}
h2 {color:rgb(255,0,0)}

```
<html>
<head>
<style type="text/css">
body {color:red}
h1 {color:#00ff00}
p.ex {color:rgb(0,0,255)}
</style>
</head>
<body>
<h1>This is heading 1</h1>
<p>This is an ordinary paragraph. Notice that this text is red. The default text-color for a page is
defined in the body selector.</p>
<p class="ex">This is a paragraph with class="ex". This text is blue.</p>
</body>
</html>
```

Text Alignment

The text-align property is used to set the horizontal alignment of a text.Text can be centered, or aligned to the left or right, or justified.

When text-align is set to "justify", each line is stretched so that every line has equal width, and the left and right margins are straight (like in magazines and newspapers).

```
h1 {text-align:center}
p.date {text-align:right}
p.main {text-align:justify}

<html>
 <head>
<style type="text/css">
h1 {text-align:center}
p.date {text-align:right}
p.main {text-align:justify}
</style>
</head>
<body>
<h1>CSS text-align Example</h1>
<p class="date">May, 2009</p>
<p class="main">In my wenger and more vulnerable years my father gave me some advice that
I've been turning over in my mind ever since. 'Whenever we feel like criticizing anyone,' he told
me, just remember that all the people in this world haven't had the advantages that we've
had.'</p>
<p><b>Note:</b> Try to resize the browser window to see how justify works.</p>
</body>
</html>
```

Text Decoration

The text-decoration property is used to set or remove decorations from text.
The text-decoration property is mostly used to remove underlines from links for design purposes:

```
h1 {text-decoration:overline}
h2 {text-decoration:line-through}
h3 {text-decoration:underline}
h4 {text-decoration:blink}
```

It can also be used to decorate text:

```
<html>
<head>
<style type="text/css">
h1 {text-decoration:overline}
```

```
h2 {text-decoration:line-through}
h3 {text-decoration:underline}
h4 {text-decoration:blink}
</style>
</head>
<body>
<h1>This is heading 1</h1>
<h2>This is heading 2</h2>
<h3>This is heading 3</h3>
<h4>This is heading 4</h4>
<p><b>Note:</b> The "blink" value is not supported in IE, Chrome, or Safari.</p>
</body>
</html>
```

Text Transformation

The text-transform property is used to specify uppercase and lowercase letters in a text.

```
p.uppercase {text-transform:uppercase}
p.lowercase {text-transform:lowercase}
p.capitalize {text-transform:capitalize}
```

It can be used to turn everything into uppercase or lowercase letters, or capitalize the first letter of each word.

```
<html>
<head>
<style type="text/css">
p.uppercase {text-transform:uppercase}
p.lowercase {text-transform:lowercase}
p.capitalize {text-transform:capitalize}
</style>
</head>
<body>
<p class="uppercase">This is some text.</p>
<p class="lowercase">This is some text.</p>
<p class="capitalize">This is some text.</p>
</body>
</html>
```

Text Indentation

The text-indentation property is used to specify the indentation of the first line of a text.

```
p {text-indent:50px}
```

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

```
<style type="text/css">
p {text-indent:100px}
</style>
</head>
<body>
<p>In my younger and more vulnerable years my father gave me some advice that I've been
turning over in my mind ever since. 'Whenever we feel like criticizing anyone,' he told me, just
remember that all the people in this world haven't had the advantages that we've had.'</p>
</body>
</html>
```

All CSS Text Properties

The number in the "CSS" column indicates in which CSS version the property is defined (CSS1 or CSS2).

Property	Description	Values	CSS
color	Sets the color of a text	*color*	1
direction	Sets the text direction	ltr rtl	2
line-height	Sets the distance between lines	normal *number* *length* %	1
letter-spacing	Increase or decrease the space between characters	normal *length*	1
text-align	Aligns the text in an element	left right center justify	1
text-decoration	Adds decoration to text	none underline overline line-through blink	1
text-indent	Indents the first line of text in an element	*length* %	1
text-shadow		none *color* *length*	
text-transform	Controls the letters in an element	none capitalize uppercase lowercase	1

unicode-bidi		normal embed bidi-override	2
vertical-align	Sets the vertical alignment of an element	baseline sub super top text-top middle bottom text-bottom *length* %	1
white-space	Sets how white space inside an element is handled	normal pre nowrap	1
word-spacing	Increase or decrease the space between words	normal *length*	1

CSS Font

CSS font properties define the font family, boldness, size, and the style of a text.

CSS Font Families

p{**font-family**:"Times New Roman",Georgia,Serif}

```
<html>
<head>
<style type="text/css">
p.serif {font-family:"Times New Roman",Georgia,Serif;
font color="red";
font size=36px}
p.sansserif{font-family:Arial,Verdana,Sans-serif }
div.msc{ font-family:Arial,Verdana,Sans-serif}
</style>
</head>
<body>
<h1>CSS font-family</h1>
        <p class="serif">This is a paragraph, shown in the Times New Roman font.</p>
<p class="sansserif">This is a paragraph, shown in the Arial font.</p>

</body>
</html>
```

Font Style

The font-style property is mostly used to specify italic text. This property has three values:

- normal - The text is shown normally
- italic - The text is shown in italics
- oblique - The text is "leaning" (oblique is very similar to italic, but less supported)

p.normal {**font-style:normal**}
p.italic {font-style:**italic**}
p.oblique {font-style:**oblique**}

```
<html>
<head> <style type="text/css">
p.normal {font-style:normal}
p.italic {font-style:italic}
p.oblique {font-style:oblique}
</style>
</head>
<body>
<p class="normal">This is a paragraph, normal.</p>
<p class="italic">This is a paragraph, italic.</p>
<p class="oblique">This is a paragraph, oblique.</p>
</body>
</html>
```

Font Size

The font-size property sets the size of the text.

Being able to manage the text size is important in web design. However, we should not use font size adjustments to make paragraphs look like headings, or headings look like paragraphs.

Always use the proper HTML tags, like <h1> - <h6> for headings and <p> for paragraphs.

The font-size value can be an absolute, or relative size.

Absolute size:

- Sets the text to a specified size
- Does not allow a user to change the text size in all browsers (bad for accessibility reasons)
- Absolute size is useful when the physical size of the output is known

Relative size:

- Sets the size relative to surrounding elements

- Allows a user to change the text size in browsers

If we do not specify a font size, the default size for normal text, like paragraphs, is 16px (16px=1em).

Setting Text Size Using Pixels

Setting the text size with pixels, gives we full control over the text size:

h1 {**font-size:40px**}
h2 {font-size:30px}
p {font-size:14px}

```
<html>
<head>
<style>
h1 {font-size:40px}
h2 {font-size:30px}
p {font-size:14px}
</style>
</head>
<body>
<h1>This is heading 1</h1>
<h2>This is heading 2</h2>
<p>This is a paragraph.</p>
</body>
</html>
```

All CSS Font Properties

The number in the "CSS" column indicates in which CSS version the property is defined (CSS1 or CSS2).

Property	Description	Values	CSS
font	Sets all the font properties in one declaration	*font-style* *font-variant* *font-weight* *font-size/line-height* *font-family* caption icon menu message-box small-caption status-bar inherit	1
font-family	Specifies the font family for text	*family-name*	1

		generic-family inherit	
[font-size](#)	Specifies the font size of text	xx-small x-small small medium large x-large xx-large smaller larger *length* % inherit	1
[font-style](#)	Specifies the font style for text	normal italic oblique inherit	1
[font-variant](#)	Specifies whether or not a text should be displayed in a small-caps font	normal small-caps inherit	1
[font-weight](#)	Specifies the weight of a font	Normal,bold,bolder,lighter 100 200 300 400 500 600 700 800 900 inherit	1

CSS Box Model

The CSS Box Model

All HTML elements can be considered as boxes. In CSS, the term "box model" is used when talking about design and lawet.

The CSS box model is essentially a box that wraps around HTML elements, and it consists of: margins, borders, padding, and the actual content.The box model allows us to place a border around elements and space elements in relation to other elements.

The image below illustrates the box model:

```
┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐
│                    Margin                       │
│  ┌───────────────────────────────────────────┐ │
│  │                  Border                     │ │
│  │  ┌───────────────────────────────────────┐ │ │
│  │  │             Padding                   │ │ │
│  │  │             Content                   │ │ │
│  │  │  ┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐  │ │ │
│  │  │  │                               │  │ │ │
│  │  │  │                               │  │ │ │
│  │  │  └ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┘  │ │ │
│  │  └───────────────────────────────────────┘ │ │
│  └───────────────────────────────────────────┘ │
└ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┘
```

Explanation of the different parts:

- **Margin** - Clears an area around the border. The margin does not have a background color, and it is completely transparent
- **Border** - A border that lies around the padding and content. The border is affected by the background color of the box
- **Padding** - Clears an area around the content. The padding is affected by the background color of the box
- **Content** - The content of the box, where text and images appear

In order to set the width and height of an element correctly in all browsers, we need to know how the box model works.

CSS Border

The CSS border properties define the borders around an element:

Border Style

The border-style property specifies what kind of border to display.

None of the other border properties will have any effect unless border-style is set.

border-style Values

none: Defines no border

dotted: Defines a dotted border

dashed: Defines a dashed border

solid: Defines a solid border

Border Width

The border-width property is used to set the width of the border.The width is set in pixels, or by using one of the three pre-defined values: thin, medium, or thick.

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

```
p.one
{
border-style:solid;
border-width:5px;
}
p.two
{
border-style:solid;
border-width:medium;
}
```

```
<html>
<head>
<style type="text/css">
p.one
{
border-style:solid;
border-width:5px;
}
p.two
{
border-style:solid;
border-width:medium;
}
p.three
{
border-style:solid;
border-width:1px;
}
</style>
</head>
<body>
<p class="one">Some text.</p>
<p class="two">Some text.</p>
<p class="three">Some text.</p>
<p><b>Note:</b> The "border-width" property does not work if it is used alone. Use the "border-style" property to set the borders first.</p>
</body>
</html>
```

Border Color

The border-color property is used to set the color of the border. The color can be set by:

- name - specify a color name, like "red"
- RGB - specify a RGB value, like "rgb(255,0,0)"
- Hex - specify a hex value, like "#ff0000"

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

```
<html>
<head>
<style type="text/css">
p.one
{
border-style:solid;
border-color:red;
}
p.two
{
border-style:solid;
border-color:#98bf21;
}
</style>
</head>
<body>
<p class="one">A solid red border</p>
<p class="two">A solid green 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>
```

Border - Individual sides

In CSS it is possible to specify different borders for different sides:

```
<html>
<head>
<style type="text/css">
p
{
border-top-style:dotted;
border-right-style:solid;
border-bottom-style:dotted;
border-left-style:solid;
}
</style>
</head>
<body>
```

```
<p>2 different border styles.</p>
</body>
</html>
```

The border-style property can have from one to four values.

- **border-style:dotted solid double dashed;**
  - o top border is dotted
  - o right border is solid
  - o bottom border is double
  - o left border is dashed

    border-style:dotted solid double;
  - o top border is dotted
  - o right and left borders are solid
  - o bottom border is double

    border-style:dotted solid;
  - o top and bottom borders are dotted
  - o right and left borders are solid

    border-style:dotted;
  - o all four borders are dotted

All CSS Border Properties

The number in the "CSS" column indicates in which CSS version the property is defined (CSS1 or CSS2).

Property	Description	Values	CSS
border	Sets all the border properties in one declaration	*border-width* *border-style* *border-color*	1
border-bottom	Sets all the bottom border properties in one declaration	*border-bottom-width* *border-bottom-style* *border-bottom-color*	1
border-bottom-color	Sets the color of the bottom border	*border-color*	2
border-bottom-style	Sets the style of the bottom border	*border-style*	2
border-bottom-width	Sets the width of the bottom border	*border-width*	1
border-color	Sets the color of the four borders	*color_name* *hex_number* *rgb_number* transparent inherit	1
border-left	Sets all the left border properties in one	*border-left-width*	1

	declaration	*border-left-style* *border-left-color*	
border-left-color	Sets the color of the left border	*border-color*	2
border-left-style	Sets the style of the left border	*border-style*	2
border-left-width	Sets the width of the left border	*border-width*	1
border-right	Sets all the right border properties in one declaration	*border-right-width* *border-right-style* *border-right-color*	1
border-right-color	Sets the color of the right border	*border-color*	2
border-right-style	Sets the style of the right border	*border-style*	2
border-right-width	Sets the width of the right border	*border-width*	1
border-style	Sets the style of the four borders	none hidden dotted dashed solid double groove ridge inset outset inherit	1
border-top	Sets all the top border properties in one declaration	*border-top-width* *border-top-style* *border-top-color*	1
border-top-color	Sets the color of the top border	*border-color*	2
border-top-style	Sets the style of the top border	*border-style*	2
border-top-width	Sets the width of the top border	*border-width*	1
border-width	Sets the width of the four borders	thin medium thick *length* inherit	1

<u>CSS Margin</u>

The CSS margin properties define the space around elements.

<u>Margin</u>

The margin clears an area around an element (outside the border). The margin does not have a background color, and is completely transparent.

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 margins at once.

Margin - Individual sides

In CSS, it is possible to specify different margins for different sides:

margin-top:100px;
margin-bottom:100px;
margin-right:50px;
margin-left:50px;

```
<html>
<head>
<style type="text/css">
p
{
background-color:yellow;
}
p.margin
{
margin-top:100px;
margin-bottom:100px;
margin-right:50px;
margin-left:50px;
}
</style>
</head>
```

Example :

```
<html>
<head>
<style type="text/css">
p
{
background-color:yellow;
}
p.margin
{
margin:100px 50px;
}
</style>
</head>
<body>
<p>This is a paragraph with no specified margins.</p>
<p class="margin">This is a paragraph with specified margins.</p>
```

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

The margin property can have from one to four values.

margin:25px 50px 75px 100px;

- o top margin is 25px
- o right margin is 50px
- o bottom margin is 75px
  left margin is 100px

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

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

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

<u>All CSS Margin Properties</u>

The number in the "CSS" column indicates in which CSS version the property is defined (CSS1 or CSS2).

Property	Description	Values	CSS
margin	A shorthand property for setting the margin properties in one declaration	*margin-top* *margin-right* *margin-bottom* *margin-left*	1
margin-bottom	Sets the bottom margin of an element	auto *length* *%*	1
margin-left	Sets the left margin of an element	auto *length* *%*	1
margin-right	Sets the right margin of an element	auto *length* *%*	1
margin-top	Sets the top margin of an element	auto *length* *%*	1

CSS Padding

The CSS padding properties define the **space between the element border and the element content.**

Padding

The padding clears an area around the content (inside the border) of an element. The padding is affected by the background color of the element.The top, right, bottom, and left padding can be changed independently using separate properties. A shorthand padding property can also be used, to change all paddings at once.

Padding - Individual sides

In CSS, it is possible to specify different padding for different sides:

padding-top:25px;
padding-bottom:25px;
padding-right:50px;
padding-left:50px;

```
<html>
<head>
<style type="text/css">
p
{
background-color:yellow;
}
p.padding
{
padding-top:15px;
padding-bottom:25px;
padding-right:50px;
padding-left:50px;
}
</style>
</head>
<body>
<p>This is a paragraph with no specified padding.</p>
<p class="padding">This is a paragraph with specified paddings.</p>
</body>
</html>
```

Example:

```
<html>
<head>
<style type="text/css">
```

```
p
{
background-color:yellow;
}
p.padding
{
padding:50px 25px;
}
</style>
</head>
<body>
<p>This is a paragraph with no specified padding.</p>
<p class="padding">This is a paragraph with specified paddings.</p>
</body>
</html>
```

The padding property can have from one to four values.

- **padding:25px 50px 75px 100px;**
    - top padding is 25px
    - right padding is 50px
    - bottom padding is 75px
    - left padding is 100px

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

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

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

All CSS Padding Properties

The number in the "CSS" column indicates in which CSS version the property is defined (CSS1 or CSS2).

Property	Description	Values	CSS
padding	A shorthand property for setting all the padding properties in one declaration	*padding-top* *padding-right* *padding-bottom* *padding-left*	1
padding-bottom	Sets the bottom padding of an element	*length* *%*	1

padding-left	Sets the left padding of an element	*length* *%*	1
padding-right	Sets the right padding of an element	*length* *%*	1
padding-top	Sets the top padding of an element	*length* *%*	1

CSS List

The CSS list properties allow us to place the list item marker, change between different list item markers, or set an image as the list item marker.

List

In HTML, there are two types of lists:

- **unordered list** - the list items are marked with bullets (typically circles or squares)
- **ordered list** - the list items are marked with numbers or letters

With CSS, lists can be styled further, and images can be used as list item markers.

Different List Item Markers

It is possible to specify the type of list item marker with the list-style-type property:

```
 ul.circle {list-style-type:circle}
ul.square {list-style-type:square}

ol.upper-roman {list-style-type:upper-roman}
ol.lower-alpha {list-style-type:lower-alpha}
```

```
<html>
<head>
<style type="text/css">
ul.circle {list-style-type:circle}
ul.square {list-style-type:square}
ol.upper-roman {list-style-type:upper-roman}
ol.lower-alpha {list-style-type:lower-alpha}
</style>
</head>
<body>
<p>Type circle:</p>
<ul class="circle">
<li>Coffee</li>
<li>Tea</li>
<li>Coca Cola</li>
</ul>
<p>Type square:</p>
```

```
<ul class="square">
<li>Coffee</li>
<li>Tea</li>
<li>Coca Cola</li>
</ul>
<p>Type upper-roman:</p>
<ol class="upper-roman">
<li>Coffee</li>
<li>Tea</li>
<li>Coca Cola</li>
</ol>
<p>Type lower-alpha:</p>
<ol class="lower-alpha">
<li>Coffee</li>
<li>Tea</li>
<li>Coca Cola</li>
</ol>
</body>
</html>
```

Some of the values are for unordered lists, and some for ordered lists.

Unordered List - Possible Values

Value	Description
None	No marker
Disc	Default. The marker is a filled circle
Circle	The marker is a circle
Square	The marker is a square

Ordered List - Possible Values

Value	Description
None	No marker
Circle	The marker is a circle
Disc	The marker is a filled circle. This is default
Square	The marker is a square
decimal-leading-zero	The marker is a number padded by initial zeros (01, 02, 03, etc.)
lower-alpha	The marker is lower-alpha (a, b, c, d, e, etc.)
lower-greek	The marker is lower-greek (alpha, beta, gamma, etc.)
lower-latin	The marker is lower-latin (a, b, c, d, e, etc.)
lower-roman	The marker is lower-roman (i, ii, iii, iv, v, etc.)
upper-alpha	The marker is upper-alpha (A, B, C, D, E, etc.)

| upper-latin | The marker is upper-latin (A, B, C, D, E, etc.) |
| upper-roman | The marker is upper-roman (I, II, III, IV, V, etc.) |

Internet Explorer does not support all property values for ordered lists.

Using an Image as List Item Marker

It is also possible to use an image as a list item marker: ul
{
list-style-image:url('arrow.gif');
}

```
<html>
<head>
<style type="text/css">
ul
{
list-style-image:url('arrow.gif');
list-style-type:square;
}
</style>
</head>
<body>
<ul>
<li>Coffee</li>
<li>Tea</li>
<li>Coca Cola</li>
</ul>
</body>
</html>
```

```
ul
{
list-style-type:none;
padding:0px;
margin:0px;
}
li
{
background-image:url(arrow.gif);
background-repeat:no-repeat;
background-position:0px 5px;
padding-left:14px;
}
```

Example explained:

- For ul:

- o Set the list-style-type to none to remove the list item marker
- o Both padding and margin must be set to 0px for cross-browser compatibility
- For li:
  - o Set the URL of the image, and show it only once (no-repeat)
  - o Use the background-position property to place the image where we want it (left 0px and down 5px)
  - o Use the padding-left property to position the text in the list

All CSS List Properties

The number in the "CSS" column indicates in which CSS version the property is defined (CSS1 or CSS2).

Property	Description	Values	CSS
list-style	Sets all the properties for a list in one declaration	*list-style-type* *list-style-position* *list-style-image* inherit	1
list-style-image	Specifies an image as the list-item marker	URL none inherit	1
list-style-position	Specifies where to place the list-item marker	inside outside inherit	1
list-style-type	Specifies the type of list-item marker	none disc circle square decimal decimal-leading-zero armenian georgian lower-alpha upper-alpha lower-greek lower-latin upper-latin lower-roman upper-roman inherit	1