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# Cascading Style Sheets

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## *Style Properties*

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Style properties specify individual characteristics of HTML elements. Styles dictate features of formatting and behaviors, such as the font size, the color of an object, and the distance from surrounding elements. A list of CSS properties is shown below, followed by a detailed description of each.

### **Color and Background Properties**

- color
- background-color
- background-image
- background-repeat
- background-attachment
- background-position
- background

### **Font Properties**

- font-family
- font-size
- font-weight
- font
- font-style
- font-variant

### **Text Properties**

- text-align
- vertical-align
- text-indent
- line-height
- text-decoration
- text-transform
- letter-spacing
- word-spacing

### **Classification Properties**

- display
- white-space
- list-style-type
- list-style-image
- list-style-position
- list-style

## Box Properties

- width
- height
- float
- clear
- margin
- margin-top
- margin-right
- margin-bottom
- margin-left
- padding
- padding-top
- padding-right
- padding-bottom
- padding-left
- border
- border-top
- border-right
- border-bottom
- border-left
- border-width
- border-style
- border-color
- border-top-width
- border-right-width
- border-bottom-width
- border-left-width

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## Color and Background Properties

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Color and background style properties control the color of text in an element and the background color or image displayed behind the element. Additional properties may be specified to control the position and appearance of a background image.

- color
- background-color
- background-image
- background-repeat
- background-attachment
- background-position
- background

### Color, Background-Color

*Values:* red, #FF0000, FF0000, rgb(255,0,0), rgb(75%,0,50%)

The name of the color, the hexadecimal value of the color, the RGB (red, green, blue) values, or the RGB percentages may be used to specify a color. The value *transparent* is the default background-color value. Recognized color names are black, silver, gray, white, maroon, red, purple, fuchsia, green, lime, olive, yellow, navy, blue, teal, and aqua.

### Background-Image

*Values:* url(/DMKB/images/graphic.gif)

The filename is used to identify the background image, along with the path to its location. If no background-image is desired, use the word *none*.

### Background-Repeat

*Values:* repeat, no-repeat, repeat-x, repeat-y

The repeat instruction tiles the image behind the element being defined. Repeat-X tiles the image across the element horizontally. Repeat-Y tiles the image down the element vertically. No-Repeat displays the image once behind the element.

### **Background-Attachment**

*Values:* fixed, scroll

Fixed keeps the background-image fixed in place as text scrolls through it. Scroll moves the image along with the text. The default is scroll.

### **Background-Position**

*Values:* x, y, top, left, right, bottom, center

The position is always relative to the top-left corner of the element in which an image is positioned. The “x” is the horizontal position, and “y” is the vertical position of an image. Either value may be a percentage relative to the size of the element; a fixed amount such as “1in” (one inch); or one of the keywords that indicate a relative position.

### **Background**

This property allows you to specify all the background properties in a single string. The following order must be used when specifying background properties:

background-color, background-image, background-repeat, background-attachment, background-position

*Examples:*

H1 {background: url(/DMKB/images/picture.gif) no-repeat fixed left bottom}

H2 {background: red}

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## *Font Properties*

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Font properties control the font face, size, weight, and other variations of typeface.

- font-family
- font-size
- font-weight
- font
- font-style
- font-variant

### **Font-Family**

*Generic:* serif, sans serif, monospace, fantasy, cursive

*Specific:* Palatino, Arial, Courier, Dingbats, Zapf Chancery. Any commonly available font may be specified by name.

## Font-Size

*Specific: pt (points), in (inches), cm (centimeter), px (pixels)*

*Relative: 150%, small, medium, large*

Relative font sizes may be further qualified as follows:

xx-small	50% smaller than the x-small font
x-small	50% smaller than the small font
small	50% smaller than the medium font
medium	A medium-sized font, typically 10 point
large	50% larger than the medium font
x-large	50% larger than the large font
xx-large	50% larger than the x-large font
larger	50% larger than the parent element's font
smaller	50% smaller than the parent element's font

## Font-Weight

*Specific: normal, bold*

*Relative: bolder, lighter*

The values of 100, 200, 300, 400, 500, 600, 700, 800, and 900 are used to indicate individual font weights, where 400 is “normal,” and 700 is “bold.” Additional weights, if available, will be displayed in the weight closest to the specified number.

## Font

This property sets the font-weight, font-size, and font-family properties in a single string.

*Examples:*

TD {font: bold 16pt Times}

H1 {font: normal 20pt Arial}

<H2 style="font: 16pt Palatino">Sample of Palatino Font</H2>

## Font-Style

*Values: normal, italic*

If an italic variant of the current font is available, specifying “italic” will apply this property. If an italic variant is not available, the current font may appear in “oblique” or slanted style, rather than true italic.

## Font-Variant

*Values: normal, small-caps*

If a small-caps variant of the current font is available, specifying “small-caps” will apply this property. If a small caps variant is not available, the current font will typically appear in upper case at the height of lower case letters.

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## *Text Properties*

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These properties are used to control both text-level elements and block-level elements. Features affected are the relative horizontal and vertical position of block level elements; spacing between lines of text, between words, and between letters; text decoration; and text case.

- text-align
- vertical-align
- text-indent
- line-height
- text-decoration
- text-transform
- letter-spacing
- word-spacing

### **Text-Align**

*Values:* left, center, right, justify

This property controls the horizontal alignment of paragraphs and other block-level elements.

### **Vertical-Align**

*Values:* baseline, bottom, middle, text-bottom, text-top, top, sub, super

This property controls the position of both text and image elements related to adjoining elements.

### **Text-Indent**

This property controls the first line of text in a paragraph. The length of the indent may be specified in an absolute value, such as “.50in” or a relative value, such as “10%.”

### **Line-Height**

This property controls the spacing of lines within a paragraph. It does not affect the space between paragraphs. The value may be set to an absolute number or to a percentage. Values such as “1.5” or “2” refer to multiples of the current line height. Set the line height to “2” to double space. To set the line height to 1 1/2 line spacing, use “1.5” or “150%.”

### **Text-Decoration**

*Values:* none, underline, overline, line-through, blink

This property controls the text formatting features listed.

### **Text-Transform**

*Values:* capitalize, uppercase, lowercase, none

This property capitalizes the first letter of every word, dictates the case of all text, or displays text in the original capitalization.

## Letter-Spacing and Word-Spacing

These properties control the space between individual letters or between words. Any recognized unit of measurement may be used to specify desired spacing, such as 4px, 3pt, 0.25in, or 2em.

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## Classification Properties

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These properties control a number of behaviors, some of which are not obvious. The list-style properties have a noticeable effect.

- display
- white-space
- list-style-type
- list-style-image
- list-style-position
- list-style

### Display

*Values:* block, inline, list-item, none

The display value “none” makes an element invisible, while leaving the display value empty (“”) allows an element to appear. An element is displayed when it is referred to as a “block” element, an “inline” element, or a “list-style” element. If an inappropriate value is specified it will be ignored and replaced by an acceptable value. The most commonly used display values are “none” and “”.

### White-Space

*Values:* normal, pre, nowrap

This property controls the behavior of white space. Theoretically, the value of “normal” displays text in the normal fashion. The value “pre” allows more than one space in sequence to be displayed, rather than the normal collapsed status. The value of nowrap disables line wrapping in an element.

### List-Style-Type

*Values:* none, disc, circle, square, decimal, lower-roman, upper-roman, lower-alpha, upper-alpha

The type of bullet is specified by this property. It controls lists that are not concurrently displaying a list image.

### List-Style-Image

This property replaces the list bullet character with an image.

*Examples:*

```
UL {list-style-image: url(/DMKB/images/newbullet.gif)}
```

```
<UL style="list-style-image: url(/DMKB/images/newbullet.gif)">
```

If a value of “none” is specified, a list is displayed in the default list style.

## List-Style-Position

*Values:* inside, outside

This property controls the relationship of a bullet to the text that follows. The value “inside” places the bullet character at the left-margin of the text and wraps subsequent text to the same position. The value “outside” causes the bullet to appear to the left of any wrapped text.

## List-Style

This property specifies two attributes at once. It controls either the list-style-type and the list-style-position, or the list-style-position and the list-style-image.

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## Box Properties

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This group of properties controls block-level elements both individually and in relation to adjoining elements. Some of these properties control the entire element, such as height or width. Others control only one side of the element “box,” such as margin-left or padding-bottom.

- width
- height
- float
- clear
- margin
- padding
- border
- border-width
- border-style
- border-color

## Width and Height

Any recognized unit of measurement may be used to specify the height or width of an HTML object. The object will expand automatically to show all text contained in the box if the width or height assigned is too small.

## Float

*Values:* left, right, none

Elements such as images and tables are instructed to “float” to the left or to the right of adjoining text. To wrap text on the right of an image, specify a float value of “left.”

## Clear

*Values:* left, right, both, none

This property works in conjunction with the float property. To prevent an element from being positioned next to a floating object, specify a value of “left” or “right” to prohibit floating objects to the left or right. Specify both to clear objects on both sides.

## Margin

*Values:* margin-top, margin-right, margin-bottom, margin-left

This property controls the left, right, top and bottom margins around elements. The outer margins around an object may be controlled with any recognized unit of measurement.

### **Padding**

*Values:* padding-top, padding-left, padding-bottom, padding-right

This property controls the distance between the element text and its box or container, in the same way that collapsing controls the space between text in a cell and the cell walls in a table. Padding refers to the inner margin. The amount of padding may be specified individually for each side of a text object in a box.

### **Border**

This property sets uniform values for the border-style, border-width, and border-color properties. Border takes a maximum of three values. The first value specifies the border-width of all four borders. The second value specifies the border-style of all four borders. A third value specifies the color of all four borders.

### **Border-Width**

*Values:* thin, medium, thick, 5px, .03in

This property controls the width of a border if one is used. One to four values may be specified. If a single value is specified it will be applied to every border. If two values are specified, the first value applies to the top and bottom border and the second value to the left and right sides. If three values are specified, the first value applies to the top border, the second value to the left and right borders, and the third value to the bottom border. If four values are specified, the values will apply respectively to the top, right, bottom and left sides. Any border may be individually specified by using the border-width-left, border-width-top, border-width-right, or border-width-bottom properties. Any recognized unit of measurement may be used to specify the border length.

### **Border-Style**

*Values:* none, dotted, dashed, solid, double, groove, ridge, inset, outset

This property controls the type of border around an object, and what line style is used to draw the border. Any style other than “none” will cause a border line to appear around the element. This property applies only to block-level elements. If a single value is specified, the value affects all borders. If more than one value is specified, the values are applied to the sides in the same order as the border-width properties are applied.

### **Border-Color**

*Values:* red, 00A0F7, #00FF00, rgb(255,0,0), rgb(0,100%,100%)

This property controls the color of a border if one is used. If a single value is specified, the value affects all sides of the object. If more than one value is specified, the values are applied to the sides in the same order as the border-width properties are applied.



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## *Units in CSS1*

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Many style sheet properties accept a length descriptor. HTML supports two types of units: relative and absolute lengths.

*Relative Units:* em, ex, px

The height of the element's font relative to the output device is expressed in em, as in "0.5em." The height of the letter X relative to the output device is expressed in "ex," as in "0.75ex." Pixels relative to the output device are expressed in "px," as in "15px." Relative units allow web pages to scale better on different devices and clients.

Absolute units define specific distances.

*Absolute Units:* in, cm, mm, pt, pc

These represent inches, as in ".5in"; centimeters, as in "1cm"; millimeters, as in "15mm"; points (1/72 inch), as in "12pt"; and pica (1 pica = 12pt), as in "1pc."

Most lengths may also be expressed as percentages. Percentages are usually relative to the parent element. If a font size of 50% is specified, it conforms the element's font size to one half of the parent element's font size.