

HTML

Blockquote	<blockquote> </blockquote>	Offsets long quotations
Body	<body> </body>	Identifies the body of an HTML document
Bold	 	Displays text in boldface
Break (line break)	 	Forces a line break in the document
Button	<button> </button>	Creates a push button
Caption	<caption> </caption>	Adds a table caption
Cite	<cite> </cite>	Identifies a citation or source reference
Code	<code> </code>	Identifies a computer code fragment
Column (table)	<col />	Creates a group of table column attributes
Column group	<colgroup> </colgroup>	Creates a specific column group
Comment	<!-- -->	Adds comments not displayed as part of the page
Definition description	<dd> </dd>	Identifies definition in a glossary or definition list
Defining instance	<dfn> </dfn>	Indicates a defining instance of a given term
Definition list	<dl> </dl>	Creates definition or glossary list
Definition term	<dt> </dt>	Identifies a term to be defined
Deleted text	 	Displays strikethrough text
Division	<div> </div>	Sets apart element's contents on separate line
Emphasis	 	Indicates emphasis (usually, displays in italics)
Fieldset	<fieldset> </fieldset>	Groups together related controls
Font	 	Modifies font appearance
Form	<form> </form>	Creates an interactive form
Frame	<frame />	Defines a frame
Frameset	<frameset> </frameset>	Defines a group of frames
Head	<head> </head>	Identifies HTML document header
Heading 1-6	<h1> </h1>, <h2> </h2> ...	Identifies heading levels 1-6
Horizontal rule	<hr />	Adds a horizontal line
HTML	<html> </html>	Identifies HTML document
Image		Embeds an image
Inline frame	<iframe> </iframe>	Creates an inline subwindow (floating frame)
Input	<input />	Specifies a form control (user input)
Inserted text	<ins> </ins>	Marks up a document, identifying text inserted in a new version
Italic text	<i> </i>	Displays text in italics
Keyboard text	<kbd> </kbd>	Identifies text to be entered by the user
Label	<label> </label>	Assigns labels to form fields
Legend	<legend> </legend>	Sets apart groups of form elements in boxes
Link	<link />	Used in document head to create links to other documents
List item	 	Identifies an item in an ordered or unordered list
Map	<map> </map>	Identifies a client-side image map
Meta information	<meta />	Contains descriptive information
Noframes	<noframes> </noframes>	Contains alternate content for browsers not supporting frames
Noscript	<noscript> </noscript>	Contains alternate content for browsers not supporting client-side scripts
Object	<object> </object>	Identifies a generic embedded object
Option	<option> </option>	Identifies a selectable choice in a form
Option group	<optgroup> </optgroup>	Creates a logical group of options in a form
Ordered list	 	Identifies a numbered list
Paragraph	<p> </p>	Identifies a paragraph
Parameter	<param />	Contains a set of values required by an object at run-time
Preformatted text	<pre> </pre>	Overrides HTML's text formatting
Quotation	<q> </q>	Identifies a short inline quotation
Sample text	<samp> </samp>	Sample output
Script	<script> </script>	Encloses script statements
Select	<select> </select>	Creates a drop-down menu in a form
Small	<small> </small>	Renders text in a "small" font
Span	 	Contains a customizable inline element
Strong emphasis	 	Displays text as strongly emphasized (usually, as boldface)
Style	<style> </style>	Includes style information in the document header
Subscript		Renders text as subscript
Superscript		Renders text as superscript
Table	<table> </table>	Identifies a table
Table body	<tbody> </tbody>	Creates a grouping of table body elements
Table data	<td> </td>	Creates a table data cell
Table footer	<tfoot> </tfoot>	Identifies a table footer
Table header	<thead> </thead>	Creates a grouping of rows in a table header
Table header cell	<th> </th>	Identifies a table header cell
Table row	<tr> </tr>	Identifies a row of cells in a table
Textarea	<textarea> </textarea>	Creates a multiple line text field in a form

Title (document)	<title> </title>	Used in document header to assign a title
Teletype text	<tt> </tt>	Renders text in a monospaced style
Unordered list	 	Identifies an unordered (bulleted) list
Variable	<var> </var>	Indicates a variable or program argument

HTML ATTRIBUTES

ATTRIBUTE NAME	ELEMENTS IT WORKS WITH	VALUE TYPES	FUNCTION
abbr	<td>, <th>	Text	Includes an abbreviation for header cell name
accept	<form>, <input>	Comma-separated list of media types	Provides a list of MIME types for file upload
accept-charset	<form>	Space-separated list of character encodings	Provides a list of supported character sets
accesskey	<a>, <area>, <button>, <input>, <label>, <legend>, <textarea>	Charset (A single character from ISO-10646)	Identifies an accessibility key character
action	<form>	URI (Uniform Resource Identifier)	Identifies a server-side form handler
alt	<area>, 	Text	Displays a short text description of an image
alt	<input>	CDATA (A sequence of characters from the document's character set. May include entities.)	Displays a short text description of form buttons for non-graphical browsers
archive	<object>	CDATA	Contains a URL where an archive file is located
axis	<td>, <th>	CDATA	Includes a comma-separated list of related headers
bgcolor	<body>, <table>, <td>, <th>, <tr>	Color	Specifies background color.
border	, <table>	Pixels	Controls border width around table
cellpadding	<table>	Length (nn for pixels or nn% for percentage length)	Adds extra space within cells
cellspacing	<table>	Length	Adds extra space between cells
char	<col>, <colgroup>, <tbody>, <td>, <tfoot>, <th>, <thead>, <tr>	Character (A single character from ISO-10646)	Identifies alignment character for table elements. For instance, char="*"
charoff	<col>, <colgroup>, <tbody>, <td>, <tfoot>, <th>, <thead>, <tr>	Length	Specifies offset for alignment character
charset	<a>, <link>, <script>	Charset (A character encoding)	Identifies character encoding of linked resource
checked	<input>	(checked)	Identifies a pre-selected option in checkboxes and radio buttons
cite	<blockquote>, <q>	URI	Identifies URI for source document
cite	, <ins>	URI	Includes info on reason for change
class	All except: <base>, <head>, <html>, <meta>, <param>, <script>, <style>, <title>	CDATA	Identifies a space-separated list of classes in an element
classid	<object>	URI	Contains a URI for an object's implementation
codebase	<object>	URI	Identifies a base URI for classid, data, archive
codetype	<object>	Media type	Identifies content type for code
cols	<frameset>	Multiple lengths	Define columns in a frames page (default 100%)
cols	<textarea>	Number	Defines the width (in characters) of a text area
colspan	<td>, <th>	Number	Specifies the number of table columns spanned by a single cell
content	<meta>	CDATA	Identifies information types included in <meta> element
coords	<a>	Coords	Sets coordinates for clickable area in client-side image maps
coords	<area>	Coords (A comma-separated list of lengths)	Sets the points that define a shape in an image map
data	<object>	URI	Contains a reference to an object's data
datetime	, <ins>	Date and time in ISO date format	Identifies date and time of change
declare	<object>	(declare)	Declares an object without instantiating it
defer	<script>	(defer)	Enables user agent to defer execution of script
dir	All except: <base>, <bdo>, , <frame>, <frameset>, <iframe>, <param>, <script>	(ltr rtl)	Specifies direction for weak/neutral text

dir	<bdo>	(ltr rtl)	Specifies directionality of text
disabled	<button>, <input>, <optgroup>, <option>, <select>, <textarea>	(disabled)	Disables form elements
enctype	<form>	Media type	Sets the encoding method for form data
for	<label>	ID reference defined by other attributes	Matches field ID value
frame	<table>	void above below hside lhs rhs visdes box border	Identifies which parts of a table structure should display
frameborder	<frame>, <iframe>	(1 0)	Turns frame borders on or off
headers	<td>, <th>	ID reference defined by other attributes	Contains a list of IDs for header cells
height	<iframe>	Length	Specifies frame height
height	, <object>	Length	Specifies an image's or object's height in pixels
href	<a>, <area>, <link>	URI	Identifies a URI for a linked resource
href	<base>	URI	Identifies a URI that acts as a base URI
hreflang	<a>, <link>	A language code	Specifies a language code
http-equiv	<meta>	Name	Identifies an HTTP response header name
id	All except: <base>, <head>, <html>, <meta>, <script>, <style>, <title>	ID	Specifies a document-wide unique ID
ismap	, <input>	(ismap)	Identifies a server-side image map
label	<optgroup>	Text	Identifies a group of options in a form
label	<option>	Text	Specifies an option name in a form
lang	All except: <base>, , <frame>, <frameset>, <iframe>, <param>, <script>	Language code	Indicates the language being used in an element's contents
longdesc	<frame>, <iframe>	URI	Provides a link to a long description of a frame's contents
longdesc		URI	Provides a link to a long description for non-graphical browsers
marginheight	<frame>, <iframe>	Pixels	Specifies frame margin height
marginwidth	<frame>, <iframe>	Pixels	Specifies frame margin width
maxlength	<input>	Number	Specifies maximum number of characters for text fields
media	<link>	Single or comma-separated list of media descriptors	Identifies the media a linked style sheet should apply to
media	<style>	Single or comma-separated list of media descriptors	Identifies the media an embedded style sheet should apply to
method	<form>	(get post)	Specifies the HTTP method used to submit a form
multiple	<select>	(multiple)	Permits multiple selections in a form
name	<a>	CDATA	Creates a named marker in a document
name	<button>, <textarea>	CDATA	Allows a form control to be named
name	<select>	CDATA	Assigns a name to a form field
name	<form>	CDATA	Assigns a name to a form for scripting purposes
name	<frame>, <iframe>	CDATA	Assigns a name to a frame for targeting purposes
name		CDATA	Assigns a name to an image for scripting purposes
name	<input>, <object>	CDATA	Assigns a name for scripting purposes
name	<map>	CDATA	Assigns a name for reference by usemap
name	<meta>	Name	Assigns a name to meta information
name	<param>	CDATA	Specifies the name of the object property being set
nohref	<area>	(nohref)	Identifies a region that has no action in an image map
noresize	<frame>	(noresize)	Prevents resizing of frames
onblur	<a>, <area>, <button>, <input>, <label>, <select>, <textarea>	Script (A script expression or code segment)	Causes an action when the element loses the focus
onchange	<input>, <select>, <textarea>	Script	Causes an action when the element value is changed
onclick	All except: <base>, <bdo>, , , <frame>, <frameset>, <head>, <html>, <iframe>, <meta>, <param>, <script>, <style>, <title>	Script	Causes an action when pointer (mouse) button is clicked
ondblclick	(same as above)	Script	Causes an action when pointer (mouse) button is double clicked

onfocus	<a>, <area>, <button>, <input>, <label>, <select>, <textarea>	Script	Causes an action when an element receives the focus
onkeydown	All except: <base>, <bdo>, , , <frame>, <frameset>, <head>, <html>, <iframe>, <meta>, <param>, <script>, <style>, <title>	Script	Causes an action when a key is pressed down
onkeypress	(same as above)	Script	Causes an action when a key is pressed and released
onkeyup	(same as above)	Script	Causes an action when a key is released
onload	<body>	Script	Causes an action when the document has been loaded
onload	<frameset>	Script	Causes an action when all the frames have been loaded
onmousedown	All except: <base>, <bdo>, , , <frame>, <frameset>, <head>, <html>, <iframe>, <meta>, <param>, <script>, <style>, <title>	Script	Causes an action when a pointer or mouse button is pressed down
onmousemove	(same as above)	Script	Causes an action when a pointer or mouse is moved within the element
onmouseout	All except: <base>, <bdo>, , , <frame>, <frameset>, <head>, <html>, <iframe>, <meta>, <param>, <script>, <style>, <title>	Script	Causes an action when a pointer is moved away from the element
onmouseover	(same as above)	Script	Causes an action when a pointer or cursor is moved onto the element
onmouseup	(same as above)	Script	Causes an action when a pointer or mouse button is released
onreset	<form>	Script	Causes an action when a form is reset
onselect	<input>, <textarea>	Script	Causes an action when some text is selected
onsubmit	<form>	Script	Causes an action when a form is submitted
onunload	<body>	Script	Causes an action when the document has been removed
onunload	<frameset>	Script	Causes an action when all the frames have been removed
profile	<head>	URI	Links to a named dictionary of meta information
readonly	<input>, <textarea>	(readonly)	Prevents editing of text fields in a form
rel	<a>, <link>	Link types	Identifies forward link types
rev	<a>, <link>	Link types	Identifies reverse link types
rows	<frameset>	Multiple lengths	Specifies a list of lengths
rows	<textarea>	Number	Sets the number of rows in a text area
rowspan	<td>, <th>	Number	Specifies the number of rows spanned by a single table cell
rules	<table>	none groups rows cols all	Controls the display of rules within a table
scheme	<meta>	CDATA	Identifies the expected format of the content attribute
scope	<td>, <th>	row col rowgroup colgroup	Indicates the scope covered by header cells
scrolling	<frame>, <iframe>	(yes no auto)	Turns scroll bars on or off in a frame
selected	<option>	(selected)	Defines preselected option in a form
shape	<a>	rect circle poly default	Defines a selectable region in a client-side image map
shape	<area>	rect circle poly default	Controls interpretation of coordinates in an image map
size	<input>	CDATA	Specifies the size (in characters) of a text form control
size	<select>	Number	Specifies the number of rows visible in a drop-down menu
span	<col>	Number	Specifies the number of table columns affected by COL attributes
span	<colgroup>	Number	Specifies the default number of table columns in a column group
src	<frame>, <iframe>	URI	Identifies the source of frame content
src	<input>	URI	Identifies the URI of an image for form fields with images

KEY HTML TERMS

- **Hypertext:** A means of connecting documents by text links.
- **HTML:** *Hypertext Markup Language.* A language that uses elements, attributes, and values (*markup*) to construct and link (*hypertext*) documents for easy access and display.
- **XML:** *Extensible Markup Language.* A customizable markup language.
- **XHTML:** *Extensible Hypertext Markup Language.* A reformulation of HTML 4 as an XML 1.0 application.
- **DHTML:** *Dynamic Hypertext Markup Language.* HTML, CSS, and JavaScript combined to create dynamic (as opposed to static) pages.
- **SGML:** *Standard Generalized Markup Language.* The mother language from which HTML, XHTML, and XML were created.
- **Element:** A container that specifies the nature, formatting, or function of a portion of a document. E.g., `<form>`, `<table>`, `<p>`, ``.
- **Tag:** Signifies the opening and closing of an element. E.g., `<table>` `</table>`.
- **Empty element:** An element that has no content and is written as a single tag. E.g., ``.
- **Block element:** Causes a line break after the element. E.g., `<p>`, `<h1>`, `<table>`, `
`.
- **Inline element:** Displays *inline* and does not generate a line break. E.g., ``, ``, `<i>`.
- **Proprietary element:** An element not part of the official HTML recommendation. Often, it is supported only by the browser for which it was developed. E.g., Netscape's `<blink>` element.
- **Deprecated element or attribute:** An element or attribute that is being phased out of HTML and therefore eventually will not be supported by browsers.
- **Attribute:** Lists a characteristic of a particular element. E.g., `<table border="3">`.
- **Value:** Modifies the attribute in which it occurs. E.g., `<table border="3">`.
- **Nesting:** The practice of placing elements inside one another (as opposed to overlapping them). Nesting is the correct syntax for HTML. Overlapping is incorrect and can cause problems with your Web page.
 - Correctly nested elements: `<tr><td></td></tr>`
 - Incorrectly nested (overlapped) elements: `<tr><td><tr></td></tr>`
- **User agent (UA):** The means (e.g., a Web browser) by which one accesses an HTML document.
- **Client-side:** Describes anything that is done on the user's computer.
- **Server-side:** Describes anything that is done on the Web server.
- **CGI:** *Common Gateway Interface.* A protocol that is used for managing the exchange of information between the user, the server, and the Web site owner.
- **Script:** A portion of programming code that can function in a Web page or on the server, but not as a stand-alone program.
- **Applet:** A small program that can be embedded in a Web page.
- **Well-formed document:** A document that uses correct HTML or XHTML syntax.
- **Valid document:** A document that conforms to a particular DTD (*Document Type Definition*).
- **DTD:** *Document Type Definition.* A standard that identifies the elements, attributes, and values that comprise HTML, XHTML, XML, or any other language created with SGML.
- **W3C:** *The World Wide Web Consortium.* The group responsible for establishing standards for the World Wide Web (www.w3.org).

XHTML DISTINCTIONS

XHTML 1.0 is the current recommendation by the W3C for authoring Web documents. Although it uses the same elements as HTML, there are a number of important distinctions between the two. In particular XHTML is much stricter regarding syntax. The following points are important to remember when writing valid XHTML:

- Documents must be **well-formed** (syntactically correct).
- Element and attribute names must be in **lowercase**.
- **End tags** are required for all **non-empty elements**.
- **Empty elements** should be written in a **minimized form**. E.g., `
`.
- Attribute values must always be in **quotation marks**.
- All attributes must have **values**.

SYNTAX

Element with content: `<elementName attribute="value">Content</elementName>`

Ex: `LinkName`

Empty element: `<elementName attribute="value" />`

Ex: ``

NUMBERED (ORDERED) LISTS

- `<ol type="I">` displays capital Roman numerals.
- `<ol type="i">` displays small Roman numerals.
- `<ol type="A">` displays capital letters.
- `<ol type="a">` displays small letters.
- `<ol type="1">` displays Arabic numerals (default).

BULLETED (UNORDERED) LISTS

- `<ul type="square">` displays a solid, square bullet.
- `<ul type="disc">` displays a solid disc (default).
- `<ul type="circle">` displays a circle.

CREATING HYPERLINKS

- **Text link (internal)**

`Link to a page on my own site`

- **Text link (external)**

`Link to someone else's site`

- **Image link (internal)**

``

- **Image link (external, with blue border turned off)**

``

- **Email (mailto) link**

`Send me a greeting`

CREATING TABLES

```
<table width="##" cellpadding="##" cellspacing="##" border="##">
<tr><td>Row 1 Cell 1</td><td>Row 1 Cell 2</td></tr>
<tr><td>Row 2 Cell 1</td><td>Row 2 Cell 2</td></tr>
</table>
```

Use the `<table>`/`</table>` element to create a table, the `<tr>`/`</tr>` element to define rows, and the `<td>`/`</td>` element to create cells. To create a dynamic table that resizes according to the browser window size, use % values in the width and/or height attributes.

CONSTRUCTING FORMS

- **Identify where the form information will be sent.**

`<form action="mailto:name@emailaddress.com" method="post">`

- **Create a text box.**

`<p>Name <input type="text" name="name" size="20" maxlength="40" /></p>`

- **Create a text input area.**

`<p>Enter text: <textarea name="response" rows="5" cols="25"></textarea></p>`

- **Offer a choice of one item with radio buttons.**

Choice 1: `<input type="radio" name="choices" value="choice 1"`

`checked="checked" />
`

Choice 2: `<input type="radio" name="choices" value="choice 2" />
`

Choice 3: `<input type="radio" name="choices" value="choice 3" />
`

- **Offer multiple choices with check boxes.**

`<input type="checkbox" name="selections" value="selection1" />Selection 1
`

`<input type="checkbox" name="selections" value="selection2" />Selection 2
`

`<input type="checkbox" name="selections" value="selection3" />Selection 3
`

- **Use the select and option elements to create a scrolling list box** (size attribute value greater than 1) **or a pull-down menu** (size attribute value of 1).

```
<select name="pulldownmenu" size="3">
<option value="firstitem">First Item</option>
<option value="seconditem">Second Item</option>
<option value="thirditem">Third Item</option>
<option value="fourthitem">Fourth Item</option>
</select>
```

- **Use the "password" attribute to create a password field.**

`<input type="password" size="15" />`

- **Use the "submit" and "reset" attributes to create submit/reset buttons**

`<input type="submit" />
`

`<input type="reset" />`

CREATING A FRAMESET PAGE

```
<html>
<head><title>Frameset Page</title></head>
<frameset cols="25%,75%">
  <frame src="document_a.htm" />
  <frame src="document_b.htm" />
</frameset>
</html>
```

Note: For the frameset page to display properly, the corresponding frame documents must also be created (in this case, `document_a.htm` and `document_b.htm`).

APPLYING STYLE SHEETS

- **Link to an external style sheet:**

```
<head>
<link rel="stylesheet" type="text/css" href="stylesheetdoc.css" />
</head>
```

- **Embed a style sheet:**

```
<head>
<style type="text/css">
  selector {property: value;}
  selector {property: value;}
</style>
</head>
```

- **Apply style inline:**

`<p style="property: value; property: value">Formatted text</p>`

INCLUDING SCRIPTS

```
<script type="text/javascript"> <!--
document.write ("This is fun");
--> </script>
```

The script can be placed in the `<head>` of the document or in the body. It can also exist as a separate document on the server. To link to an external script, you must add the attribute `src="document.js"` to the opening script tag.

HTML ELEMENTS

ELEMENT NAME	SYNTAX	FUNCTION
Abbreviation	<code><abbr></code> <code></abbr></code>	Identifies abbreviated text
Acronym	<code><acronym></code> <code></acronym></code>	Identifies acronyms
Anchor	<code><a></code> <code></code>	Creates links
Area	<code><area /></code>	Defines hot spots in client-side image maps
Attribution information	<code><address></code> <code></address></code>	Identifies author and contact information
Base URL	<code><base /></code>	Identifies a base URL for a document
Bidirectional algorithm	<code><bdo></code> <code></bdo></code>	Overrides the directionality of language characters
Big text	<code><big></code> <code></big></code>	Makes text one size larger than default

HTML ATTRIBUTES (continued)

ATTRIBUTE NAME	ELEMENTS IT WORKS WITH	VALUE TYPES	FUNCTION
src		URI	Identifies the URI of image to embed
src	<script>	URI	Identifies the URI for an external script
standby	<object>	Text	Contains a message to display while loading an object
style	All except: <base>, <head>, <html>, <meta>, <param>, <script>, <style>, <title>	Style rules	Contains associated style information
summary	<table>	Text	Identifies the purpose/structure of a table for speech output
tabindex	<a>, <area>, <button>, <input>, <object>, <select>, <textarea>	Number	Specifies tabbing order for form fields
target	<a>, <area>, <base>, <form>, <link>	Frame name or _blank, _parent, _self, or _top	Identifies a frame or browser window in which content is to be rendered
title	All except: <base>, <head>, <html>, <meta>, <param>, <script>, <title>	Text	Assigns an advisory title to an element
type	<a>, <link>	Media type (RFC2045)	Identifies advisory content type
type	<button>	button submit reset	Defines the function of a form button
type	<input>	text password checkbox radio submit reset file hidden image button	Defines the kind of input that is needed for a form field
type		disc square circle or 1 a A i I	Specifies a list item style

type	<object>	Media type (RFC2045)	Identifies content type for object data
type		1 a A i I	Specifies numbering style in an ordered list
type	<param>	Media type (RFC2045)	Identifies content type for value when valuetype="ref"
type	<script>	Media type (RFC2045)	Identifies content type of script language
type	<style>	Media type (RFC2045)	Identifies content type of style language
type		disc square circle	Specifies bullet style in an unordered list
usemap	, <input>, <object>	URI	Instructs user agent to use a client-side image map
valign	<col>, <colgroup>, <tbody>, <td>, <tfoot>, <th>, <thead>, <tr>	top middle bottom baseline	Specifies vertical alignment in cells
value	<button>	CDATA	Specifies a value sent to the server when clicked
value	<input>	CDATA	Specifies values for radio buttons and checkboxes in forms
value	<option>	CDATA	Specifies a value in a form item
value	<param>	CDATA	Specifies the value of a parameter
valuetype	<param>	data ref object	Specifies how a value should be interpreted
width	<col>, <colgroup>	Multiple length	Specifies width
width	<iframe>, , <object>, <table>	Length	Specifies width

CASCADING STYLE SHEETS (CSS) I

KEY CSS TERMS

Selector: Identifies *which portions* of a document will be affected by the style. Frequently a selector is an HTML element name.

Declaration: Identifies *which* style is to be applied to a selector (contains both a property and value).

Property: Identifies which characteristic of an element is to be modified (similar to an HTML attribute).

Value: Identifies the specific style to be applied.

Inheritance: The passing of style from a parent element to its children and grandchildren (descendants).

Descendant: An element that is *nested* inside another element.

Rule: A complete style instruction, including a selector and one or more properties and values.

Text properties: Modify how *text* is displayed.

Font properties: Modify how *fonts* are displayed.

Box properties: Modify how *margins, borders, and padding* are displayed.

Background properties: Set *background images and background colors*.

Classification properties: Set the *display* and *function* characteristics of elements.

Linked style sheet: A style sheet that exists on the server as a separate text document and is linked to a Web page or pages through the <link> element.

Embedded style sheet: A style sheet that is contained in the <head> portion of an HTML document, inside the <style> </style> element.

Inline style sheet: A style sheet that is inserted directly into an HTML element through the use of the style attribute.

Cascade: The order of priority a Web browser gives to style sheets. Generally (though not always), this order is as follows: inline styles take priority over embedded styles, and embedded styles take priority over linked styles.

CSS SYNTAX

- Style rule:**
selector {property: value; property: value; property: value;}
- or**
selector {
property: value;
property: value;
property: value
}
- Specifying a URL:**
url(picture.gif)
- Adding an !important declaration:**
selector {property: value !important;}

(The important declaration will usually prevent a user's styles from overriding your own.)

RELATIVE LENGTH UNITS

- Ems:** em
- Exes:** ex
- Percentage:** %
- Pixels:** px

ABSOLUTE LENGTH UNITS

- Centimeters:** cm
- Inches:** in
- Millimeters:** mm
- Picas:** pc
- Points:** pt

GENERIC FONTS

- Cursive**
- Fantasy**
- Monospace**
- Sans-serif**
- Serif**

USEFUL PSEUDO CLASSES

- a:link**
Determine link appearance.
- a:visited**
Determine appearance of visited links.
- a:active**
Determine appearance of active links.
- a:hover**
Change appearance of links when a cursor moves over them.

SELECTORS

Selector	Syntax
Type (element)	body {property: value;} (multiple selectors may be separated by commas) h1, h2, h3, h4, h5, h6 {property: value;}
Descendant (contextual)	Selects an element <h3> that is a descendant of another element . span h3 {property: value;}
Class	Selects an element that contains a corresponding class attribute. .boldface {property: value;} selects: <p class="boldface">
ID	Selects an element that contains a unique ID attribute. #243 {property: value;} selects: <p id="243">
Pseudo-class	Selects an element based on a potential condition that may occur when a page is viewed. a:visited {color: red;} sets the color of visited links to red.

Pseudo-element Selects an element based on a potential situation in which that element occurs.
p:first-line {font-size: 2em;}
increases the font size of the first line of every paragraph.

TEXT PROPERTIES

Property	Possible Values
color	[color] inherit
text-align	left right center justify
text-decoration	none underline overline line-through blink inherit
text-indent	[length] [percentage] inherit
text-transform	capitalize uppercase lowercase none inherit
text-shadow	none [color] [length] inherit
letter-spacing	normal [length] inherit
word-spacing	normal [length] [percentage] inherit
vertical-align	baseline sub super top text-top middle bottom text-bottom [percentage] [length] inherit

FONT PROPERTIES

Property	Possible Values
font-family	[font name] [generic name] inherit
font-size	xx-small x-small small medium large x-large xx-large [length] [percentage] larger smaller (relative measurement) inherit
font-style	normal italic oblique inherit
font-variant	normal small-caps inherit
font-weight	normal bold lighter bolder 100 200 300 400 500 600 700 800 900 inherit
font-stretch	ultra-condensed extra-condensed condensed semi-condensed normal semi-expanded expanded extra-expanded ultra-expanded inherit
font-size-adjust	[number] none inherit
line-height	normal [number] [length] [percentage] inherit

BACKGROUND PROPERTIES

Property	Possible Values
background-color	transparent [color value] inherit
background-image	none [url] inherit
background-repeat	repeat repeat-x repeat-y no-repeat inherit
background-attachment	scroll fixed inherit
background-position	[percentage] [length(1,2)] [top center bottom] [left center right] inherit

BOX PROPERTIES

Property	Possible Values
width	[length] [percentage] auto inherit
height	[length] [percentage] auto inherit
clear	none left right both inherit
float	left right none inherit
border-top-width	[length] thin medium thick inherit
border-bottom-width	[length] thin medium thick inherit
border-left-width	[length] thin medium thick inherit
border-right-width	[length] thin medium thick inherit
border-width	[length] thin medium thick inherit
border-color	[color value] [color name] transparent inherit
border-style	none hidden dotted dashed solid double groove ridge inset outset inherit
margin-top	[length] [percentage] auto inherit
margin-right	[length] [percentage] auto inherit
margin-bottom	[length] [percentage] auto inherit
margin-left	[length] [percentage] auto inherit
padding-top	[length] [percentage] inherit
padding-right	[length] [percentage] inherit

padding-bottom	[length] [percentage] inherit
padding-left	[length] [percentage] inherit

CLASSIFICATION PROPERTIES

Property	Possible Values
display	block inline list-item run-in compact marker table inline-table table-row-group table-header-group table-footer-group table-row table-column-group table-column table-cell table-caption none inherit
list-style-type	disc circle square decimal lower-roman upper-roman lower-alpha upper-alpha none inherit
list-style-image	url none inherit
list-style-position	inside outside inherit
white-space	normal pre nowrap inherit

SHORTHAND PROPERTIES

Property	Values
background	[background-color] [background-image] [background-repeat] [background-attachment] [background-position] inherit

font	[font-weight] [font-style] [font-variant] [font-size] [line-height] [font-family] [caption] icon menu message-box small-caption status-bar inherit
border	[border-width] [border-style] color inherit
border-[top, right, bottom, left]	[border-width] [border-style] color inherit
margin	margin-width (1,4) inherit
padding	padding-width (1,4) inherit

- When adding values with the border, margin, and padding shorthand properties, the syntax is as follows:
 - If a single value is supplied, it applies to all four sides.
 - If two values are supplied, they apply to the top and bottom, respectively.
 - If three values are supplied, the first and third apply to the top and bottom; the second applies to both the right and left sides.
 - If four values are supplied, they apply to the top, right, bottom, and left sides respectively.

ADDING COLOR TO WEB PAGES

METHODS FOR CODING COLOR

- Name (sixteen basic colors only): white
- Netscape Named (not all browsers support): lemonchiffon
- Hexadecimal: #ffffff
- Short hex: #fff [CSS only]
- rgb(decimal): rgb(255, 255, 255) [CSS only]
- rgb(%): rgb(100%, 100%, 100%) [CSS only]

APPLYING COLOR WITH HTML (DEPRECATED)

- The **bgcolor** attribute controls background color:
 - Accepts name, Netscape name, or hexadecimal code.
 - May be used with <body>, <table>, <td>, <th>, and <tr>.
 - Syntax: <body bgcolor="red"> <table bgcolor="#ff0000">
- The **color** attribute controls text color:
 - Accepts name, Netscape name, or hexadecimal code.
 - May be used with the and <basefont> elements.
 - Syntax: <basefont color="#0000ff">

APPLYING COLOR WITH CSS

- The **background-color** property:
 - Accepts colors by name, hexadecimal code, short hex, rgb(decimal), and rgb(%).
 - May be used with any element (selector).
 - Syntax:

```
body {background-color: green;}
table {background-color: #00ff00;}
p {background-color: #0f0;}
div {background-color: rgb(0,255,0);}
span {background-color: rgb(0%,100%,0%);}
```

- The **color** property:
 - Controls foreground (usually text) color.
 - Accepts colors by name, hexadecimal code, short hex, rgb(decimal), and rgb(%).
 - May be used with any element (selector).
 - Syntax:


```
p {color: black;}
td {color: #000000;}
body {color: #000;}
div {color: rgb(0,0,0);}
span {color: rgb(0%,0%,0%);}
```

THE SIXTEEN BASIC COLORS

See chart in next column.

THE WEB SAFE COLORS

Non-dithering or *Web safe* colors are constructed using combinations of red, green, and blue in amounts of 0%, 20%, 40%, 60%, 80%, 100%. These values must be expressed in hexadecimal if you are using the HTML **bgcolor** attribute, but may be written in short hex, rgb(decimal), and rgb(%), in CSS.

THE WEB SAFE COLOR PERCENTAGES

Percent	Hexadecimal	Short Hex	Numerical Value
0%	00	0	0
20%	33	3	51
40%	66	6	102
60%	99	9	153
80%	CC	C	204
100%	FF	F	255

			
black #000000	silver #C0C0C0	gray #808080	white #FFFFFF
			
maroon #800000	red #FF0000	purple #800080	fuchsia #FF00FF
			
green #008000	lime #00FF00	olive #808000	yellow #FFFF00
			
navy #000080	blue #0000FF	teal #008080	aqua #00FFFF

SPECIAL CHARACTERS (ENTITIES)

DEFINITION

Character entities are case sensitive combinations of letters and numbers that represent a specific character or letter. For example, **®** and **®** both represent the registered trademark symbol, ®. Every character in the ISO 8859 Latin 1 Character Set has a numeric reference like **®**, but only certain characters have character references like **®**.

USE

- Inserting special characters:** Entities may be used to insert special characters into your Web page. For example, if you want to represent an amount of money using the Pound (£), you could use either a character entity or numeric entity to represent the pound symbol:


```
<p>Item price: &pound;2.5</p>
```

 or


```
<p>Item price: &#163;2.5</p>
```

 In either case, the text will display: **Item price: £2.5**.
- Escaping out characters:** Some characters, such as the "less than" and "greater than" signs, can cause problems with your pages if you simply type them in from the keyboard. This is because a browser might confuse those characters with HTML, CSS, or JavaScript code. To avoid this problem, you need to escape out those characters by using entities. For example, if you are designing an HTML tutorial page and wish to represent the **<table>** tag, you would need to write it either as


```
&lt;table&gt;
```

 or as


```
&#60;table&#62;
```

SYNTAX

- All entities are case-sensitive.
- All entities must begin with an **&** (ampersand).
- All entities must end with a **;** (semicolon).
- Numeric entities must have a **#** (crosshatch) before the entity number.

LETTERS AND NUMERALS

A	A	a	a	0	0
B	B	b	b	1	1
C	C	c	c	2	2
D	D	d	d	3	3
E	E	e	e	4	4
F	F	f	f	5	5
G	G	g	g	6	6
H	H	h	h	7	7
I	I	i	i	8	8
J	J	j	j	9	9
K	K	k	k		
L	L	l	l		
M	M	m	m		
N	N	n	n		
O	O	o	o		
P	P	p	p		
Q	Q	q	q		
R	R	r	r		
S	S	s	s		
T	T	t	t		
U	U	u	u		
V	V	v	v		
W	W	w	w		
X	X	x	x		
Y	Y	y	y		
Z	Z	z	z		

PUNCTUATION AND SYMBOLS

Normal space	(none)	
Exclamation point	!	!
Quotation mark	"	" "
Hash mark	#	#

Dollar sign	\$	$
Percent sign	%	%
Ampersand	&	& &
Apostrophe	'	'
Parenthesis (left)	((
Parenthesis (right)))
Asterisk	*	*
Plus sign	+	+
Comma	,	,
Hyphen/minus sign	-	-
Period	.	.
Slash	/	/
Colon	:	:
Semicolon	;	;
Less than	<	< <
Equal sign	=	=
Greater than	>	> >
Question mark	?	?
Commercial "at" sign	@	@
Square bracket (left)	[[
Backslash	\	\
Square bracket (right)]]
Caret	^	^
Underscore	_	_
Grave accent	`	`
Curly brace (left)	{	{
Vertical bar		|
Curly brace (right)	}	}
Tilde	~	~
Non-breaking space	(none)	
Inverted exclamation point	!	¡ ¡
Euro sign	€	€ €



216 Web Safe Colors

Cent sign	€	¢	¢
Pound sign	£	£	£
Currency sign	¤	¤	¤
Yen sign	¥	¥	¥
Broken vertical bar		¦	¦
Section sign	§	§	§
Umlaut	¨	¨	¨
Copyright symbol	©	©	©
Feminine ordinal	ª	ª	ª
Left angle quote	«	«	«
Logical not sign	¬	¬	¬
Soft hyphen	-	­	­
Registered trademark	®	®	®
Macron accent	ˆ	¯	¯
Degree sign	°	°	°
Plus or minus	±	±	±
Superscript two	²	²	²
Superscript three	³	³	³
Acute accent	´	´	´
Micro sign	µ	µ	µ
Paragraph sign	¶	¶	¶
Middle dot	·	·	·
Cedilla	¸	¸	¸
Superscript one	¹	¹	¹
Masculine ordinal	º	º	º
Right angle quote	»	»	»
Fraction one-fourth	¼	¼	¼
Fraction one-half	½	½	½
Fraction three-fourths	¾	¾	¾
Inverted question mark	¿	¿	?
Multiplication sign	×	×	×
Division sign	÷	÷	÷

MISCELLANEOUS SPECIAL CHARACTERS

Capital A (grave accent)	À	À	À
Capital A (acute accent)	Á	Á	&Acute;
Capital A (circumflex accent)	Â	Â	Â

Capital A (tilde)	Ã	Ã	Ã
Capital A (umlaut)	Ä	Ä	Ä
Capital A (ring)	Å	Å	Å
Capital AE (ligature)	Æ	Æ	Æ
Capital C (cedilla)	Ç	Ç	Ç
Capital E (grave accent)	Ê	È	È
Capital E (acute accent)	É	É	É
Capital E (circumflex accent)	Ê	Ê	Ê
Capital E (umlaut)	Ë	Ë	Ë
Capital I (grave accent)	Ì	Ì	Ì
Capital I (acute accent)	Í	Í	Í
Capital I (circumflex accent)	Î	Î	Î
Capital I (umlaut)	Ï	Ï	Ï
Capital ETH (Icelandic)	Ð	Ð	Ð
Capital N (tilde)	Ñ	Ñ	Ñ
Capital O (grave accent)	Ò	Ò	Ò
Capital O (acute accent)	Ó	Ó	Ó
Capital O (circumflex accent)	Ô	Ô	Ô
Capital O (tilde)	Õ	Õ	Õ
Capital O (umlaut)	Ö	Ö	Ö
Capital O (slash)	Ø	Ø	Ø
Capital U (grave)	Ù	Ù	Ù
Capital U (acute)	Ú	Ú	Ú
Capital U (circumflex)	Û	Û	Û
Capital U (umlaut)	Ü	Ü	Ü
Capital Y (acute)	Ý	Ý	Ý
Capital Thorn (Icelandic)	Þ	Þ	Þ
Small sz (ligature, German)	ß	ß	ß
Small a (grave accent)	à	à	à
Small a (acute accent)	á	á	á
Small a (circumflex accent)	â	â	â
Small a (tilde)	ã	ã	ã
Small a (umlaut)	ä	ä	ä
Small a (ring)	å	å	å

Small ae (ligature)	æ	æ	æ
Small c (cedilla)	ç	ç	ç
Small e (grave accent)	è	è	è
Small e (acute accent)	é	é	é
Small e (circumflex accent)	ê	ê	ê
Small e (umlaut)	ë	ë	ë
Small i (grave accent)	ì	ì	ì
Small i (acute accent)	í	í	í
Small i (circumflex accent)	î	î	î
Small i (umlaut)	ï	ï	ï
Small eth (Icelandic)	ð	ð	ð
Small n (tilde)	ñ	ñ	ñ
Small o (grave accent)	ò	ò	ò
Small o (acute accent)	ó	ó	ó
Small o (circumflex accent)	ô	ô	ô
Small o (tilde)	õ	õ	õ
Small o (umlaut)	ö	ö	ö
Small o (slash)	ø	ø	ø
Small u (grave accent)	ù	ù	ù
Small u (acute accent)	ú	ú	ú
Small u (circumflex accent)	û	û	û
Small u (umlaut)	ü	ü	ü
Small y (acute accent)	ý	ý	ý
Small thorn (Icelandic)	þ	þ	þ
Small y (umlaut)	ÿ	ÿ	ÿ
Left arrow	←	←	←
Up arrow	↑	↑	↑
Right arrow	→	→	→
Down arrow	↓	↓	↓
Horizontal arrow	↔	↔	↔
Spade suit (black)	♠	♠	♠
Club suit (black)	♣	♣	♣
Heart suit (black)	♥	♥	♥
Diamond suit (black)	♦	♦	♦