H1

**HTML Example  
  
< !DOCTYPE html>  
< html>  
< body>  
  
< h1>My First Heading</h1>  
  
< p>My first paragraph.</p>  
  
< /body>  
< /html>  
  
  
Example Explained  
The DOCTYPE declaration defines the document type  
The text between <html> and </html> describes the web page  
The text between <body> and </body> is the visible page content  
The text between <h1> and </h1> is displayed as a heading  
The text between <p> and </p> is displayed as a paragraph  
Note    The <!DOCTYPE html> declaration is the doctype for HTML5.  
  
What is HTML?  
HTML is a language for describing web pages.  
  
HTML stands for Hyper Text Markup Language  
HTML is a markup language  
A markup language is a set of markup tags  
The tags describe document content  
HTML documents contain HTML tags and plain text  
HTML documents are also called web pages  
HTML Tags  
HTML markup tags are usually called HTML tags.  
  
HTML tags are keywords (tag names) surrounded by angle brackets like <html>  
HTML tags normally come in pairs like <p> and </p>  
The first tag in a pair is the start tag, the second tag is the end tag  
The end tag is written like the start tag, with a slash before the tag name  
Start and end tags are also called opening tags and closing tags  
< tagname>content</tagname>  
  
HTML Elements  
In HTML, most elements are written with a start tag (e.g. <p>) and an end tag (e.g. </p>), with the content in between:  
  
< p>This is a paragraph.</p>  
  
Web Browsers  
The purpose of a web browser (such as Google Chrome, Internet Explorer, Firefox, Safari) is to read HTML documents and display them as web pages.  
  
The browser does not display the HTML tags, but uses the tags to determine how the content of the HTML page is to be presented/displayed to the user:  
  
Browser  
  
HTML Page Structure  
Below is a visualization of an HTML page structure:  
  
< html>  
< body>  
< h1>This is a heading</h1>  
< p>This is a paragraph.</p>  
< p>This is another paragraph.</p>  
< /body>  
< /html>  
  
HTML Versions  
Since the early days of the web, there have been many versions of HTML:  
  
Version    Year  
HTML    1991  
HTML+    1993  
HTML 2.0    1995  
HTML 3.2    1997  
HTML 4.01    1999  
XHTML    2000  
HTML5    2012  
  
The <!DOCTYPE> Declaration  
The <!DOCTYPE> declaration helps the browser to display a web page correctly.  
  
There are many different documents on the web, and a browser can only display an HTML page 100% correctly if it knows the HTML version and type used.  
  
Common Declarations  
HTML5  
  
< !DOCTYPE html>  
HTML 4.01  
  
< !DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"  
"**[**http://www.w3.org/TR/html4/loose.dtd**](http://www.w3.org/TR/html4/loose.dtd)**">  
XHTML 1.0  
  
< !DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
"**[**http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd**](http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd)**">  
  
  
HTML <!DOCTYPE> Declaration:  
Definition and Usage  
The <!DOCTYPE> declaration must be the very first thing in your HTML document, before the <html> tag.  
  
The <!DOCTYPE> declaration is not an HTML tag; it is an instruction to the web browser about what version of HTML the page is written in.  
  
In HTML 4.01, the <!DOCTYPE> declaration refers to a DTD, because HTML 4.01 was based on SGML. The DTD specifies the rules for the markup language, so that the browsers render the content correctly.  
  
HTML5 is not based on SGML, and therefore does not require a reference to a DTD.  
  
Tip: Always add the <!DOCTYPE> declaration to your HTML documents, so that the browser knows what type of document to expect.  
  
Browser Support  
Element  
< !DOCTYPE>    Yes    Yes    Yes    Yes    Yes  
  
Differences Between HTML 4.01 and HTML5  
There are three different <!DOCTYPE> declarations in HTML 4.01. In HTML5 there is only one:  
  
< !DOCTYPE html>  
  
HTML Elements and Doctypes  
HTML Elements - Valid DOCTYPES  
The table below lists all HTML elements, and shows what !DOCTYPE each element appears in.  
HTML 4.01 / XHTML 1.0  
Tag    HTML5    Transitional    Strict    Frameset    XHTML 1.1  
< a>    Yes    Yes    Yes    Yes    Yes  
< abbr>    Yes    Yes    Yes    Yes    Yes  
< acronym>    No    Yes    Yes    Yes    Yes  
< address>    Yes    Yes    Yes    Yes    Yes  
< applet>    No    Yes    No    Yes    No  
< area>    Yes    Yes    Yes    Yes    No  
< article>    Yes    No    No    No    No  
< aside>    Yes    No    No    No    No  
< audio>    Yes    No    No    No    No  
< b>    Yes    Yes    Yes    Yes    Yes  
< base>    Yes    Yes    Yes    Yes    Yes  
< basefont>    No    Yes    No    Yes    No  
< bdi>    Yes    No    No    No    No  
< bdo>    Yes    Yes    Yes    Yes    No  
< big>    No    Yes    Yes    Yes    Yes  
< blockquote>    Yes    Yes    Yes    Yes    Yes  
< body>    Yes    Yes    Yes    Yes    Yes  
< br>    Yes    Yes    Yes    Yes    Yes  
< button>    Yes    Yes    Yes    Yes    Yes  
< canvas>    Yes    No    No    No    No  
< caption>    Yes    Yes    Yes    Yes    Yes  
< center>    No    Yes    No    Yes    No  
< cite>    Yes    Yes    Yes    Yes    Yes  
< code>    Yes    Yes    Yes    Yes    Yes  
< col>    Yes    Yes    Yes    Yes    No  
< colgroup>    Yes    Yes    Yes    Yes    No  
< datalist>    Yes    No    No    No    No  
< dd>    Yes    Yes    Yes    Yes    Yes  
< del>    Yes    Yes    Yes    Yes    No  
< details>    Yes    No    No    No    No  
< dfn>    Yes    Yes    Yes    Yes    Yes  
< dialog>    Yes    No    No    No    No  
< dir>    No    Yes    No    Yes    No  
< div>    Yes    Yes    Yes    Yes    Yes  
< dl>    Yes    Yes    Yes    Yes    Yes  
< dt>    Yes    Yes    Yes    Yes    Yes  
< em>    Yes    Yes    Yes    Yes    Yes  
< embed>    Yes    No    No    No    No  
< fieldset>    Yes    Yes    Yes    Yes    Yes  
< figcaption>    Yes    No    No    No    No  
< figure>    Yes    No    No    No    No  
< font>    No    Yes    No    Yes    No  
< footer>    Yes    No    No    No    No  
< form>    Yes    Yes    Yes    Yes    Yes  
< frame>    No    No    No    Yes    No  
< frameset>    No    No    No    Yes    No  
< h1> to <h6>    Yes    Yes    Yes    Yes    Yes  
< head>    Yes    Yes    Yes    Yes    Yes  
< header>    Yes    No    No    No    No  
< hr>    Yes    Yes    Yes    Yes    Yes  
< html>    Yes    Yes    Yes    Yes    Yes  
< i>    Yes    Yes    Yes    Yes    Yes  
< iframe>    Yes    Yes    No    Yes    No  
< img>    Yes    Yes    Yes    Yes    Yes  
< input>    Yes    Yes    Yes    Yes    Yes  
< ins>    Yes    Yes    Yes    Yes    No  
< kbd>    Yes    Yes    Yes    Yes    Yes  
< keygen>    Yes    No    No    No    No  
< label>    Yes    Yes    Yes    Yes    Yes  
< legend>    Yes    Yes    Yes    Yes    Yes  
< li>    Yes    Yes    Yes    Yes    Yes  
< link>    Yes    Yes    Yes    Yes    Yes  
< main>    Yes    No    No    No    No  
< map>    Yes    Yes    Yes    Yes    No  
< mark>    Yes    No    No    No    No  
< menu>    Yes    Yes    No    Yes    No  
< menuitem>    Yes    No    No    No    No  
< meta>    Yes    Yes    Yes    Yes    Yes  
< meter>    Yes    No    No    No    No  
< nav>    Yes    No    No    No    No  
< noframes>    No    Yes    No    Yes    No  
< noscript>    Yes    Yes    Yes    Yes    Yes  
< object>    Yes    Yes    Yes    Yes    Yes  
< ol>    Yes    Yes    Yes    Yes    Yes  
< optgroup>    Yes    Yes    Yes    Yes    Yes  
< option>    Yes    Yes    Yes    Yes    Yes  
< output>    Yes    No    No    No    No  
< p>    Yes    Yes    Yes    Yes    Yes  
< param>    Yes    Yes    Yes    Yes    Yes  
< pre>    Yes    Yes    Yes    Yes    Yes  
< progress>    Yes    No    No    No    No  
< q>    Yes    Yes    Yes    Yes    Yes  
< rp>    Yes    No    No    No    No  
< rt>    Yes    No    No    No    No  
< ruby>    Yes    No    No    No    No  
< s>    Yes    Yes    No    Yes    No  
< samp>    Yes    Yes    Yes    Yes    Yes  
< script>    Yes    Yes    Yes    Yes    Yes  
< section>    Yes    No    No    No    No  
< select>    Yes    Yes    Yes    Yes    Yes  
< small>    Yes    Yes    Yes    Yes    Yes  
< source>    Yes    No    No    No    No  
< span>    Yes    Yes    Yes    Yes    Yes  
< strike>    No    Yes    No    Yes    No  
< strong>    Yes    Yes    Yes    Yes    Yes  
< style>    Yes    Yes    Yes    Yes    Yes  
< sub>    Yes    Yes    Yes    Yes    Yes  
< summary>    Yes    No    No    No    No  
< sup>    Yes    Yes    Yes    Yes    Yes  
< table>    Yes    Yes    Yes    Yes    Yes  
< tbody>    Yes    Yes    Yes    Yes    No  
< td>    Yes    Yes    Yes    Yes    Yes  
< textarea>    Yes    Yes    Yes    Yes    Yes  
< tfoot>    Yes    Yes    Yes    Yes    No  
< th>    Yes    Yes    Yes    Yes    Yes  
< thead>    Yes    Yes    Yes    Yes    No  
< time>    Yes    No    No    No    No  
< title>    Yes    Yes    Yes    Yes    Yes  
< tr>    Yes    Yes    Yes    Yes    Yes  
< track>    Yes    No    No    No    No  
< tt>    No    Yes    Yes    Yes    Yes  
< u>    No    Yes    No    Yes    No  
< ul>    Yes    Yes    Yes    Yes    Yes  
< var>    Yes    Yes    Yes    Yes    Yes  
< video>    Yes    No    No    No    No  
< wbr>    Yes    No    No    No    No  
  
Tips and Notes  
Tip: The <!DOCTYPE> declaration is NOT case sensitive.  
  
Tip: You can go here to validate if your document is valid HTML.  
  
Common DOCTYPE Declarations  
  
HTML 5  
  
< !DOCTYPE html>  
  
HTML 4.01 Strict  
  
This DTD contains all HTML elements and attributes, but does NOT INCLUDE presentational or deprecated elements (like font). Framesets are not allowed.  
  
< !DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "**[**http://www.w3.org/TR/html4/strict.dtd**](http://www.w3.org/TR/html4/strict.dtd)**">  
  
HTML 4.01 Transitional  
  
This DTD contains all HTML elements and attributes, INCLUDING presentational and deprecated elements (like font). Framesets are not allowed.  
  
< !DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "**[**http://www.w3.org/TR/html4/loose.dtd**](http://www.w3.org/TR/html4/loose.dtd)**">  
  
HTML 4.01 Frameset  
  
This DTD is equal to HTML 4.01 Transitional, but allows the use of frameset content.  
  
< !DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Frameset//EN" "**[**http://www.w3.org/TR/html4/frameset.dtd**](http://www.w3.org/TR/html4/frameset.dtd)**">  
  
XHTML 1.0 Strict  
  
This DTD contains all HTML elements and attributes, but does NOT INCLUDE presentational or deprecated elements (like font). Framesets are not allowed. The markup must also be written as well-formed XML.  
  
< !DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "**[**http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd**](http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd)**">  
  
XHTML 1.0 Transitional  
  
This DTD contains all HTML elements and attributes, INCLUDING presentational and deprecated elements (like font). Framesets are not allowed. The markup must also be written as well-formed XML.  
  
< !DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "**[**http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd**](http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd)**">  
  
XHTML 1.0 Frameset  
  
This DTD is equal to XHTML 1.0 Transitional, but allows the use of frameset content.  
  
< !DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Frameset//EN" "**[**http://www.w3.org/TR/xhtml1/DTD/xhtml1-frameset.dtd**](http://www.w3.org/TR/xhtml1/DTD/xhtml1-frameset.dtd)**">  
  
XHTML 1.1  
  
This DTD is equal to XHTML 1.0 Strict, but allows you to add modules (for example to provide ruby support for East-Asian languages).  
  
< !DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN" "**[**http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd**](http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd)**">**

**H2**

**Don't worry if the examples use tags you have not learned.  
  
You will learn about them in the next chapters.  
  
HTML Headings  
HTML headings are defined with the <h1> to <h6> tags.  
  
Example  
  
< h1>This is a heading</h1>  
< h2>This is a heading</h2>  
< h3>This is a heading</h3>  
  
Example:  
< !DOCTYPE html>  
< html>  
< 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>  
< h5>This is heading 5</h5>  
< h6>This is heading 6</h6>  
  
< /body>  
< /html>  
  
  
HTML Paragraphs  
HTML paragraphs are defined with the <p> tag.  
  
Example  
  
< p>This is a paragraph.</p>  
< p>This is another paragraph.</p>  
  
Example:  
< !DOCTYPE html>  
< html>  
< body>  
  
< p>This is a paragraph.</p>  
< p>This is a paragraph.</p>  
< p>This is a paragraph.</p>  
  
< /body>  
< /html>  
  
  
HTML Links  
HTML links are defined with the <a> tag.  
  
Example  
  
< a href="**[**http://www.w3schools.com**](http://www.w3schools.com/)**">This is a link</a>  
  
Example:  
< !DOCTYPE html>  
< html>  
< body>  
  
< a href="**[**http://www.w3schools.com**](http://www.w3schools.com/)**">  
This is a link</a>  
  
< /body>  
< /html>  
  
  
Note: The link address is specified in the href attribute.  
  
(You will learn about attributes in a later chapter of this tutorial).  
  
HTML Images  
HTML images are defined with the <img> tag.  
  
Example  
  
< img src="w3schools.jpg" alt="W3Schools.com" width="104" height="142">  
  
Example:  
< !DOCTYPE html>  
< html>  
< body>  
  
< img src="w3schools.jpg" alt="W3Schools.com" width="104" height="142"></body>  
< /html>  
  
Note: The filename and the size of the image are provided as attributes.**

**H3**

**HTML documents are defined by HTML elements.  
  
HTML Elements  
An HTML element is everything from the start tag to the end tag:  
  
Start tag \*    Element content    End tag \*  
< p>    This is a paragraph    </p>  
< a href="default.htm">    This is a link    </a>  
< br>  
\* The start tag is often called the opening tag. The end tag is often called the closing tag.  
  
HTML Element Syntax  
An HTML element starts with a start tag / opening tag  
An HTML element ends with an end tag / closing tag  
The element content is everything between the start and the end tag  
Some HTML elements have empty content  
Empty elements are closed in the start tag  
Most HTML elements can have attributes  
Tip: You will learn about attributes in the next chapter of this tutorial.  
  
Nested HTML Elements  
Most HTML elements can be nested (can contain other HTML elements).  
  
HTML documents consist of nested HTML elements.  
  
HTML Document Example  
< !DOCTYPE html>  
< html>  
  
< body>  
< p>This is my first paragraph.</p>  
< /body>  
  
< /html>  
The example above contains 3 HTML elements.  
  
HTML Example Explained  
The <p> element:  
  
< p>This is my first paragraph.</p>  
The <p> element defines a paragraph in the HTML document.  
The element has a start tag <p> and an end tag </p>.  
The element content is: This is my first paragraph.  
  
The <body> element:  
  
< body>  
< p>This is my first paragraph.</p>  
< /body>  
The <body> element defines the body of the HTML document.  
The element has a start tag <body> and an end tag </body>.  
The element content is another HTML element (a p element).  
  
The <html> element:  
  
< html>  
  
< body>  
< p>This is my first paragraph.</p>  
< /body>  
  
< /html>  
The <html> element defines the whole HTML document.  
The element has a start tag <html> and an end tag </html>.  
The element content is another HTML element (the body element).  
  
Don't Forget the End Tag  
Some HTML elements might display correctly even if you forget the end tag:  
  
< p>This is a paragraph  
< p>This is a paragraph  
The example above works in most browsers, because the closing tag is considered optional.  
  
Never rely on this. Many HTML elements will produce unexpected results and/or errors if you forget the end tag .  
  
Empty HTML Elements  
HTML elements with no content are called empty elements.  
  
< br> is an empty element without a closing tag (the <br> tag defines a line break).  
  
Tip: In XHTML, all elements must be closed. Adding a slash inside the start tag, like <br />, is the proper way of closing empty elements in XHTML (and XML).  
  
HTML Tip: Use Lowercase Tags  
HTML tags are not case sensitive: <P> means the same as <p>. Many web sites use uppercase HTML tags.  
  
W3Schools use lowercase tags because the World Wide Web Consortium (W3C) recommends lowercase in HTML 4, and demands lowercase tags in XHTML.**

**H4**

**Attributes provide additional information about HTML elements.  
  
HTML Attributes  
HTML elements can have attributes  
Attributes provide additional information about an element  
Attributes are always specified in the start tag  
Attributes come in name/value pairs like: name="value"  
Attribute Example  
HTML links are defined with the <a> tag. The link address is specified in the href attribute:  
  
Example  
  
< a href="**[**http://www.w3schools.com**](http://www.w3schools.com/)**">This is a link</a>  
  
< !DOCTYPE html>  
< html>  
< body>  
  
< a href="**[**http://www.w3schools.com**](http://www.w3schools.com/)**">  
This is a link</a>  
  
< /body>  
< /html>  
  
  
Always Quote Attribute Values  
Attribute values should always be enclosed in quotes.  
  
Double style quotes are the most common, but single style quotes are also allowed.  
  
Note    Tip: In some rare situations, when the attribute value itself contains quotes, it is necessary to use single quotes: name='John "ShotGun" Nelson'  
  
HTML Tip: Use Lowercase Attributes  
Attribute names and attribute values are case-insensitive.  
  
However, the World Wide Web Consortium (W3C) recommends lowercase attributes/attribute values in their HTML 4 recommendation.  
  
Newer versions of (X)HTML will demand lowercase attributes.  
  
HTML Attributes Reference  
A complete list of legal attributes for each HTML element is listed in our: HTML Tag Reference.  
  
Below is a list of some attributes that can be used on any HTML element:  
  
Attribute    Description  
class    Specifies one or more classnames for an element (refers to a class in a style sheet)  
id    Specifies a unique id for an element  
style    Specifies an inline CSS style for an element  
title    Specifies extra information about an element (displayed as a tool tip)  
For more information about global attributes: HTML Global Attributes Reference.  
  
HTML Global Attributes  
Attribute    Description  
accesskey    Specifies a shortcut key to activate/focus an element  
class    Specifies one or more classnames for an element (refers to a class in a style sheet)  
contenteditable    Specifies whether the content of an element is editable or not  
contextmenu    Specifies a context menu for an element. The context menu appears when a user right-clicks on the element  
data-\*    Used to store custom data private to the page or application  
dir    Specifies the text direction for the content in an element  
draggable    Specifies whether an element is draggable or not  
dropzone    Specifies whether the dragged data is copied, moved, or linked, when dropped  
hidden    Specifies that an element is not yet, or is no longer, relevant  
id    Specifies a unique id for an element  
lang    Specifies the language of the element's content  
spellcheck    Specifies whether the element is to have its spelling and grammar checked or not  
style    Specifies an inline CSS style for an element  
tabindex    Specifies the tabbing order of an element  
title    Specifies extra information about an element  
translate    Specifies whether the content of an element should be translated or not**

**H5**

**Headings are important in HTML documents.  
  
HTML Headings  
Headings are defined with the <h1> to <h6> tags.  
  
< h1> defines the most important heading. <h6> defines the least important heading.  
  
Example  
  
< h1>This is a heading</h1>  
< h2>This is a heading</h2>  
< h3>This is a heading</h3>  
  
  
< !DOCTYPE html>  
< html>  
< 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>  
< h5>This is heading 5</h5>  
< h6>This is heading 6</h6>  
  
< /body>  
< /html>  
  
  
Note: Browsers automatically add some empty space (a margin) before and after each heading.  
  
Headings Are Important  
Use HTML headings for headings only. Don't use headings to make text BIG or bold.  
  
Search engines use your headings to index the structure and content of your web pages.  
  
Since users may skim your pages by its headings, it is important to use headings to show the document structure.  
  
H1 headings should be used as main headings, followed by H2 headings, then the less important H3 headings, and so on.  
  
HTML Lines  
The <hr> tag creates a horizontal line in an HTML page.  
  
The hr element can be used to separate content:  
  
Example  
  
< p>This is a paragraph.</p>  
< hr>  
< p>This is a paragraph.</p>  
< hr>  
< p>This is a paragraph.</p>  
  
< !DOCTYPE html>  
< html>  
< body>  
< p>The hr tag defines a horizontal rule:</p>  
< hr>  
< p>This is a paragraph.</p>  
< hr>  
< p>This is a paragraph.</p>  
< hr>  
< p>This is a paragraph.</p>  
< /body>  
< /html>  
  
  
  
HTML Tip - How to View HTML Source  
Have you ever seen a Web page and wondered "Hey! How did they do that?"  
  
To find out, right-click in the page and select "View Source" (IE) or "View Page Source" (Firefox), or similar for other browsers. This will open a window containing the HTML code of the page.  
  
HTML Tag Reference  
W3Schools' tag reference contains additional information about these tags and their attributes.  
  
You will learn more about HTML tags and attributes in the next chapters of this tutorial.  
  
Tag    Description  
< html>    Defines an HTML document  
< body>    Defines the document's body  
< h1> to <h6>    Defines HTML headings  
< hr>    Defines a horizontal line  
< !-->    Defines a comment**

**H6**

**HTML documents are divided into paragraphs.  
  
HTML Paragraphs  
Paragraphs are defined with the <p> tag.  
  
Example  
  
< p>This is a paragraph</p>  
< p>This is another paragraph</p>  
  
< !DOCTYPE html>  
< html>  
< body>  
  
< p>This is a paragraph.</p>  
< p>This is a paragraph.</p>  
< p>This is a paragraph.</p>  
  
< /body>  
< /html>  
  
  
Note: Browsers automatically add an empty line before and after a paragraph.  
  
Don't Forget the End Tag  
Most browsers will display HTML correctly even if you forget the end tag:  
  
Example  
  
< p>This is a paragraph  
< p>This is another paragraph  
  
< !DOCTYPE html>  
< html>  
< body>  
  
< p>This is a paragraph.  
< p>This is a paragraph.  
< p>This is a paragraph.  
  
< p>Don't forget to close your HTML tags!</p>  
  
< /body>  
< /html>  
  
  
The example above will work in most browsers, but don't rely on it. Forgetting the end tag can produce unexpected results or errors.  
  
Note: Future version of HTML will not allow you to skip end tags.  
  
HTML Line Breaks  
Use the <br> tag if you want a line break (a new line) without starting a new paragraph:  
  
Example  
  
< p>This is<br>a para<br>graph with line breaks</p>  
  
< !DOCTYPE html>  
< html>  
< body>  
  
< p>This is<br>a para<br>graph with line breaks</p>  
  
< /body>  
< /html>  
  
The <br> element is an empty HTML element. It has no end tag.  
  
HTML Output - Useful Tips  
You cannot be sure how HTML will be displayed. Large or small screens, and resized windows will create different results.  
  
With HTML, you cannot change the output by adding extra spaces or extra lines in your HTML code.  
  
The browser will remove extra spaces and extra lines when the page is displayed. Any number of lines count as one line, and any number of spaces count as one space.  
  
< !DOCTYPE html>  
< html>  
< body>  
  
< p>  
    My Bonnie lies over the ocean.  
  
  
    My Bonnie lies over the sea.  
  
  
    My Bonnie lies over the ocean.  
  
  
    Oh, bring back my Bonnie to me.  
< /p>  
  
< p>Note that your browser ignores the layout in the HTML source code!</p>  
  
< /body>  
< /html>  
  
(The example demonstrates some HTML formatting problems)  
  
HTML Tag Reference  
W3Schools' tag reference contains additional information about HTML elements and their attributes.  
  
Tag    Description  
< p>    Defines a paragraph  
< br>    Inserts a single line break**

**H7**

**HTML Text Formatting  
  
This text is bold  
  
This text is italic  
  
This is computer output  
  
This is subscript and superscript  
  
< !DOCTYPE html>  
< html>  
< body>  
  
< p><b>This text is bold</b></p>  
< p><strong>This text is strong</strong></p>  
< p><i>This text is italic</i></p>  
< p><em>This text is emphasized</em></p>  
< p><code>This is computer output</code></p>  
< p>This is<sub> subscript</sub> and <sup>superscript</sup></p>  
  
< /body>  
< /html>  
  
  
HTML Formatting Tags  
HTML uses tags like <b> and <i> for formatting output, like bold or italic text.  
  
These HTML tags are called formatting tags (look at the bottom of this page for a complete reference).  
  
Note    Often <strong> renders as <b>, and <em> renders as <i>.  
  
However, there is a difference in the meaning of these tags:  
  
< b> or <i> defines bold or italic text only.  
  
< strong> or <em> means that you want the text to be rendered in a way that the user understands as "important". Today, all major browsers render strong as bold and em as italics. However, if a browser one day wants to make a text highlighted with the strong feature, it might be cursive for example and not bold!  
  
Examples  
Try it Yourself - Examples  
Text formatting  
< !DOCTYPE html>  
< html>  
< body>  
  
< p><b>This text is bold</b></p>  
< p><strong>This text is strong</strong></p>  
< p><em>This text is emphasized</em></p>  
< p><i>This text is italic</i></p>  
< p><small>This text is small</small></p>  
< p>This is<sub> subscript</sub> and <sup>superscript</sup></p>  
  
< /body>  
< /html>  
  
How to format text in an HTML document.  
  
Preformatted text  
< !DOCTYPE html>  
< html>  
< body>  
  
< pre>  
This is  
preformatted text.  
It preserves      both spaces  
and line breaks.  
< /pre>  
  
< p>The pre tag is good for displaying computer code:</p>  
  
< pre>  
for i = 1 to 10  
     print i  
next i  
< /pre>  
  
< /body>  
< /html>  
  
How to control the line breaks and spaces with the <pre> tag.  
  
"Computer output" tags  
< !DOCTYPE html>  
< html>  
< body>  
  
< code>Computer code</code>  
< br>  
< kbd>Keyboard input</kbd>  
< br>  
< samp>Sample text</samp>  
< br>  
< var>Computer variable</var>  
< br>  
  
< p><b>Note:</b> These tags are often used to display computer/programming code.</p>  
  
< /body>  
< /html>  
  
How different "computer output" tags will be displayed.  
  
Address  
< !DOCTYPE html>  
< html>  
< body>  
  
< address>  
Written by W3Schools.com<br>  
< a href="mailto:**[**us@example.org**](mailto:us@example.org)**">Email us</a><br>  
Address: Box 564, Disneyland<br>  
Phone: +12 34 56 78  
< /address>  
  
< /body>  
< /html>  
  
How to define contact information for the author/owner of an HTML document.  
  
Abbreviations and acronyms  
< !DOCTYPE html>  
< html>  
< body>  
  
  
< p>The <abbr title="World Health Organization">WHO</abbr> was founded in 1948.</p>  
< p>Can I get this <abbr title="as soon as possible">ASAP</abbr>?</p>  
  
< p>The title attribute is used to show the spelled-out version when holding the mouse pointer over the acronym or abbreviation.</p>  
  
< /body>  
< /html>  
  
How to handle abbreviations and acronyms.  
  
Text direction  
< !DOCTYPE html>  
< html>  
< body>  
  
< p>  
If your browser supports bi-directional override (bdo), the next line will be written from the right to the left (rtl):  
< /p>  
  
< bdo dir="rtl">  
Here is some Hebrew text  
< /bdo>  
  
< /body>  
< /html>  
  
How to change the text direction.  
  
Quotations  
< !DOCTYPE html>  
< html>  
< body>  
  
< h2>The blockquote Element</h2>  
< p>The blockquote element specifies a section that is quoted from another source.</p>  
< p>Here is a quote from WWF's website:</p>  
< blockquote cite="**[**http://www.worldwildlife.org/who/index.html**](http://www.worldwildlife.org/who/index.html)**">  
For 50 years, WWF has been protecting the future of nature. The world抯 leading conservation organization, WWF works in 100 countries and is supported by 1.2 million members in the United States and close to 5 million globally.  
< /blockquote>  
< p><b>Note:</b> Browsers usually indent blockquote elements.</p>  
  
< h2>The q Element</h2>  
< p>The q element defines a short quotation.</p>  
  
< p>WWF's goal is to:  
< q>Build a future where people live in harmony with nature.</q>  
We hope they succeed.</p>  
< p><b>Note:</b> Browsers insert quotation marks around the q element.</p>  
  
< /body>  
< /html>  
  
How to handle long and short quotations.  
  
Deleted and inserted text  
< !DOCTYPE html>  
< html>  
< body>  
  
< p>My favorite color is <del>blue</del> <ins>red</ins>!</p>  
  
< p>Notice that browsers will strikethrough deleted text and underline inserted text.</p>  
  
< /body>  
< /html>  
  
How to mark deleted and inserted text.  
  
Marked/Highlighted text  
< !DOCTYPE html>  
< html>  
< body>  
  
< p>Do not forget to buy <mark>milk</mark> today.</p>  
  
< /body>  
< /html>  
  
How to mark/highlight text.  
  
HTML Text Formatting Tags  
Tag    Description  
< b>    Defines bold text  
< em>    Defines emphasized text  
< i>    Defines a part of text in an alternate voice or mood  
< small>    Defines smaller text  
< strong>    Defines important text  
< sub>    Defines subscripted text  
< sup>    Defines superscripted text  
< ins>    Defines inserted text  
< del>    Defines deleted text  
< mark>    Defines marked/highlighted text  
HTML "Computer Output" Tags  
Tag    Description  
< code>    Defines computer code text  
< kbd>    Defines keyboard text  
< samp>    Defines sample computer code  
< var>    Defines a variable  
< pre>    Defines preformatted text  
HTML Citations, Quotations, and Definition Tags  
Tag    Description  
< abbr>    Defines an abbreviation or acronym  
< address>    Defines contact information for the author/owner of a document  
< bdo>    Defines the text direction  
< blockquote>    Defines a section that is quoted from another source  
< q>    Defines an inline (short) quotation  
< cite>    Defines the title of a work  
< dfn>    Defines a definition term**

**H8**

**Comment tags <!-- and --> are used to insert comments in HTML.  
  
HTML Comment Tags  
You can add comments to your HTML source by using the following syntax:  
  
< !-- Write your comments here -->  
  
Note    Note: There is an exclamation point (!) in the opening tag, but not in the closing tag.  
Comments are not displayed by the browser, but they can help document your HTML.  
  
With comments you can place notifications and reminders in your HTML:  
  
Example  
  
< !-- This is a comment -->  
  
< p>This is a paragraph.</p>  
  
< !-- Remember to add more information here -->  
  
< !DOCTYPE html>  
< html>  
< body>  
  
< !-- This is a comment -->  
< p>This is a paragraph.</p>  
< !-- Comments are not displayed in the browser -->  
  
< /body>  
< /html>  
  
  
Comments are also great for debugging HTML, because you can comment out HTML lines of code, one at a time, to search for errors:  
  
Example  
  
< !-- Do not display this at the moment  
< img border="0" src="/images/pulpit.jpg" alt="Pulpit rock" width="304" height="228">  
-->  
  
< !DOCTYPE html>  
< html>  
< body>  
  
< !-- Do not display this at the moment  
< img border="0" src="/images/pulpit.jpg" alt="Pulpit rock" width="304" height="228">  
-->  
  
< /body>  
< /html>  
  
  
Conditional Comments  
You might stumble upon conditional comments in HTML:  
  
< !--[if IE 8]>  
    .... some HTML here ....  
< ![endif]-->  
Conditional comments defines HTML tags to be executed by IE only. We will not use conditional comments in this tutorial.  
  
Software Program Tags  
HTML comments tags can also be generated by various HTML software programs.  
  
For example <!--webbot bot--> tags wrapped inside HTML comments by FrontPage and Expression Web.  
  
As a rule, let these tags stay, to help support the software that created them.**

**H9**

**Links are found in nearly all Web pages. Links allow users to click their way from page to page.  
  
Examples  
Try it Yourself - Examples  
HTML links  
< !DOCTYPE html>  
< html>  
< body>  
  
< p>  
< a href="default.asp">HTML Tutorial</a> This is a link to a page on this website.  
< /p>  
  
< p>  
< a href="**[**http://www.w3.org/**](http://www.w3.org/)**">W3C</a> This is a link to a website on the World Wide Web.  
< /p>  
  
< /body>  
< /html>  
  
How to create links in an HTML document.  
  
  
HTML Hyperlinks (Links)  
The HTML <a> tag defines a hyperlink.  
  
A hyperlink (or link) is a word, group of words, or image that you can click on to jump to another document.  
  
When you move the cursor over a link in a Web page, the arrow will turn into a little hand.  
  
The most important attribute of the <a> element is the href attribute, which indicates the link's destination.  
  
By default, links will appear as follows in all browsers:  
  
An unvisited link is underlined and blue  
A visited link is underlined and purple  
An active link is underlined and red  
HTML Link Syntax  
The HTML code for a link is simple. It looks like this:  
  
< a href="url">Link text</a>  
The href attribute specifies the destination of a link.  
  
Example  
< a href="**[**http://www.w3schools.com/**](http://www.w3schools.com/)**">Visit W3Schools</a>  
which will display like this: Visit W3Schools  
  
Clicking on this hyperlink will send the user to W3Schools' homepage.  
  
Tip: The "Link text" doesn't have to be text. It can be an image or any other HTML element.  
  
HTML Links - The target Attribute  
The target attribute specifies where to open the linked document.  
  
The example below will open the linked document in a new browser window or a new tab:  
  
Example  
  
< a href="**[**http://www.w3schools.com/**](http://www.w3schools.com/)**" target="\_blank">Visit W3Schools!</a>  
  
< !DOCTYPE html>  
< html>  
< body>  
  
< a href="**[**http://www.w3schools.com**](http://www.w3schools.com/)**" target="\_blank">Visit W3Schools.com!</a>  
  
< p>If you set the target attribute to "\_blank", the link will open in a new browser window/tab.</p>  
  
< /body>  
< /html>  
  
  
HTML Links - The id Attribute  
The id attribute can be used to create a bookmark inside an HTML document.  
  
Tip: Bookmarks are not displayed in any special way. They are invisible to the reader.  
  
Example  
An anchor with an id inside an HTML document:  
  
< a id="tips">Useful Tips Section</a>  
Create a link to the "Useful Tips Section" inside the same document:  
  
< a href="#tips">Visit the Useful Tips Section</a>  
Or, create a link to the "Useful Tips Section" from another page:  
  
< a href="**[**http://www.w3schools.com/html\_links.htm#tips**](http://www.w3schools.com/html_links.htm#tips)**">  
Visit the Useful Tips Section</a>  
  
Basic Notes - Useful Tips  
Note: Always add a trailing slash to subfolder references. If you link like this: href="**[**http://www.w3schools.com/html**](http://www.w3schools.com/html)**", you will generate two requests to the server, the server will first add a slash to the address, and then create a new request like this: href="**[**http://www.w3schools.com/html/**](http://www.w3schools.com/html/)**".  
  
Examples  
More Examples  
An image as a link  
< !DOCTYPE html>  
< html>  
< body>  
  
< p>Create a link of an image:  
< a href="default.asp"><img src="smiley.gif" alt="HTML tutorial" width="42" height="42"></a></p>  
  
< p><b>Note:</b> For IE 9 and earlier versions, the image-link above will show a border around the image. To remove the border around the image, add style="border:0;" to the img element.</p>  
  
< p>Image-link: Still a link, but with no borders:  
< a href="default.asp"><img style="border:0;" src="smiley.gif" alt="HTML tutorial" width="42" height="42"></a></p>  
  
< /body>  
< /html>  
  
How to use an image as a link.  
  
Link to a location on the same page  
< !DOCTYPE html>  
< html>  
< body>  
  
< p>  
< a href="#C4">See also Chapter 4.</a>  
< /p>  
  
< h2>Chapter 1</h2>  
< p>This chapter explains ba bla bla</p>  
  
< h2>Chapter 2</h2>  
< p>This chapter explains ba bla bla</p>  
  
< h2>Chapter 3</h2>  
< p>This chapter explains ba bla bla</p>  
  
< h2><a id="C4">Chapter 4</a></h2>  
< p>This chapter explains ba bla bla</p>  
  
< h2>Chapter 5</h2>  
< p>This chapter explains ba bla bla</p>  
  
< h2>Chapter 6</h2>  
< p>This chapter explains ba bla bla</p>  
  
< h2>Chapter 7</h2>  
< p>This chapter explains ba bla bla</p>  
  
< h2>Chapter 8</h2>  
< p>This chapter explains ba bla bla</p>  
  
< h2>Chapter 9</h2>  
< p>This chapter explains ba bla bla</p>  
  
< h2>Chapter 10</h2>  
< p>This chapter explains ba bla bla</p>  
  
< h2>Chapter 11</h2>  
< p>This chapter explains ba bla bla</p>  
  
< h2>Chapter 12</h2>  
< p>This chapter explains ba bla bla</p>  
  
< h2>Chapter 13</h2>  
< p>This chapter explains ba bla bla</p>  
  
< h2>Chapter 14</h2>  
< p>This chapter explains ba bla bla</p>  
  
< h2>Chapter 15</h2>  
< p>This chapter explains ba bla bla</p>  
  
< h2>Chapter 16</h2>  
< p>This chapter explains ba bla bla</p>  
  
< h2>Chapter 17</h2>  
< p>This chapter explains ba bla bla</p>  
  
< /body>  
< /html>  
  
How to link to a bookmark.  
  
Break out of a frame  
How to break out of a frame (if your site is locked in a frame).  
  
Create a mailto link  
< !DOCTYPE html>  
< html>  
  
< body>  
  
< p>Locked in a frame?</p>  
< a href="**[**http://www.w3schools.com/**](http://www.w3schools.com/)**" target="\_top">Click here!</a>  
  
< /body>  
< /html>  
  
How to link to a mail message (will only work if you have mail installed).  
  
Create a mailto link 2  
< !DOCTYPE html>  
< html>  
< body>  
  
< p>  
This is another mailto link:  
< a href="mailto:**[**someone@example.com**](mailto:someone@example.com)**?cc=**[**someoneelse@example.com**](mailto:someoneelse@example.com)**&bcc=**[**andsomeoneelse@example.com**](mailto:andsomeoneelse@example.com)**&subject=Summer%20Party&body=You%20are%20invited%20to%20a%20big%20summer%20party!" target="\_top">Send mail!</a>  
< /p>  
  
< p>  
< b>Note:</b> Spaces between words should be replaced by %20 to ensure that the browser will display the text properly.  
< /p>  
  
< /body>  
< /html>  
  
Another mailto link.  
  
HTML Link Tags  
Tag    Description  
< a>    Defines a hyperlink**

**H10**

**Try it Yourself - Examples  
< title> - Define a title for an HTML document  
< !DOCTYPE html>  
< html>  
< head>  
< title>My first HTML page</title>  
< /head>  
  
< body>  
< p>The content of the body element is displayed in the browser.</p>  
< p>The content of the title element is displayed in the browser's title.</p>  
< /body>  
  
< /html>  
  
Use the <title> tag to define a title for a document.  
  
< base> - Default URL and target for all links  
< !DOCTYPE html>  
< html>  
< head>  
< base href="**[**http://www.w3schools.com/images/**](http://www.w3schools.com/images/)**" target="\_blank">  
< /head>  
  
< body>  
< img src="stickman.gif" width="24" height="39"> - Notice that we have only specified a relative address for the image. Since we have specified a base URL in the head section, the browser will look for the image at "**[**http://www.w3schools.com/images/stickman.gif**](http://www.w3schools.com/images/stickman.gif)**"  
< br><br>  
< a href="**[**http://www.w3schools.com**](http://www.w3schools.com/)**">W3Schools</a> - Notice that the link opens in a new window, even if it has no target="\_blank" attribute. This is because the target attribute of the base element is set to "\_blank".  
  
< /body>  
< /html>  
  
Use the <base> tag to specify a default URL and a default target for all links on a page.  
  
< meta> - Provide metadata for an HTML document  
< !DOCTYPE html>  
< html>  
< head>  
< meta name="description" content="Free Web tutorials">  
< meta name="keywords" content="HTML,CSS,XML,JavaScript">  
< meta name="author" content="Hege Refsnes">  
< meta charset="UTF-8">  
< /head>  
< body>  
  
< p>All meta information goes in the head section...</p>  
  
< /body>  
< /html>  
  
Use <meta> elements to specify a description, keywords, author, and character set of a document.  
  
The HTML <head> Element  
The <head> element is a container for all the head elements. Elements inside <head> can include scripts, instruct the browser where to find style sheets, provide meta information, and more.  
  
The following tags can be added to the head section: <title>, <style>, <meta>, <link>, <script>, <noscript>, and <base>.  
  
The HTML <title> Element  
The <title> tag defines the title of the document.  
  
The <title> element is required in all HTML/XHTML documents.  
  
The <title> element:  
  
defines a title in the browser toolbar  
provides a title for the page when it is added to favorites  
displays a title for the page in search-engine results  
A simplified HTML document:  
  
< !DOCTYPE html>  
< html>  
< head>  
< title>Title of the document</title>  
< /head>  
  
< body>  
The content of the document......  
< /body>  
  
< /html>  
  
The HTML <base> Element  
The <base> tag specifies the base URL/target for all relative URLs in a page:  
  
< head>  
< base href="**[**http://www.w3schools.com/images/**](http://www.w3schools.com/images/)**" target="\_blank">  
< /head>  
  
The HTML <link> Element  
The <link> tag defines the relationship between a document and an external resource.  
  
The <link> tag is most used to link to style sheets:  
  
< head>  
< link rel="stylesheet" type="text/css" href="mystyle.css">  
< /head>  
  
The HTML <style> Element  
The <style> tag is used to define style information for an HTML document.  
  
Inside the <style> element you specify how HTML elements should render in a browser:  
  
< head>  
< style type="text/css">  
body {background-color:yellow;}  
p {color:blue;}  
< /style>  
< /head>  
  
The HTML <meta> Element  
Metadata is data (information) about data.  
  
The <meta> tag provides metadata about the HTML document. Metadata will not be displayed on the page, but will be machine parsable.  
  
Meta elements are typically used to specify page description, keywords, author of the document, last modified, and other metadata.  
  
The metadata can be used by browsers (how to display content or reload page), search engines (keywords), or other web services.  
  
< meta> tags always go inside the <head> element.  
  
< meta> Tags - Examples of Use  
Define keywords for search engines:  
  
< meta name="keywords" content="HTML, CSS, XML, XHTML, JavaScript">  
Define a description of your web page:  
  
< meta name="description" content="Free Web tutorials on HTML and CSS">  
Define the author of a page:  
  
< meta name="author" content="Hege Refsnes">  
Refresh document every 30 seconds:  
  
< meta http-equiv="refresh" content="30">  
  
The HTML <script> Element  
The <script> tag is used to define a client-side script, such as a JavaScript.  
  
The <script> element will be explained in a later chapter.  
  
HTML head Elements  
Tag    Description  
< head>    Defines information about the document  
< title>    Defines the title of a document  
< base>    Defines a default address or a default target for all links on a page  
< link>    Defines the relationship between a document and an external resource  
< meta>    Defines metadata about an HTML document  
< script>    Defines a client-side script  
< style>    Defines style information for a document**

**H11**

**Try it Yourself - Examples  
Using styles in HTML  
< !DOCTYPE html>  
< html>  
< head>  
< style>  
h1 {color:red;}  
h2 {color:blue;}  
p {color:green;}  
< /style>  
< /head>  
  
< body>  
  
< h1>All header 1 elements will be red</h1>  
< h2>All header 2 elements will be blue</h2>  
< p>All text in paragraphs will be green.</p>  
  
< /body>  
< /html>  
  
How to add style information inside the <head> section.  
  
Link that is not underlined  
< !DOCTYPE html>  
< html>  
< body>  
  
< a href="**[**http://www.w3schools.com**](http://www.w3schools.com/)**" style="text-decoration:none;">Visit W3Schools.com!</a>  
  
< /body>  
< /html>  
  
How to make a link that is not underlined, with the style attribute.  
  
Link to an external style sheet  
< !DOCTYPE html>  
< html>  
< head>  
< link rel="stylesheet" type="text/css" href="styles.css">  
< /head>  
  
< body>  
< h1>I am formatted with an external style sheet</h1>  
< p>Me too!</p>  
< /body>  
  
< /html>  
  
How to use the <link> tag to link to an external style sheet.  
  
Styling HTML with CSS  
CSS was introduced together with HTML 4, to provide a better way to style HTML elements.  
  
CSS can be added to HTML in the following ways:  
  
Inline - using the style attribute in HTML elements  
Internal - using the <style> element in the <head> section  
External - using an external CSS file  
The preferred way to add CSS to HTML, is to put CSS syntax in separate CSS files.  
  
However, in this HTML tutorial we will introduce you to CSS using the style attribute. This is done to simplify the examples. It also makes it easier for you to edit the code and try it yourself.  
  
You can learn everything about CSS in our CSS Tutorial.  
  
Inline Styles  
An inline style can be used if a unique style is to be applied to one single occurrence of an element.  
  
To use inline styles, use the style attribute in the relevant tag. The style attribute can contain any CSS property. The example below shows how to change the text color and the left margin of a paragraph:  
  
< p style="color:blue;margin-left:20px;">This is a paragraph.</p>  
To learn more about style sheets, visit our CSS tutorial.  
  
HTML Style Example - Background Color  
The background-color property defines the background color for an element:  
  
Example  
  
< !DOCTYPE html>  
< html>  
  
< body style="background-color:yellow;">  
< h2 style="background-color:red;">This is a heading</h2>  
< p style="background-color:green;">This is a paragraph.</p>  
< /body>  
  
< /html>  
  
The background-color property makes the "old" bgcolor attribute obsolete.  
  
HTML Style Example - Font, Color and Size  
The font-family, color, and font-size properties defines the font, color, and size of the text in an element:  
  
Example  
  
< !DOCTYPE html>  
< html>  
  
< body>  
< h1 style="font-family:verdana;">A heading</h1>  
< p style="font-family:arial;color:red;font-size:20px;">A paragraph.</p>  
< /body>  
  
< /html>  
  
The font-family, color, and font-size properties make the old <font> tag obsolete.  
  
HTML Style Example - Text Alignment  
The text-align property specifies the horizontal alignment of text in an element:  
  
Example  
  
< !DOCTYPE html>  
< html>  
  
< body>  
< h1 style="text-align:center;">Center-aligned heading</h1>  
< p>This is a paragraph.</p>  
< /body>  
  
< /html>  
  
The text-align property makes the old <center> tag obsolete.  
  
Internal Style Sheet  
An internal style sheet can be used if one single document has a unique style. Internal styles are defined in the <head> section of an HTML page, by using the <style> tag, like this:  
  
< head>  
< style>  
body {background-color:yellow;}  
p {color:blue;}  
< /style>  
< /head>  
  
External Style Sheet  
An external style sheet is ideal when the style is applied to many pages. With an external style sheet, you 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 rel="stylesheet" type="text/css" href="mystyle.css">  
< /head>  
  
HTML Style Tags  
Tag    Description  
< style>    Defines style information for a document  
< link>    Defines the relationship between a document and an external resource  
  
Deprecated Tags and Attributes  
In HTML 4, several tags and attributes were used to style documents. These tags are not supported in newer versions of HTML.  
  
Avoid using the elements: <font>, <center> and <strike>, and the attributes: color and bgcolor.**

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**Try it Yourself - Examples  
Insert images  
< !DOCTYPE html>  
< html>  
< body>  
  
< p>  
An image:  
< img src="smiley.gif" alt="Smiley face" width="42" height="42"></p>  
  
< p>  
A moving image:  
< img src="hackanm.gif" alt="Computer man" width="48" height="48"></p>  
  
< p>  
Note that the syntax of inserting a moving image is no different from a non-moving image.  
< /p>  
  
< /body>  
< /html>  
  
How to insert images into an HTML document.  
  
Insert images from different locations  
< !DOCTYPE html>  
< html>  
< body>  
  
< p>An image from another folder:</p>  
< img src="/images/chrome.gif" alt="Google Chrome" width="33" height="32"><p>An image from W3Schools:</p>  
< img src="**[**http://www.w3schools.com/images/w3schools\_green.jpg**](http://www.w3schools.com/images/w3schools_green.jpg)**" alt="W3Schools.com" width="104" height="142">  
  
< /body>  
< /html>  
  
How to insert an image from another folder or another server.  
  
(You can find more examples at the bottom of this page).  
  
HTML Images - The <img> Tag and the Src Attribute  
In HTML, images are defined with the <img> tag.  
  
The <img> tag is empty, which means that it contains attributes only, and has no closing tag.  
  
To display an image on a page, you need to use the src attribute. Src stands for "source". The value of the src attribute is the URL of the image you want to display.  
  
Syntax for defining an image:  
  
< img src="url" alt="some\_text">  
The URL points to the location where the image is stored. An image named "boat.gif", located in the "images" directory on "**[**www.w3schools.com**](http://www.w3schools.com/)**" has the URL:** [**http://www.w3schools.com/images/boat.gif**](http://www.w3schools.com/images/boat.gif)**.  
  
The browser displays the image where the <img> tag occurs in the document. If you put an image tag between two paragraphs, the browser shows the first paragraph, then the image, and then the second paragraph.  
  
HTML Images - The Alt Attribute  
The required alt attribute specifies an alternate text for an image, if the image cannot be displayed.  
  
The value of the alt attribute is an author-defined text:  
  
< img src="smiley.gif" alt="Smiley face">  
The alt attribute provides alternative information for an image if a user for some reason cannot view it (because of slow connection, an error in the src attribute, or if the user uses a screen reader).  
  
HTML Images - Set Height and Width of an Image  
The height and width attributes are used to specify the height and width of an image.  
  
The attribute values are specified in pixels by default:  
  
< img src="smiley.gif" alt="Smiley face" width="42" height="42">  
Tip: It is a good practice to specify both the height and width attributes for an image. If these attributes are set, the space required for the image is reserved when the page is loaded. However, without these attributes, the browser does not know the size of the image. The effect will be that the page layout will change during loading (while the images load).  
  
Basic Notes - Useful Tips  
Note: If an HTML file contains ten images - eleven files are required to display the page right. Loading images takes time, so my best advice is: Use images carefully.  
  
Note: When a web page is loaded, it is the browser, at that moment, that actually gets the image from a web server and inserts it into the page. Therefore, make sure that the images actually stay in the same spot in relation to the web page, otherwise your visitors will get a broken link icon. The broken link icon is shown if the browser cannot find the image.  
  
Examples  
More Examples  
Let an image float to the left and to the right  
< !DOCTYPE html>  
< html>  
< body>  
  
< p>  
< img src="smiley.gif" alt="Smiley face" style="float:left" width="42" height="42"> A paragraph with an image. The image will float to the left of this text.  
< /p>  
  
< p>  
< img src="smiley.gif" alt="Smiley face" style="float:right" width="42" height="42"> A paragraph with an image. The image will float to the right of this text.  
< /p>  
  
< p><b>Note:</b> Here we have used the CSS "float" property to align the image; as the align attribute is deprecated in HTML 4, and is not supported in HTML5.</p>  
  
< /body>  
< /html>  
  
How to let an image float to the left or right of a paragraph.  
  
Make a hyperlink of an image  
< !DOCTYPE html>  
< html>  
< body>  
  
< p>Create a link of an image:  
< a href="default.asp"><img src="smiley.gif" alt="HTML tutorial" width="42" height="42"></a></p>  
  
< p><b>Note:</b> For IE 9 and earlier versions, the image-link above will show a border around the image. To remove the border around the image, add style="border:0;" to the img element.</p>  
  
< p>Image-link: Still a link, but with no borders:  
< a href="default.asp"><img style="border:0;" src="smiley.gif" alt="HTML tutorial" width="42" height="42"></a></p>  
  
< /body>  
< /html>  
  
How to use an image as a link.  
  
Create an image map  
< !DOCTYPE html>  
< html>  
< body>  
  
< p>Click on the sun or on one of the planets to watch it closer:</p>  
  
< img src="planets.gif" width="145" height="126" alt="Planets" usemap="#planetmap">  
  
< map name="planetmap">  
  <area shape="rect" coords="0,0,82,126" alt="Sun" href="sun.htm">  
  <area shape="circle" coords="90,58,3" alt="Mercury" href="mercur.htm">  
  <area shape="circle" coords="124,58,8" alt="Venus" href="venus.htm">  
< /map>  
  
< /body>  
< /html>  
  
How to create an image map, with clickable regions. Each region is a hyperlink.  
  
HTML Image Tags  
Tag    Description  
< img>    Defines an image  
< map>    Defines an image-map  
< area>    Defines a clickable area inside an image-map**

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**Try it Yourself - Examples  
Basic HTML tables  
< !DOCTYPE html>  
< html>  
< body>  
  
< p>  
HTML tables start with a table tag.<br>  
Table rows start with a tr tag.<br>  
Table data start with a td tag.  
< /p>  
< hr>  
  
< h3>1 Column:</h3>  
< table>  
< tr>  
  <td>100</td>  
< /tr>  
< /table>  
< hr>  
  
< h3>1 Row and 3 Columns:</h3>  
< table>  
< tr>  
  <td>100</td>  
  <td>200</td>  
  <td>300</td>  
< /tr>  
< /table>  
< hr>  
  
< h3>3 Rows and 3 Columns:</h3>  
< table>  
< tr>  
  <td>100</td>  
  <td>200</td>  
  <td>300</td>  
< /tr>  
< tr>  
  <td>400</td>  
  <td>500</td>  
  <td>600</td>  
< /tr>  
< tr>  
  <td>700</td>  
  <td>800</td>  
  <td>900</td>  
< /tr>  
  
< /table>  
< hr>  
  
< /body>  
< /html>  
  
How to create basic tables in HTML.  
  
A table with borders  
< !DOCTYPE html>  
< html>  
< head>  
< style>  
table,th,td  
{  
border:1px solid black;  
}  
< /style>  
< /head>  
< body>  
  
< table style="width:300px">  
< tr>  
  <td>Jill</td>  
  <td>Smith</td>  
  <td>50</td>  
< /tr>  
< tr>  
  <td>Eve</td>  
  <td>Jackson</td>  
  <td>94</td>  
< /tr>  
< tr>  
  <td>John</td>  
  <td>Doe</td>  
  <td>80</td>  
< /tr>  
< /table>  
  
< /body>  
< /html>  
  
How to add borders to a table.  
  
A table with collapsed borders  
< !DOCTYPE html>  
< html>  
< head>  
< style>  
table,th,td  
{  
border:1px solid black;  
border-collapse:collapse;  
}  
< /style>  
< /head>  
< body>  
  
< table style="width:300px">  
< tr>  
  <td>Jill</td>  
  <td>Smith</td>  
  <td>50</td>  
< /tr>  
< tr>  
  <td>Eve</td>  
  <td>Jackson</td>  
  <td>94</td>  
< /tr>  
< tr>  
  <td>John</td>  
  <td>Doe</td>  
  <td>80</td>  
< /tr>  
< /table>  
  
< /body>  
< /html>  
  
How to make the borders collapse.  
  
  
HTML Tables  
Tables are defined with the <table> tag.  
  
A table is divided into rows with the <tr> tag. (tr stands for table row)  
  
A row is divided into data cells with the <td> tag. (td stands for table data)  
  
A row can also be divided into headings with the <th> tag. (th stands for table heading)  
  
The <td> elements are the data containers in the table.  
  
The <td> elements can contain all sorts of HTML elements like text, images, lists, other tables, etc.  
  
The width of a table can be defined using CSS.  
  
Example  
  
< table style="width:300px">  
< tr>  
  <td>Jill</td>  
  <td>Smith</td>  
  <td>50</td>  
< /tr>  
< tr>  
  <td>Eve</td>  
  <td>Jackson</td>  
  <td>94</td>  
< /tr>  
< /table>  
  
< !DOCTYPE html>  
< html>  
< body>  
  
< table style="width:300px">  
< tr>  
  <td>Jill</td>  
  <td>Smith</td>  
  <td>50</td>  
< /tr>  
< tr>  
  <td>Eve</td>  
  <td>Jackson</td>  
  <td>94</td>  
< /tr>  
< tr>  
  <td>John</td>  
  <td>Doe</td>  
  <td>80</td>  
< /tr>  
< /table>  
  
< /body>  
< /html>  
  
  
An HTML Table with a Border Attribute  
If you do not specify a border for the table, it will be displayed without borders.  
  
A border can be added using the border attribute:  
  
Example  
  
< table border="1" style="width:300px">  
< tr>  
  <td>Jill</td>  
  <td>Smith</td>  
  <td>50</td>  
< /tr>  
< tr>  
  <td>Eve</td>  
  <td>Jackson</td>  
  <td>94</td>  
< /tr>  
< /table>  
  
< !DOCTYPE html>  
< html>  
< body>  
  
< table border="1" style="width:300px">  
< tr>  
  <td>Jill</td>  
  <td>Smith</td>  
  <td>50</td>  
< /tr>  
< tr>  
  <td>Eve</td>  
  <td>Jackson</td>  
  <td>94</td>  
< /tr>  
< tr>  
  <td>John</td>  
  <td>Doe</td>  
  <td>80</td>  
< /tr>  
< /table>  
  
< /body>  
< /html>  
  
  
Note    However, the border attribute is on its way out of the HTML standard!  
It is better to use CSS.  
To add borders with CSS, use the border property:  
  
Example  
  
< style>  
table,th,td  
{  
border:1px solid black;  
}  
< /style>  
  
< !DOCTYPE html>  
< html>  
< head>  
< style>  
table,th,td  
{  
border:1px solid black;  
}  
< /style>  
< /head>  
< body>  
  
< table style="width:300px">  
< tr>  
  <td>Jill</td>  
  <td>Smith</td>  
  <td>50</td>  
< /tr>  
< tr>  
  <td>Eve</td>  
  <td>Jackson</td>  
  <td>94</td>  
< /tr>  
< tr>  
  <td>John</td>  
  <td>Doe</td>  
  <td>80</td>  
< /tr>  
< /table>  
  
< /body>  
< /html>  
  
Remember to define borders for both the table and the table cells.  
  
An HTML Table with Collapsed Borders  
If you want the borders to collapse into one border, add border-collapse to your CSS:  
  
Example  
  
< style>  
table,th,td  
{  
border:1px solid black;  
border-collapse:collapse  
}  
< /style>  
  
< !DOCTYPE html>  
< html>  
< head>  
< style>  
table,th,td  
{  
border:1px solid black;  
border-collapse:collapse;  
}  
< /style>  
< /head>  
< body>  
  
< table style="width:300px">  
< tr>  
  <td>Jill</td>  
  <td>Smith</td>  
  <td>50</td>  
< /tr>  
< tr>  
  <td>Eve</td>  
  <td>Jackson</td>  
  <td>94</td>  
< /tr>  
< tr>  
  <td>John</td>  
  <td>Doe</td>  
  <td>80</td>  
< /tr>  
< /table>  
  
< /body>  
< /html>  
  
  
An HTML Table with Cell Padding  
Cell padding specifies the space between the cell content and its borders.  
  
If you do not specify a padding, the table cells will be displayed without padding.  
  
To set the padding, use the CSS padding property:  
  
Example  
  
th,td  
{  
padding:15px;  
}  
  
< !DOCTYPE html>  
< html>  
< head>  
< style>  
table, th, td  
{  
border-collapse:collapse;  
border:1px solid black;  
}  
th, td  
{  
padding:15px;  
}  
< /style>  
< /head>  
< body>  
  
< table style="width:300px">  
< tr>  
  <td>Jill</td>  
  <td>Smith</td>  
  <td>50</td>  
< /tr>  
< tr>  
  <td>Eve</td>  
  <td>Jackson</td>  
  <td>94</td>  
< /tr>  
< tr>  
  <td>John</td>  
  <td>Doe</td>  
  <td>80</td>  
< /tr>  
< /table>  
  
< p>Try to change the padding to 5px.</p>  
  
< /body>  
< /html>  
  
  
HTML Table Headings  
Table headings are defined with the <th> tag.  
  
By default, all major browsers display table headings as bold and centered:  
  
Example  
  
< table style="width:300px">  
< tr>  
  <th>Firstname</th>  
  <th>Lastname</th>  
  <th>Points</th>  
< /tr>  
< tr>  
  <td>Eve</td>  
  <td>Jackson</td>  
  <td>94</td>  
< /tr>  
< /table>  
  
< !DOCTYPE html>  
< html>  
< head>  
< style>  
table,th,td  
{  
border:1px solid black;  
border-collapse:collapse;  
}  
th,td  
{  
padding:5px;  
}  
< /style>  
< /head>  
< body>  
  
< table style="width:300px">  
< tr>  
  <th>Firstname</th>  
  <th>Lastname</th>  
  <th>Points</th>  
< /tr>  
< tr>  
  <td>Jill</td>  
  <td>Smith</td>  
  <td>50</td>  
< /tr>  
< tr>  
  <td>Eve</td>  
  <td>Jackson</td>  
  <td>94</td>  
< /tr>  
< tr>  
  <td>John</td>  
  <td>Doe</td>  
  <td>80</td>  
< /tr>  
< /table>  
  
< /body>  
< /html>  
  
  
To left-align the table headings, use the CSS text-align property:  
  
Example  
  
th  
{  
text-align:left;  
}  
  
< !DOCTYPE html>  
< html>  
< head>  
< style>  
table,th,td  
{  
border:1px solid black;  
border-collapse:collapse;  
}  
th,td  
{  
padding:5px;  
}  
th  
{  
text-align:left;  
}  
< /style>  
< /head>  
< body>  
  
< table style="width:300px">  
< tr>  
  <th>Firstname</th>  
  <th>Lastname</th>  
  <th>Points</th>  
< /tr>  
< tr>  
  <td>Jill</td>  
  <td>Smith</td>  
  <td>50</td>  
< /tr>  
< tr>  
  <td>Eve</td>  
  <td>Jackson</td>  
  <td>94</td>  
< /tr>  
< tr>  
  <td>John</td>  
  <td>Doe</td>  
  <td>80</td>  
< /tr>  
< /table>  
  
< /body>  
< /html>  
  
  
An HTML Table with Cell Spacing  
Cell spacing specifies the space between the cells.  
  
To set the cell spacing for the table, use the CSS border-spacing property:  
  
Example  
  
table  
{  
border-spacing:5px;  
}  
  
< !DOCTYPE html>  
< html>  
< head>  
< style>  
table, th, td  
{  
border:1px solid black;  
padding:5px;  
}  
table  
{  
border-spacing:15px;  
}  
< /style>  
< /head>  
< body>  
  
< table style="width:300px">  
< tr>  
  <td>Jill</td>  
  <td>Smith</td>  
  <td>50</td>  
< /tr>  
< tr>  
  <td>Eve</td>  
  <td>Jackson</td>  
  <td>94</td>  
< /tr>  
< tr>  
  <td>John</td>  
  <td>Doe</td>  
  <td>80</td>  
< /tr>  
< /table>  
  
< p>Try to change the spacing to 5px.</p>  
  
< /body>  
< /html>  
  
  
Examples  
More Examples  
Horizontal/Vertical table headings  
< !DOCTYPE html>  
< html>  
  
< head>  
< style>  
table, th, td  
{  
border-collapse:collapse;  
border:1px solid black;  
}  
th, td  
{  
padding:5px;  
}  
< /style>  
< /head>  
  
< body>  
  
< h3>Horizontal Headings:</h3>  
  
< table>  
< tr>  
  <th>Name</th>  
  <th>Telephone</th>  
  <th>Telephone</th>  
< /tr>  
< tr>  
  <td>Bill Gates</td>  
  <td>555 77 854</td>  
  <td>555 77 855</td>  
< /tr>  
< /table>  
  
< h3>Vertical Headings:</h3>  
  
< table>  
< tr>  
  <th>Name:</th>  
  <td>Bill Gates</td>  
< /tr>  
< tr>  
  <th>Telephone:</th>  
  <td>555 77 854</td>  
< /tr>  
< tr>  
  <th>Telephone:</th>  
  <td>555 77 855</td>  
< /tr>  
< /table>  
  
< /body>  
< /html>  
  
How to create horizontal/vertical table headings.  
  
Table with a caption  
< !DOCTYPE html>  
< html>  
  
< head>  
< style>  
table, th, td  
{  
border-collapse:collapse;  
border:1px solid black;  
}  
th, td  
{  
padding:5px;  
}  
< /style>  
< /head>  
  
< body>  
  
< table>  
  <caption>Monthly savings</caption>  
  <tr>  
    <th>Month</th>  
    <th>Savings</th>  
  </tr>  
  <tr>  
    <td>January</td>  
    <td>$100</td>  
  </tr>  
  <tr>  
    <td>February</td>  
    <td>$50</td>  
  </tr>  
< /table>  
  
< /body>  
< /html>  
  
How to add a caption to a table.  
  
Table cells that span more than one row/column  
< !DOCTYPE html>  
< html>  
  
< head>  
< style>  
table, th, td  
{  
border-collapse:collapse;  
border:1px solid black;  
}  
th, td  
{  
padding:5px;  
}  
< /style>  
< /head>  
  
< body>  
  
< h3>Cell that spans two columns:</h3>  
< table>  
< tr>  
  <th>Name</th>  
  <th colspan="2">Telephone</th>  
< /tr>  
< tr>  
  <td>Bill Gates</td>  
  <td>555 77 854</td>  
  <td>555 77 855</td>  
< /tr>  
< /table>  
  
< h3>Cell that spans two rows:</h3>  
< table>  
< tr>  
  <th>First Name:</th>  
  <td>Bill Gates</td>  
< /tr>  
< tr>  
  <th rowspan="2">Telephone:</th>  
  <td>555 77 854</td>  
< /tr>  
< tr>  
  <td>555 77 855</td>  
< /tr>  
< /table>  
  
< /body>  
< /html>  
  
How to define table cells that span more than one row or one column.  
  
Tags inside a table  
< !DOCTYPE html>  
< html>  
  
< head>  
< style>  
table, th, td  
{  
border-collapse:collapse;  
border:1px solid black;  
}  
th, td  
{  
padding:5px;  
}  
< /style>  
< /head>  
  
< body>  
  
< table>  
< tr>  
  <td>  
   <p>This is a paragraph</p>  
   <p>This is another paragraph</p>  
  </td>  
  <td>This cell contains a table:  
   <table>  
   <tr>  
     <td>A</td>  
     <td>B</td>  
   </tr>  
   <tr>  
     <td>C</td>  
     <td>D</td>  
   </tr>  
   </table>  
  </td>  
< /tr>  
< tr>  
  <td>This cell contains a list  
   <ul>  
    <li>apples</li>  
    <li>bananas</li>  
    <li>pineapples</li>  
   </ul>  
  </td>  
  <td>HELLO</td>  
< /tr>  
< /table>  
  
< /body>  
< /html>  
  
How to display elements inside other elements.  
  
HTML Table Tags  
Tag    Description  
< table>    Defines a table  
< th>    Defines a header cell in a table  
< tr>    Defines a row in a table  
< td>    Defines a cell in a table  
< caption>    Defines a table caption  
< colgroup>    Specifies a group of one or more columns in a table for formatting  
< col>    Specifies column properties for each column within a <colgroup> element  
< thead>    Groups the header content in a table  
< tbody>    Groups the body content in a table  
< tfoot>    Groups the footer content in a table**

**H15**

**Try-It-Yourself Examples  
Unordered list  
< !DOCTYPE html>  
< html>  
< body>  
  
< h4>An Unordered List:</h4>  
< ul>  
  <li>Coffee</li>  
  <li>Tea</li>  
  <li>Milk</li>  
< /ul>  
  
< /body>  
< /html>  
  
How to create an unordered list in an HTML document.  
  
Ordered list  
< !DOCTYPE html>  
< html>  
< body>  
  
< h4>An Ordered List:</h4>  
< ol>  
  <li>Coffee</li>  
  <li>Tea</li>  
  <li>Milk</li>  
< /ol>  
  
< /body>  
< /html>  
  
How to create an ordered list in an HTML document.  
  
  
HTML Unordered Lists  
An unordered list starts with the <ul> tag. Each list item starts with the <li> tag.  
  
The list items are marked with bullets (typically small black circles).  
  
< ul>  
< li>Coffee</li>  
< li>Milk</li>  
< /ul>  
How the HTML code above looks in a browser:  
  
Coffee  
Milk  
HTML Ordered Lists  
An ordered list starts with the <ol> tag. Each list item starts with the <li> tag.  
  
The list items are marked with numbers.  
  
< ol>  
< li>Coffee</li>  
< li>Milk</li>  
< /ol>  
How the HTML code above looks in a browser:  
  
Coffee  
Milk  
HTML Description Lists  
A description list is a list of terms/names, with a description of each term/name.  
  
The <dl> tag defines a description list.  
  
The <dl> tag is used in conjunction with <dt> (defines terms/names) and <dd> (describes each term/name):  
  
< dl>  
< dt>Coffee</dt>  
< dd>- black hot drink</dd>  
< dt>Milk</dt>  
< dd>- white cold drink</dd>  
< /dl>  
How the HTML code above looks in a browser:  
  
Coffee  
- black hot drink  
Milk  
- white cold drink  
Basic Notes - Useful Tips  
Tip: Inside a list item you can put text, line breaks, images, links, other lists, etc.  
  
Examples  
More Examples  
Different types of ordered lists  
< !DOCTYPE html>  
< html>  
< body>  
  
< h4>Numbered list:</h4>  
< ol>  
 <li>Apples</li>  
 <li>Bananas</li>  
 <li>Lemons</li>  
 <li>Oranges</li>  
< /ol>  
  
< h4>Letters list:</h4>  
< ol type="A">  
 <li>Apples</li>  
 <li>Bananas</li>  
 <li>Lemons</li>  
 <li>Oranges</li>  
< /ol>  
  
< h4>Lowercase letters list:</h4>  
< ol type="a">  
 <li>Apples</li>  
 <li>Bananas</li>  
 <li>Lemons</li>  
 <li>Oranges</li>  
< /ol>  
  
< h4>Roman numbers list:</h4>  
< ol type="I">  
 <li>Apples</li>  
 <li>Bananas</li>  
 <li>Lemons</li>  
 <li>Oranges</li>  
< /ol>  
  
< h4>Lowercase Roman numbers list:</h4>  
< ol type="i">  
 <li>Apples</li>  
 <li>Bananas</li>  
 <li>Lemons</li>  
 <li>Oranges</li>  
< /ol>  
  
< /body>  
< /html>  
  
Demonstrates different types of ordered lists.  
  
Different types of unordered lists  
< !DOCTYPE html>  
< html>  
< body>  
  
< p><b>Note:</b> The type attribute of the ul tag is deprecated in HTML 4, and is not supported in HTML5.  
Therefore we have used the style attribute and the CSS list-style-type property, to define different types of unordered lists below:</p>  
  
< h4>Disc bullets list:</h4>  
< ul style="list-style-type:disc">  
 <li>Apples</li>  
 <li>Bananas</li>  
 <li>Lemons</li>  
 <li>Oranges</li>  
< /ul>  
  
< h4>Circle bullets list:</h4>  
< ul style="list-style-type:circle">  
 <li>Apples</li>  
 <li>Bananas</li>  
 <li>Lemons</li>  
 <li>Oranges</li>  
< /ul>  
  
< h4>Square bullets list:</h4>  
< ul style="list-style-type:square">  
 <li>Apples</li>  
 <li>Bananas</li>  
 <li>Lemons</li>  
 <li>Oranges</li>  
< /ul>  
  
< /body>  
< /html>  
  
Demonstrates different types of unordered lists.  
  
Nested list  
< !DOCTYPE html>  
< html>  
< body>  
  
< h4>A nested List:</h4>  
< ul>  
  <li>Coffee</li>  
  <li>Tea  
    <ul>  
    <li>Black tea</li>  
    <li>Green tea</li>  
    </ul>  
  </li>  
  <li>Milk</li>  
< /ul>  
  
< /body>  
< /html>  
  
Demonstrates how you can nest lists.  
  
Nested list 2  
< !DOCTYPE html>  
< html>  
< body>  
  
< h4>A nested List:</h4>  
< ul>  
  <li>Coffee</li>  
  <li>Tea  
    <ul>  
    <li>Black tea</li>  
    <li>Green tea  
      <ul>  
      <li>China</li>  
      <li>Africa</li>  
      </ul>  
    </li>  
    </ul>  
  </li>  
  <li>Milk</li>  
< /ul>  
  
< /body>  
< /html>  
  
Demonstrates a more complicated nested list.  
  
Description list  
< !DOCTYPE html>  
< html>  
< body>  
  
< h4>A Description List:</h4>  
< dl>  
  <dt>Coffee</dt>  
  <dd>- black hot drink</dd>  
  <dt>Milk</dt>  
  <dd>- white cold drink</dd>  
< /dl>  
  
< /body>  
< /html>  
  
Demonstrates a description list.  
  
HTML List Tags  
Tag    Description  
< ol>    Defines an ordered list  
< ul>    Defines an unordered list  
< li>    Defines a list item  
< dl>    Defines a description list  
< dt>    Defines a term/name in a description list  
< dd>    Defines a description of a term/name in a description list**

**H16**

**HTML elements can be grouped together with <div> and <span>.  
  
HTML Block Elements  
Most HTML elements are defined as block level elements or as inline elements.  
  
Block level elements normally start (and end) with a new line when displayed in a browser.  
  
Examples: <h1>, <p>, <ul>, <table>  
  
HTML Inline Elements  
Inline elements are normally displayed without starting a new line.  
  
Examples: <b>, <td>, <a>, <img>  
  
The HTML <div> Element  
The HTML <div> element is a block level element that can be used as a container for grouping other HTML elements.  
  
The <div> element has no special meaning. Except that, because it is a block level element, the browser will display a line break before and after it.  
  
When used together with CSS, the <div> element can be used to set style attributes to large blocks of content.  
  
Another common use of the <div> element, is for document layout. It replaces the "old way" of defining layout using tables. Using <table> elements for layout is not the correct use of <table>. The purpose of the <table> element is to display tabular data.  
  
The HTML <span> Element  
The HTML <span> element is an inline element that can be used as a container for text.  
  
The <span> element has no special meaning.  
  
When used together with CSS, the <span> element can be used to set style attributes to parts of the text.  
  
HTML Grouping Tags  
Tag    Description  
< div>    Defines a section in a document (block-level)  
< span>    Defines a section in a document (inline)**

**H17**

**Web page layout is very important to make your website look good.  
  
Design your webpage layout very carefully.  
  
Examples  
Try it Yourself - Examples  
Web page layout using <div> elements  
< !DOCTYPE html>  
< html>  
< body>  
  
< div id="container" style="width:500px">  
  
< div id="header" style="background-color:#FFA500;">  
< h1 style="margin-bottom:0;">Main Title of Web Page</h1></div>  
  
< div id="menu" style="background-color:#FFD700;height:200px;width:100px;float:left;">  
< b>Menu</b><br>  
HTML<br>  
CSS<br>  
JavaScript</div>  
  
< div id="content" style="background-color:#EEEEEE;height:200px;width:400px;float:left;">  
Content goes here</div>  
  
< div id="footer" style="background-color:#FFA500;clear:both;text-align:center;">  
Copyright � W3Schools.com</div>  
  
< /div>  
  
< /body>  
< /html>  
  
How to add layout using <div> elements.  
  
Web page layout using <table> elements  
< !DOCTYPE html>  
< html>  
< body>  
  
< table style="width:500px;" cellpadding="0" cellspacing="0">  
< tr>  
< td colspan="2" style="background-color:#FFA500;">  
< h1 style="margin:0;padding:0;">Main Title of Web Page</h1>  
< /td>  
< /tr>  
  
< tr>  
< td style="background-color:#FFD700;width:100px;vertical-align:top;">  
< b>Menu</b><br>  
HTML<br>  
CSS<br>  
JavaScript  
< /td>  
< td style="background-color:#eeeeee;height:200px;width:400px;vertical-align:top;">  
Content goes here</td>  
< /tr>  
  
< tr>  
< td colspan="2" style="background-color:#FFA500;text-align:center;">  
Copyright � W3Schools.com</td>  
< /tr>  
< /table>  
  
< /body>  
< /html>  
  
How to add layout using <table> elements.  
  
Website Layouts  
Most websites have put their content in multiple columns (formatted like a magazine or newspaper).  
  
Multiple columns are created by using <div> or <table> elements. CSS are used to position elements, or to create backgrounds or colorful look for the pages.  
  
Note    Even though it is possible to create nice layouts with HTML tables, tables were designed for presenting tabular data - NOT as a layout tool!  
  
HTML Layouts - Using <div> Elements  
The div element is a block level element used for grouping HTML elements.  
  
The following example uses five div elements to create a multiple column layout, creating the same result as in the previous example:  
  
Example  
  
< !DOCTYPE html>  
< html>  
< body>  
  
< div id="container" style="width:500px">  
  
< div id="header" style="background-color:#FFA500;">  
< h1 style="margin-bottom:0;">Main Title of Web Page</h1></div>  
  
< div id="menu" style="background-color:#FFD700;height:200px;width:100px;float:left;">  
< b>Menu</b><br>  
HTML<br>  
CSS<br>  
JavaScript</div>  
  
< div id="content" style="background-color:#EEEEEE;height:200px;width:400px;float:left;">  
Content goes here</div>  
  
< div id="footer" style="background-color:#FFA500;clear:both;text-align:center;">  
Copyright © W3Schools.com</div>  
  
< /div>  
  
< /body>  
< /html>  
  
  
The HTML code above will produce the following result:  
  
Main Title of Web Page  
Menu  
HTML  
CSS  
JavaScript Content goes here  
Copyright © W3Schools.com  
  
HTML Layouts - Using Tables  
A simple way of creating layouts is by using the HTML <table> tag.  
  
Multiple columns are created by using <div> or <table> elements. CSS are used to position elements, or to create backgrounds or colorful look for the pages.  
  
Note    Using <table> to create a nice layout is NOT the correct use of the element. The purpose of the <table> element is to display tabular data!  
The following example uses a table with 3 rows and 2 columns - the first and last row spans both columns using the colspan attribute:  
  
Example  
  
< !DOCTYPE html>  
< html>  
< body>  
  
< table style="width:500px;" cellpadding="0" cellspacing="0">  
< tr>  
< td colspan="2" style="background-color:#FFA500;">  
< h1 style="margin:0;padding:0;">Main Title of Web Page</h1>  
< /td>  
< /tr>  
  
< tr>  
< td style="background-color:#FFD700;width:100px;vertical-align:top;">  
< b>Menu</b><br>  
HTML<br>  
CSS<br>  
JavaScript  
< /td>  
< td style="background-color:#eeeeee;height:200px;width:400px;vertical-align:top;">  
Content goes here</td>  
< /tr>  
  
< tr>  
< td colspan="2" style="background-color:#FFA500;text-align:center;">  
Copyright © W3Schools.com</td>  
< /tr>  
< /table>  
  
< /body>  
< /html>  
  
  
HTML Layout - Useful Tips  
Tip: The biggest advantage of using CSS is that, if you place the CSS code in an external style sheet, your site becomes MUCH EASIER to maintain. You can change the layout of all your pages by editing one file. To learn more about CSS, study our CSS tutorial.  
  
Tip: Because advanced layouts take time to create, a quicker option is to use a template. Search Google for free website templates (these are pre-built website layouts you can use and customize).  
  
HTML Layout Tags  
Tag    Description  
< div>    Defines a section in a document (block-level)  
< span>    Defines a section in a document (inline)**

**H18**

**HTML Forms are used to select different kinds of user input.  
  
Examples  
Try it Yourself - Examples  
Create text fields  
< !DOCTYPE html>  
< html>  
< body>  
  
< form action="">  
First name: <input type="text" name="firstname"><br>  
Last name: <input type="text" name="lastname">  
< /form>  
  
< p><b>Note:</b> The form itself is not visible. Also note that the default width of a text field is 20 characters.</p>  
  
< /body>  
< /html>  
  
How to create text fields. The user can write text in a text field.  
  
Create password field  
< !DOCTYPE html>  
< html>  
< body>  
  
< form action="">  
Username: <input type="text" name="user"><br>  
Password: <input type="password" name="password">  
< /form>  
  
< p><b>Note:</b> The characters in a password field are masked (shown as asterisks or circles).</p>  
  
< /body>  
< /html>  
  
How to create a password field.  
  
(You can find more examples at the bottom of this page)  
  
HTML Forms  
HTML forms are used to pass data to a server.  
  
An HTML form can contain input elements like text fields, checkboxes, radio-buttons, submit buttons and more. A form can also contain select lists, textarea, fieldset, legend, and label elements.  
  
The <form> tag is used to create an HTML form:  
  
< form>  
.  
input elements  
.  
< /form>  
  
HTML Forms - The Input Element  
The most important form element is the <input> element.  
  
The <input> element is used to select user information.  
  
An <input> element can vary in many ways, depending on the type attribute. An <input> element can be of type text field, checkbox, password, radio button, submit button, and more.  
  
The most common input types are described below.  
  
Text Fields  
< input type="text"> defines a one-line input field that a user can enter text into:  
  
< form>  
First name: <input type="text" name="firstname"><br>  
Last name: <input type="text" name="lastname">  
< /form>  
How the HTML code above looks in a browser:  
  
First name:  
Last name:  
Note: The form itself is not visible. Also note that the default width of a text field is 20 characters.  
  
Password Field  
< input type="password"> defines a password field:  
  
< form>  
Password: <input type="password" name="pwd">  
< /form>  
How the HTML code above looks in a browser:  
  
Password:  
Note: The characters in a password field are masked (shown as asterisks or circles).  
  
Radio Buttons  
< input type="radio"> defines a radio button. Radio buttons let a user select ONLY ONE of a limited number of choices:  
  
< form>  
< input type="radio" name="sex" value="male">Male<br>  
< input type="radio" name="sex" value="female">Female  
< /form>  
How the HTML code above looks in a browser:  
  
Male  
Female  
Checkboxes  
< input type="checkbox"> defines a checkbox. Checkboxes let a user select ZERO or MORE options of a limited number of choices.  
  
< form>  
< input type="checkbox" name="vehicle" value="Bike">I have a bike<br>  
< input type="checkbox" name="vehicle" value="Car">I have a car  
< /form>  
How the HTML code above looks in a browser:  
  
I have a bike  
I have a car  
Submit Button  
< input type="submit"> defines a submit button.  
  
A submit button is used to send form data to a server. The data is sent to the page specified in the form's action attribute. The file defined in the action attribute usually does something with the received input:  
  
< form name="input" action="demo\_form\_action.asp" method="get">  
Username: <input type="text" name="user">  
< input type="submit" value="Submit">  
< /form>  
How the HTML code above looks in a browser:  
  
Username:  
If you type some characters in the text field above, and click the "Submit" button, the browser will send your input to a page called "demo\_form\_action.asp". The page will show you the received input.  
  
Examples  
More Examples  
Radio buttons  
< !DOCTYPE html>  
< html>  
< body>  
  
< form action="">  
< input type="radio" name="sex" value="male">Male<br>  
< input type="radio" name="sex" value="female">Female  
< /form>  
  
< p><b>Note:</b> When a user clicks on a radio-button, it becomes checked, and all other radio-buttons with equal name become unchecked.</p>  
  
< /body>  
< /html>  
  
How to create radio buttons.  
  
Checkboxes  
< !DOCTYPE html>  
< html>  
< body>  
  
< form action="">  
< input type="checkbox" name="vehicle" value="Bike">I have a bike<br>  
< input type="checkbox" name="vehicle" value="Car">I have a car  
< /form>  
  
< /body>  
< /html>  
  
How to create checkboxes. A user can select or unselect a checkbox.  
  
Simple drop-down list  
< !DOCTYPE html>  
< html>  
< body>  
  
< form action="">  
< select name="cars">  
< option value="volvo">Volvo</option>  
< option value="saab">Saab</option>  
< option value="fiat">Fiat</option>  
< option value="audi">Audi</option>  
< /select>  
< /form>  
  
< /body>  
< /html>  
  
How to create a simple drop-down list.  
  
Drop-down list with a pre-selected value  
< !DOCTYPE html>  
< html>  
< body>  
  
< form action="">  
< select name="cars">  
< option value="volvo">Volvo</option>  
< option value="saab">Saab</option>  
< option value="fiat" selected>Fiat</option>  
< option value="audi">Audi</option>  
< /select>  
< /form>  
  
< /body>  
< /html>  
  
How to create a drop-down list with a pre-selected value.  
  
Textarea  
< !DOCTYPE html>  
< html>  
< body>  
  
< textarea rows="10" cols="30">  
The cat was playing in the garden.  
< /textarea>  
  
< /body>  
< /html>  
  
How to create a multi-line text input control. In a text-area the user can write an unlimited number of characters.  
  
Create a button  
< !DOCTYPE html>  
< html>  
< body>  
  
< form action="">  
< input type="button" value="Hello world!">  
< /form>  
  
< /body>  
< /html>  
  
How to create a button.  
  
Examples  
Form Examples  
Fieldset around form-data  
< !DOCTYPE html>  
< html>  
< body>  
  
< form action="">  
< fieldset>  
< legend>Personal information:</legend>  
Name: <input type="text" size="30"><br>  
E-mail: <input type="text" size="30"><br>  
Date of birth: <input type="text" size="10">  
< /fieldset>  
< /form>  
  
< /body>  
< /html>  
  
How to create a border around elements in a form.  
  
Form with text fields and a submit button  
< !DOCTYPE html>  
< html>  
< body>  
  
< form name="input" action="demo\_form\_action.asp" method="get">  
First name: <input type="text" name="FirstName" value="Mickey"><br>  
Last name: <input type="text" name="LastName" value="Mouse"><br>  
< input type="submit" value="Submit">  
< /form>  
  
< p>If you click the "Submit" button, the form-data will be sent to a page called "demo\_form\_action.asp".</p>  
  
< /body>  
< /html>  
  
How to create a form with two text fields and a submit button.  
  
Form with checkboxes  
< !DOCTYPE html>  
< html>  
< body>  
  
< form name="input" action="demo\_form\_action.asp" method="get">  
< input type="checkbox" name="vehicle" value="Bike">I have a bike<br>  
< input type="checkbox" name="vehicle" value="Car">I have a car  
< br><br>  
< input type="submit" value="Submit">  
< /form>  
  
< p>If you click the "Submit" button, the form-data will be sent to a page called "demo\_form\_action.asp".</p>  
  
< /body>  
< /html>  
  
How to create a form with two checkboxes and a submit button.  
  
Form with radio buttons  
< !DOCTYPE html>  
< html>  
< body>  
  
< form name="input" action="demo\_form\_action.asp" method="get">  
< input type="radio" name="sex" value="male">Male<br>  
< input type="radio" name="sex" value="female">Female<br>  
< input type="submit" value="Submit">  
< /form>  
  
< p>If you click the "Submit" button, the form-data will be sent to a page called "demo\_form\_action.asp".</p>  
  
< /body>  
< /html>  
  
How to create a form with two radio buttons, and a submit button.  
  
Send e-mail from a form  
< !DOCTYPE html>  
< html>  
< body>  
  
< h3>Send e-mail to** [**someone@example.com**](mailto:someone@example.com)**:</h3>  
  
< form action="MAILTO:**[**someone@example.com**](mailto:someone@example.com)**" method="post" enctype="text/plain">  
Name:<br>  
< input type="text" name="name" value="your name"><br>  
E-mail:<br>  
< input type="text" name="mail" value="your email"><br>  
Comment:<br>  
< input type="text" name="comment" value="your comment" size="50"><br><br>  
< input type="submit" value="Send">  
< input type="reset" value="Reset">  
< /form>  
  
< /body>  
< /html>  
  
How to send e-mail from a form.  
  
HTML Form Tags  
  
Tag    Description  
< form>    Defines an HTML form for user input  
< input>    Defines an input control  
< textarea>    Defines a multiline input control (text area)  
< label>    Defines a label for an <input> element  
< fieldset>    Groups related elements in a form  
< legend>    Defines a caption for a <fieldset> element  
< select>    Defines a drop-down list  
< optgroup>    Defines a group of related options in a drop-down list  
< option>    Defines an option in a drop-down list  
< button>    Defines a clickable button  
< datalist>    Specifies a list of pre-defined options for input controls  
< keygen>    Defines a key-pair generator field (for forms)  
< output>    Defines the result of a calculation**

**H19**

**Syntax for adding an iframe:  
  
< iframe src="URL"></iframe>  
The URL points to the location of the separate page.  
  
Iframe - Set Height and Width  
The height and width attributes are used to specify the height and width of the iframe.  
  
The attribute values are specified in pixels by default, but they can also be in percent (like "80%").  
  
Example  
  
< iframe src="demo\_iframe.htm" width="200" height="200"></iframe>  
  
< !DOCTYPE html>  
< html>  
< body>  
  
< iframe src="demo\_iframe.htm" width="200" height="200"></iframe>  
  
< p>Some older browsers don't support iframes.</p>  
< p>If they don't, the iframe will not be visible.</p>  
  
  
< /body>  
< /html>  
  
  
Iframe - Remove the Border  
The frameborder attribute specifies whether or not to display a border around the iframe.  
  
Set the attribute value to "0" to remove the border:  
  
Example  
  
< iframe src="demo\_iframe.htm" frameborder="0"></iframe>  
  
< !DOCTYPE html>  
< html>  
< body>  
  
< iframe src="demo\_iframe.htm" frameborder="0"></iframe>  
  
< p>Some older browsers don't support iframes.</p>  
< p>If they don't, the iframe will not be visible.</p>  
  
  
< /body>  
< /html>  
  
  
Use iframe as a Target for a Link  
An iframe can be used as the target frame for a link.  
  
The target attribute of a link must refer to the name attribute of the iframe:  
  
Example  
  
< iframe src="demo\_iframe.htm" name="iframe\_a"></iframe>  
< p><a href="**[**http://www.w3schools.com**](http://www.w3schools.com/)**" target="iframe\_a">W3Schools.com</a></p>  
  
< !DOCTYPE html>  
< html>  
< body>  
  
< iframe src="demo\_iframe.htm" name="iframe\_a"></iframe>  
< p><a href="**[**http://www.w3schools.com**](http://www.w3schools.com/)**" target="iframe\_a">W3Schools.com</a></p>  
  
< p><b>Note:</b> Because the target of the link matches the name of the iframe, the link will open in the iframe.</p>  
  
< /body>  
< /html>  
  
  
HTML iframe Tag  
Tag    Description  
< iframe>    Defines an inline frame**

**H20**

**Color Names Supported by All Browsers  
140 color names are defined in the HTML and CSS color specification (17 standard colors plus 123 more). The table below lists them all, along with their hexadecimal values.  
  
Note    Tip: The 17 standard colors are: aqua, black, blue, fuchsia, gray, green, lime, maroon, navy, olive, orange, purple, red, silver, teal, white, and yellow.  
  
Sorted by Color Name  
Colors sorted by HEX values  
  
Click on a color name (or a hex value) to view the color as the background-color along with different text colors:  
  
Color Name    HEX     Shades    Mix  
AliceBlue     #F0F8FF         Shades    Mix  
AntiqueWhite     #FAEBD7         Shades    Mix  
Aqua     #00FFFF         Shades    Mix  
Aquamarine     #7FFFD4         Shades    Mix  
Azure     #F0FFFF         Shades    Mix  
Beige     #F5F5DC         Shades    Mix  
Bisque     #FFE4C4         Shades    Mix  
Black     #000000         Shades    Mix  
BlanchedAlmond     #FFEBCD         Shades    Mix  
Blue     #0000FF         Shades    Mix  
BlueViolet     #8A2BE2         Shades    Mix  
Brown     #A52A2A         Shades    Mix  
BurlyWood     #DEB887         Shades    Mix  
CadetBlue     #5F9EA0         Shades    Mix  
Chartreuse     #7FFF00         Shades    Mix  
Chocolate     #D2691E         Shades    Mix  
Coral     #FF7F50         Shades    Mix  
CornflowerBlue     #6495ED         Shades    Mix  
Cornsilk     #FFF8DC         Shades    Mix  
Crimson     #DC143C         Shades    Mix  
Cyan     #00FFFF         Shades    Mix  
DarkBlue     #00008B         Shades    Mix  
DarkCyan     #008B8B         Shades    Mix  
DarkGoldenRod     #B8860B         Shades    Mix  
DarkGray     #A9A9A9         Shades    Mix  
DarkGreen     #006400         Shades    Mix  
DarkKhaki     #BDB76B         Shades    Mix  
DarkMagenta     #8B008B         Shades    Mix  
DarkOliveGreen     #556B2F         Shades    Mix  
DarkOrange     #FF8C00         Shades    Mix  
DarkOrchid     #9932CC         Shades    Mix  
DarkRed     #8B0000         Shades    Mix  
DarkSalmon     #E9967A         Shades    Mix  
DarkSeaGreen     #8FBC8F         Shades    Mix  
DarkSlateBlue     #483D8B         Shades    Mix  
DarkSlateGray     #2F4F4F         Shades    Mix  
DarkTurquoise     #00CED1         Shades    Mix  
DarkViolet     #9400D3         Shades    Mix  
DeepPink     #FF1493         Shades    Mix  
DeepSkyBlue     #00BFFF         Shades    Mix  
DimGray     #696969         Shades    Mix  
DodgerBlue     #1E90FF         Shades    Mix  
FireBrick     #B22222         Shades    Mix  
FloralWhite     #FFFAF0         Shades    Mix  
ForestGreen     #228B22         Shades    Mix  
Fuchsia     #FF00FF         Shades    Mix  
Gainsboro     #DCDCDC         Shades    Mix  
GhostWhite     #F8F8FF         Shades    Mix  
Gold     #FFD700         Shades    Mix  
GoldenRod     #DAA520         Shades    Mix  
Gray     #808080         Shades    Mix  
Green     #008000         Shades    Mix  
GreenYellow     #ADFF2F         Shades    Mix  
HoneyDew     #F0FFF0         Shades    Mix  
HotPink     #FF69B4         Shades    Mix  
IndianRed      #CD5C5C         Shades    Mix  
Indigo      #4B0082         Shades    Mix  
Ivory     #FFFFF0         Shades    Mix  
Khaki     #F0E68C         Shades    Mix  
Lavender     #E6E6FA         Shades    Mix  
LavenderBlush     #FFF0F5         Shades    Mix  
LawnGreen     #7CFC00         Shades    Mix  
LemonChiffon     #FFFACD         Shades    Mix  
LightBlue     #ADD8E6         Shades    Mix  
LightCoral     #F08080         Shades    Mix  
LightCyan     #E0FFFF         Shades    Mix  
LightGoldenRodYellow     #FAFAD2         Shades    Mix  
LightGray     #D3D3D3         Shades    Mix  
LightGreen     #90EE90         Shades    Mix  
LightPink     #FFB6C1         Shades    Mix  
LightSalmon     #FFA07A         Shades    Mix  
LightSeaGreen     #20B2AA         Shades    Mix  
LightSkyBlue     #87CEFA         Shades    Mix  
LightSlateGray     #778899         Shades    Mix  
LightSteelBlue     #B0C4DE         Shades    Mix  
LightYellow     #FFFFE0         Shades    Mix  
Lime     #00FF00         Shades    Mix  
LimeGreen     #32CD32         Shades    Mix  
Linen     #FAF0E6         Shades    Mix  
Magenta     #FF00FF         Shades    Mix  
Maroon     #800000         Shades    Mix  
MediumAquaMarine     #66CDAA         Shades    Mix  
MediumBlue     #0000CD         Shades    Mix  
MediumOrchid     #BA55D3         Shades    Mix  
MediumPurple     #9370DB         Shades    Mix  
MediumSeaGreen     #3CB371         Shades    Mix  
MediumSlateBlue     #7B68EE         Shades    Mix  
MediumSpringGreen     #00FA9A         Shades    Mix  
MediumTurquoise     #48D1CC         Shades    Mix  
MediumVioletRed     #C71585         Shades    Mix  
MidnightBlue     #191970         Shades    Mix  
MintCream     #F5FFFA         Shades    Mix  
MistyRose     #FFE4E1         Shades    Mix  
Moccasin     #FFE4B5         Shades    Mix  
NavajoWhite     #FFDEAD         Shades    Mix  
Navy     #000080         Shades    Mix  
OldLace     #FDF5E6         Shades    Mix  
Olive     #808000         Shades    Mix  
OliveDrab     #6B8E23         Shades    Mix  
Orange     #FFA500         Shades    Mix  
OrangeRed     #FF4500         Shades    Mix  
Orchid     #DA70D6         Shades    Mix  
PaleGoldenRod     #EEE8AA         Shades    Mix  
PaleGreen     #98FB98         Shades    Mix  
PaleTurquoise     #AFEEEE         Shades    Mix  
PaleVioletRed     #DB7093         Shades    Mix  
PapayaWhip     #FFEFD5         Shades    Mix  
PeachPuff     #FFDAB9         Shades    Mix  
Peru     #CD853F         Shades    Mix  
Pink     #FFC0CB         Shades    Mix  
Plum     #DDA0DD         Shades    Mix  
PowderBlue     #B0E0E6         Shades    Mix  
Purple     #800080         Shades    Mix  
Red     #FF0000         Shades    Mix  
RosyBrown     #BC8F8F         Shades    Mix  
RoyalBlue     #4169E1         Shades    Mix  
SaddleBrown     #8B4513         Shades    Mix  
Salmon     #FA8072         Shades    Mix  
SandyBrown     #F4A460         Shades    Mix  
SeaGreen     #2E8B57         Shades    Mix  
SeaShell     #FFF5EE         Shades    Mix  
Sienna     #A0522D         Shades    Mix  
Silver     #C0C0C0         Shades    Mix  
SkyBlue     #87CEEB         Shades    Mix  
SlateBlue     #6A5ACD         Shades    Mix  
SlateGray     #708090         Shades    Mix  
Snow     #FFFAFA         Shades    Mix  
SpringGreen     #00FF7F         Shades    Mix  
SteelBlue     #4682B4         Shades    Mix  
Tan     #D2B48C         Shades    Mix  
Teal     #008080         Shades    Mix  
Thistle     #D8BFD8         Shades    Mix  
Tomato     #FF6347         Shades    Mix  
Turquoise     #40E0D0         Shades    Mix  
Violet     #EE82EE         Shades    Mix  
Wheat     #F5DEB3         Shades    Mix  
White     #FFFFFF         Shades    Mix  
WhiteSmoke     #F5F5F5         Shades    Mix  
Yellow     #FFFF00         Shades    Mix  
YellowGreen     #9ACD32         Shades    Mix**

**H21**