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HTML tags overview

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Topics

- Head Tag
- Elements categories
- HTML Entities
- Colors
- Global Attributes
- Paragraphs
- Text Formatting
- Hyperlinks (Links)
- Headings
- Images
- Lists

Topics (cont.)

- Tables
- HTML Layouts – Div
- HTML Layouts – Span
- Forms
- Iframes
- URL Encoding

HTML Head

- 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>.
- HTML <title> Element
 - The <title> tag defines the title of the document
 - The <title> tag defines a title in the browser toolbar
 - The <title> tag provides a title for the page when it is added to favorites
 - The <title> tag displays a title for the page in search-engine results
 - The <title> tag must be no longer than 70 character

HTML Head (Cont.)

- HTML <base> Element
 - The <base> tag specifies the base URL/target for all relative URLs in a page:
 - <head>
 <base href="http://www.mysite.com/images/" target="_blank">
 </head>
- 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:
 - <link rel="stylesheet" type="text/css" href="mystyle.css">

HTML Head (Cont.)

- 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>
```


HTML Head (Cont.)

- 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.

HTML Head (Cont.)

- <META> Tags – Examples
 - 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">
 - Meta Name Robots
 - <meta name="robots" content="noindex, nofollow">

HTML elements categories

- HTML elements can be divided into two categories :
 - block level
 - inline elements.
- Block level elements
 - 1. HTML block level elements can appear in the body of an HTML page.
 - 2. It can contain other block level as well as inline elements.
 - 3. By default, block-level elements begin on new lines.
 - 4. block level elements create larger structures (than inline elements).
- List of block level elements
 - P, h1-h6, ol, ul, pre, address, blockquote, dl, div, fieldset, form, hr, noscript, table

HTML inline elements

- HTML inline elements:
 - 1. HTML inline level elements can appear in the body of an HTML page.
 - 2. It can contain data and other inline elements.
 - 3. By default, inline elements do not begin on new lines.
 - 4. inline elements create shorter structures (than block level elements).
- List of inline elements
 - b, big, i, small, tt, abbr, acronym, cite, code, dfn, em, kbd, strong, samp, var, a, bdo, br, img, map, object, q, script, span, sub, sup, button, input, label, select, textarea

HTML Entities

- Some characters are reserved in HTML.
- Reserved characters in HTML must be replaced with character entities.
- If you use the less than (<) or greater than (>) signs in your text, the browser might mix them with tags.
- Character entities are used to display reserved characters in HTML.
 - &entity_name; or &#entity_number;
- To display a less than sign we must write: < or <
- Browsers will always truncate spaces in HTML pages. To add real spaces to your text, you can use the character entity.
- Examples: © & € > ‘ ™

HTML Colors

- Colors are displayed combining RED, GREEN, and BLUE light.
- Colors are defined using a hexadecimal (hex) notation for the combination of Red, Green, and Blue color values (RGB).
- The lowest value that can be given to one of the light sources is 0 (hex 00). The highest value is 255 (hex FF).
- Hex values are written as 3 double digit numbers, starting with a # sign.
- The combination of Red, Green and Blue values from 0 to 255 gives a total of more than 16 million different colors to play with (256 x 256 x 256).

HTML Global attributes

- The global attributes below can be used on any HTML element.
 - 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)
 - id - Specifies a unique id for an element
 - lang - Specifies the language of the element's content
 - style Specifies an inline CSS style for an element
 - tabindex- Specifies the tabbing order of an element
 - title- Specifies extra information about an element
 - dir- Specifies the text direction for the content in an element
 - translate - New in HTML5, specifies whether the content of an element should be translated or not
 - hidden- specifies that an element is not yet, or is no longer, relevant

HTML Paragraphs

- HTML documents are divided into paragraphs.
- Paragraphs are defined with the `<p>` tag.
- Paragraphs is block level element, so Browsers automatically add an empty line before and after a paragraph.
- Use the `
` tag if you want a line break (a new line) without starting a new paragraph
 - The `
` element is an empty HTML element. It has no end tag.
- The align attribute specifies the alignment of the text within a paragraph (left, right, center, justify).
 - The align attribute of `<p>` is not supported in HTML5. Use CSS instead.
 - `<p style="text-align:right">`

HTML Text Formatting

- HTML uses tags like `` and `<i>` for formatting output, like bold or italic text.
- These HTML tags are called formatting tags:
- `` specifies bold text.
 - should be used as a LAST resort when no other tag is more appropriate.
- `` tag is a phrase tag. Indicates emphasis.
- `` tag indicates stronger emphasis.
- `<i>` content of this tag is usually displayed in italic.
- Often `` renders as ``, and `` renders as `<i>`.
 - However, there is a difference in the meaning of these tags
 - `` or `<i>` defines bold or italic text only.
 - `` or `` means understands as "important"

HTML Text Formatting (cont.)

- `<small>` tag defines smaller text (and other side comments).
- `<sub>` tag defines subscript text. Subscript text appears half a character below the baseline.
- `<sup>` defines superscript text. Superscript text appears half a character above the baseline.
- `<ins>` tag defines a text that has been inserted into a document
 - It's usefull when authors need to show which piece of content has been added during an update of the document.
- `` tag defines text that has been deleted from a document.
- Both of `<ins>` and `` have 2 attribute cite and datetime which specifies modification information.
- `<mark>` tag defines marked text (new in HTML5).

HTML "Computer Output" Tags

- `<code>` tag is a phrase tag. It defines a piece of computer code.
- `<kbd>` tag is a phrase tag. It defines keyboard input.
- `<samp>` tag is a phrase tag. It defines sample output from a computer program.
- `<var>` tag is a phrase tag. It defines a variable.
- `<pre>` tag defines preformatted text
 - Text in a `<pre>` element is displayed in a fixed-width font (usually Courier), and it preserves both spaces and line breaks.

Citations, Quotations, and Definition Tags

- `<abbr>` tag indicates an abbreviation or an acronym
 - By marking up abbreviations you can give useful information to browsers, spell checkers, translation systems and search-engine indexers.
 - `<abbr title="Instigate training center">ITC</abbr>`
- `<address>` tag defines the contact information for the author/owner of a document or an article.
 - `<address>` element is inside the `<body>` element represents contact information for the document.
 - HTML 4.01 does not support the `<article>` tag, so in HTML 4.01 the `<address>` tag always defines the contact information of the document's author/owner.
- `<bdo>` tag (Bi-Directional Override) is used to override the current text direction.
 - Attributes – `dir`, values `ltr` or `rtl`

Citations, Quotations, and Definition Tags (cont.)

- `<blockquote>` tag specifies a section that is quoted from another source.
 - Attributes – cite – URL - Specifies the source of the quotation
- `<q>` tag defines a short quotation.
- `<cite>` tag (citation) defines the title of a work (e.g. a book, a song, a movie, a TV show, a painting, a sculpture, etc.)
- `<dfn>` tag is a phrase tag. It defines a definition term.
 - `<p><dfn title="Google chrome browser">Chrome</dfn>` is the most popular browser used underwater.`</p>`

Hyperlinks (Links)

- HTML <a> (Anchor) 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.
- Most important attribute of the <a> element is the href attribute, which indicates the link's destination.
- When href attribute specified then the following attribute can be persist: download, hreflang, media, rel, target
 - download attribute specifies that the target will be downloaded when a user clicks on the hyperlink.
 - hreflang – *language_code*- Specifies the language of the linked document. Example: "en", "hy", "ru"
 - media attribute specifies what media/device the linked document is optimized for. media attribute is new in HTML5.

Hyperlinks (cont.)

- rel attribute specifies the relationship between the current document and the linked document.
- Browsers do not use this attribute in any way. However, search engines can use this attribute to get more information about a link.
- Rel attribute values
 - nofollow - links to an unendorsed document, like a paid link. ("nofollow" is used by Google, to specify that the Google search spider should not follow that link)
 - author - Links to the author of the document
 - help - Links to a help document
 - alternate - Links to an alternate version of the document
 - stylesheet - URL to a style sheet to import
 - next, prev - Indicates that the document is a part of a series

Hyperlinks (cont.)

- target attribute specifies a window or a frame where the linked document is loaded.
- Target attribute values
 - _blank Load in a new window
 - _self Load in the same frame as it was clicked
 - _parent Load in the parent frameset
 - _top Load in the full body of the window
 - framename Load in a named frame
- The target attribute is deprecated and its use as a layout mechanism, like that of the frameset, is no longer common.

HTML Headings

- Headings are defined with the `<h1>` to `<h6>` tags.
- `<h1>` defines the most important heading. `<h6>` defines the least important heading.
- Search engines use your headings to index the structure and content of your web pages.
- H1 headings should be used as main headings, followed by H2 headings, then the less important H3 headings, and so on.
- Only one H1 tag allowed in the document, more than one will be considered as abuse.
- Do not use the FONT tags to adjust formatting of heading tags. Experts recommend using cascading style sheets for specifying font color, font-size, font-face and backgrounds

HTML Images

- In HTML, images are defined with the `` tag.
- The `` 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.
 - ``
- The required `alt` attribute specifies an alternate text for an image, if the image cannot be displayed.
- The `height` and `width` attributes are used to specify the height and width of an image.
 - If height and width is not set, browser dose not know the size of the image and page layout will change during loading

HTML Images - map

- <map> tag is used to define a client-side image-map. An image-map is an image with clickable areas.
- required name attribute of the <map> element is associated with the 's **usemap** attribute and creates a relationship between the image and the map.
- <map> element contains a number of <area> elements, that defines the clickable areas in the image map.
- <map> **name** attribute is associated with the 's usemap attribute and creates a relationship between the image and the map.
- <area> tag defines an area inside an image-map (an image-map is an image with clickable areas).
- <area> element is always nested inside a <map> tag.
- Attributes of <area> tag: alt, coords, href, shape(rect,circle,poly)
- Coords - specifies coordinates of shape - coords="0,0,82,126"

Lists

- HTML Unordered Lists
 - An unordered list starts with the `` tag. Each list item starts with the `` tag. The list items are marked with bullets
- HTML Ordered Lists
 - An ordered list starts with the `` tag. Each list item starts with the `` tag.
 - The list items are marked with numbers.
- 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):

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)
- `<td>` elements are the data containers in the table.
- To add borders with CSS, use the border property:
 - `style="border:1px solid black;"`
- Prior to the creation of CSS, HTML `<table>` elements were often used as a method for page layout. This usage has been discouraged since HTML 4, and the `<table>` element should not be used for layout purposes.

HTML <div> and Tag

- The <div> tag defines a division or a section in an HTML document.
- <div> tag is used to group block-elements to format them with CSS.
- <div> defines a section in a document (block-level)
- By default, browsers always place a line break before and after the <div> element. However, this can be changed with CSS.
- The align attribute not supported in HTML5.
- tag is used to group inline-elements in a document.
- When a text is hooked in a element, you can style it with CSS, or manipulate it with JavaScript.
 - <p>This is Span</p>

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: input, button, option, select, textarea, fieldset, legend, and label elements.
- The <form> tag is used to create an HTML form:
- The action attribute specifies where to send the form-data when a form is submitted. Possible values: URL
 - <form action="demo_form.asp" method="get">
 - <input type="submit" value="Submit">
 - </form>

HTML <input> Tag

- The <input> tag specifies an input field where the user can enter data.
- An input field can vary in many ways, depending on the type attribute.
- Input types can be: button, checkbox, file, hidden, image, password, radio, submit, text
- HTML5 has the following new input types: color, date, datetime, datetime-local, month, week, time, email, number, range, search, tel, and url.
- <input> tag attributes can be allowed depended from input type, this is all available attributes list:
 - accept, alt, autocomplete, autofocus, checked, disabled, formaction, formenctype, formmethod, formnovalidate, formtarget, height, list, max, maxlength, min, multiple, name, readonly, required, size, src, type, value, width

HTML <textarea> Tag

- The <textarea> tag defines a multi-line text input control.
- A text area can hold an unlimited number of characters, and the text renders in a fixed-width font.
- The size of a text area can be specified by the cols and rows attributes, or even better; through CSS' height and width properties.
- <textarea> tag attributes: cols, disabled, name, readonly, rows
- HTML5 has added several new attributes: autofocus, form, maxlength, placeholder, required, wrap
- Examples:
 - <textarea rows="4" cols="50" wrap="hard" autofocus >
 - <textarea name="comment" wrap="soft" maxlength="50" required>
 - <textarea placeholder="Input your Name" >

HTML <button> Tag

- The <button> tag defines a clickable button.
- Inside a <button> element you can put content, like text or images
- Always specify the type attribute for a <button> element. Different browsers use different default types for the <button> element.
 - <button type="button">Click Here!</button>
- <button> tag attributes: autofocus, disabled, form, formaction, formenctype, formmethod, formnovalidate, formtarget, name, type, value
- The type attribute specifies the type of button.
 - <button type="button|submit|reset">
- In a form, the button and its value is only submitted if the button itself was used to submit the form.

HTML <select> Tag

- The <select> element is used to create a drop-down list.
- The <option> tags inside the <select> element define the available options in the list.
- The <option> tag can be used without any attributes(disabled, selected, label, value), but you usually need the value attribute, which indicates what is sent to the server.
- The <optgroup> is used to group related options in a drop-down list.
- Attribute size – Defines the number of visible options in a drop-down list
- <Select> Example
 - <select size="2" name="Yes/no" autofocus multiple>
 - <option value="yes">Yes</option>
 - <option value="no">No</option>
 - </select>

HTML Forms (cont)

- The `<fieldset>` tag is used to group related elements in a form.
- The `<fieldset>` tag draws a box around the related elements.
- The `<label>` tag defines a label for an `<input>` element.
- The `<label>` element does not render as anything special for the user. However, it provides a usability improvement for mouse users, because if the user clicks on the text within the `<label>` element, it toggles the control.
- The `for` attribute of the `<label>` tag should be equal to the `id` attribute of the related element to bind them together.
 - `<label for="male">Male</label>`
 - `<input type="radio" name="sex" id="male" value="male">`

HTML Iframes

- An iframe is used to display a web page within a web page.
- Syntax for adding an iframe: `<iframe src="URL"></iframe>`
- The height and width attributes are used to specify the height and width of the iframe.
- An iframe can be used as the target frame for a link.
 - `<iframe src="iframe.html" name="iframe_a"></iframe>`
`Google`
- The sandbox attribute enables a set of restrictions for the content in the inline frame.
 - Values: allow-same-origin, allow-top-navigation, allow-forms, allow-scripts
 - Values "" will apply all restrictions
- For web site security iFrames must be restricted from Header, this section will be described in Web site security lesson.

URL Encoding

- URLs can only be sent over the Internet using the ASCII character-set.
- Since URLs often contain characters outside the ASCII set, the URL has to be converted into a valid ASCII format.
- URL encoding converts characters into a format that can be transmitted over the Internet.
- URL encoding replaces non ASCII characters with a "%" followed by two hexadecimal digits
- URLs cannot contain spaces. URL encoding normally replaces a space with a + sign.
- Example encoding we can view on <http://www.url-encode-decode.com>
- In JavaScript, PHP, and ASP there are functions that can be used to URL encode a string.



Thank You