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HTML

* HTML stands for Hyper Text Markup Language
* HTML is the standard markup language for creating Web pages
* HTML describes the structure of a Web page
* HTML consists of a series of elements
* HTML elements tell the browser how to display the content
* HTML elements label pieces of content such as "this is a heading", "this is a paragraph", "this is a link", etc

**HTML Element**

An HTML element is defined by a start tag, some content, and an end tag:

<tagname>Content goes here...</tagname>

The HTML ****element**** is everything from the start tag to the end tag:

## HTML Documents

All HTML documents must start with a document type declaration: <!DOCTYPE html>.

The HTML document itself begins with <html> and ends with </html>.

The visible part of the HTML document is between <body> and </body>.

HTML Attributes

* All HTML elements can have ****attributes****
* The href attribute of <a> specifies the URL of the page the link goes to
* The src attribute of <img> specifies the path to the image to be displayed
* The width and height attributes of <img> provide size information for images
* The alt attribute of <img> provides an alternate text for an image
* The style attribute is used to add styles to an element, such as color, font, size, and more
* The lang attribute of the <html> tag declares the language of the Web page
* The title attribute defines some extra information about an element

HTML Heading

<h1>to <h6> tags display headings in descending order

HTML Paragraph

<P >tag displays content in pargraph and skips spaces if we want spaces we need to use <pre> tag skips spaces. <hr> inserts horizontal line <br> is a break line.

HTML style

* Use the style attribute for styling HTML elements
* Use background-color for background color
* Use color for text colors
* Use font-family for text fonts
* Use font-size for text sizes
* Use text-align for text alignment

HTML Format tags

Formatting elements were designed to display special types of text:

* <b> - Bold text
* <strong> - Important text
* <i> - Italic text
* <em> - Emphasized text
* <mark> - Marked text
* <small> - Smaller text
* <del> - Deleted text
* <ins> - Inserted text
* <sub> - Subscript text
* <sup> - Superscript text

HTML Comments

<!--your comment -->

HTML CSS

* Use the HTML style attribute for inline styling
* Use the HTML <style> element to define internal CSS
* Use the HTML <link> element to refer to an external CSS file
* Use the HTML <head> element to store <style> and <link> elements
* Use the CSS color property for text colors
* Use the CSS font-family property for text fonts
* Use the CSS font-size property for text sizes
* Use the CSS border property for borders
* Use the CSS padding property for space inside the border
* Use the CSS margin property for space outside the border

HTML LINKS

The most important attribute of the <a> element is the href attribute, which indicates the link's destination.

The link text is the part that will be visible to the reader.

Clicking on the link text, will send the reader to the specified URL address.

By default, the linked page will be displayed in the current browser window. To change this, you must specify another target for the link.

The target attribute specifies where to open the linked document.

The target attribute can have one of the following values:

* \_self - Default. Opens the document in the same window/tab as it was clicked
* \_blank - Opens the document in a new window or tab
* \_parent - Opens the document in the parent frame
* \_top - Opens the document in the full body of the window

HTML Bookmarks

* Use the id attribute (id="value") to define bookmarks in a page
* Use the href attribute (href="#value") to link to the bookmark

HTML Images

The required src attribute specifies the path (URL) to the image.The alt specifes text.

<img src=”path” alt=”text”>

HTML background-image

To add a background image on an HTML element, use the HTML style attribute and the CSS background-image property

<body Style=”background-image:url(‘path’)></body>

HTML Tables

The <table> tag defines an HTML table.

Each table row is defined with a <tr> tag. Each table header is defined with a <th> tag. Each table data/cell is defined with a <td> tag.

By default, the text in <th> elements are bold and centered.

By default, the text in <td> elements are regular and left-aligned.

* Use the HTML <table> element to define a table
* Use the HTML <tr> element to define a table row
* Use the HTML <td> element to define a table data
* Use the HTML <th> element to define a table heading
* Use the HTML <caption> element to define a table caption
* Use the CSS border property to define a border
* Use the CSS border-collapse property to collapse cell borders
* Use the CSS padding property to add padding to cells
* Use the CSS text-align property to align cell text
* Use the CSS border-spacing property to set the spacing between cells
* Use the colspan attribute to make a cell span many columns
* Use the rowspan attribute to make a cell span many rows
* Use the id attribute to uniquely define one table

HTML Lists

* Use the HTML <ul> element to define an unordered list
* Use the CSS list-style-type property to define the list item marker
* Use the HTML <li> element to define a list item
* Lists can be nested
* List items can contain other HTML elements
* Use the CSS property float:left to display a list horizontally
* Use the HTML <ol> element to define an ordered list
* Use the HTML type attribute to define the numbering type
* Use the HTML <li> element to define a list item
* Lists can be nested
* List items can contain other HTML elements
* Use the HTML <dl> element to define a description list
* Use the HTML <dt> element to define the description term
* Use the HTML <dd> element to describe the term in a description list

HTML Block and Inline

* There are two display values: block and inline
* A block-level element always starts on a new line and takes up the full width available
* An inline element does not start on a new line and it only takes up as much width as necessary
* The <div> element is a block-level and is often used as a container for other HTML elements
* The <span> element is an inline container used to mark up a part of a text, or a part of a document

HTML Classes

* The HTML class attribute specifies one or more class names for an element
* Classes are used by CSS and JavaScript to select and access specific elements
* The class attribute can be used on any HTML element
* The class name is case sensitive
* Different HTML elements can point to the same class name

HTML id

* The id attribute is used to specify a unique id for an HTML element
* The value of the id attribute must be unique within the HTML document
* The id attribute is used by CSS and JavaScript to style/select a specific element
* The value of the id attribute is case sensitive
* The id attribute is also used to create HTML bookmarks
* JavaScript can access an element with a specific id with the getElementById() method

HTML iframes

* The HTML <iframe> tag specifies an inline frame
* The src attribute defines the URL of the page to embed
* Always include a title attribute (for screen readers)
* The height and width attributes specifies the size of the iframe
* Use border:none; to remove the border around the iframe

HTML JavaScript

The HTML <script> tag is used to define a client-side script (JavaScript).

The <script> element either contains script statements, or it points to an external script file through the src attribute.

Common uses for JavaScript are image manipulation, form validation, and dynamic changes of content.

To select an HTML element, JavaScript most often uses the document.getElementById() method or document.getElementByClassName() or document.querySelector().

HTML Head

* The <head> element is a container for metadata (data about data)
* The <head> element is placed between the <html> tag and the <body> tag
* The <title> element is required and it defines the title of the document
* The <style> element is used to define style information for a single document
* The <link> tag is most often used to link to external style sheets
* The <meta> element is typically used to specify the character set, page description, keywords, author of the document, and viewport settings
* The <script> element is used to define client-side JavaScripts
* The <base> element specifies the base URL and/or target for all relative URLs in a page

HTML Layout

* <header> - Defines a header for a document or a section
* <nav> - Defines a set of navigation links
* <section> - Defines a section in a document
* <article> - Defines an independent, self-contained content
* <aside> - Defines content aside from the content (like a sidebar)
* <footer> - Defines a footer for a document or a section
* <details> - Defines additional details that the user can open and close on demand
* <summary> - Defines a heading for the <details> element

HTML ComputerCode

* The <kbd> element defines keyboard input
* The <samp> element defines sample output from a computer program
* The <code> element defines a piece of computer code
* The <var> element defines a variable in programming or in a mathematical expression
* The <pre> element defines preformatted text

HTML Forms

The <form> element is a container for different types of input elements, such as: text fields, checkboxes, radio buttons, submit buttons, etc.

All the different form elements are covered in this chapter

The <input type="text"> defines a single-line input field for text input.

The <label> element is useful for screen-reader users, because the screen-reader will read out loud the label when the user focus on the input element.

The <input type="radio"> defines a radio button.

The <input type="checkbox"> defines a ****checkbox****.

Checkboxes let a user select ZERO or MORE options of a limited number of choices.

The <input type="submit"> defines a button for submitting the form data to a form-handler.

The form-handler is typically a file on the server with a script for processing input data.

The form-handler is specified in the form's action attribute

Notice that each input field must have a name attribute to be submitted.

If the name attribute is omitted, the value of the input field will not be sent at all.

HTML Form Attributes

The autocomplete attribute specifies whether a form should have autocomplete on or off.

**Notes on GET:**

* Appends the form data to the URL, in name/value pairs
* NEVER use GET to send sensitive data! (the submitted form data is visible in the URL!)
* The length of a URL is limited (2048 characters)
* Useful for form submissions where a user wants to bookmark the result
* GET is good for non-secure data, like query strings in Google

**Notes on POST:**

* Appends the form data inside the body of the HTTP request (the submitted form data is not shown in the URL)
* POST has no size limitations, and can be used to send large amounts of data.
* Form submissions with POST cannot be bookmarked

HTML Form Elements

The <fieldset> element is used to group related data in a form.

The <legend> element defines a caption for the <fieldset> element.

The <button> element defines a clickable button

The <datalist> element specifies a list of pre-defined options for an <input> element.

Users will see a drop-down list of the pre-defined options as they input data.

The list attribute of the <input> element, must refer to the id attribute of the <datalist> element.

HTML Input Types

* <input type="button">
* <input type="checkbox">
* <input type="color">
* <input type="date">
* <input type="datetime-local">
* <input type="email">
* <input type="file">
* <input type="hidden">
* <input type="image">
* <input type="month">
* <input type="number">
* <input type="password">
* <input type="radio">
* <input type="range">
* <input type="reset">
* <input type="search">
* <input type="submit">
* <input type="tel">
* <input type="text">
* <input type="time">
* <input type="url">
* <input type="week">

HTML Input Attributes

The input value attribute specifies an initial value for an input field.

The input readonly attribute specifies that an input field is read-only.

The input disabled attribute specifies that an input field should be disabled.

The input multiple attribute specifies that the user is allowed to enter more than one value in an input field.

The multiple attribute works with the following input types: email, and file.

HTML Input Form Attributes

The input form attribute specifies the form the <input> element belongs to.

The value of this attribute must be equal to the id attribute of the <form> element it belongs to.

The input formaction attribute specifies the URL of the file that will process the input when the form is submitted.

****Note:**** This attribute overrides the action attribute of the <form> element.

The formaction attribute works with the following input types: submit and image.

The input formtarget attribute specifies a name or a keyword that indicates where to display the response that is received after submitting the form

The input formnovalidate attribute specifies that an <input> element should not be validated when submitted.

****Note:**** This attribute overrides the novalidate attribute of the <form> element.