HTML TUTORIAL

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HTML INTRODUCTION

HTML, also known as Hypertext Markup Language. Used to create web pages by using some elements like hyperlinks, video, images, headings, and some other elements. HTML uses a specific DOCUMENT STRUCTURE with a lot of elements and tags like <html>,<head>,<body>, and other tags and elements.

HTML DOCUMENT STRUCTURE

HTML stands for one of the most user-friendly and easy languages in web development. Important to have a basic knowledge of its structure.

Main elements of the HTML document Structure:

1. **Document Type Declaration (DOCTYPE):**<!DOCTYPE html> defines the browser about which version of the HTML document is used.  
    **DOCTYPE IN HTML 5:** MINI COMPILER  
     
    **DOCTYPE IN OTHER PREVIOUS HTML VERSIONS:** MINI COMPILER
2. **HTML Element:**<html> is the base of every HTML document. Which contains all the work of the page.
3. **Head Section:**<head> section contains <meta>, <title>, <links>, and other resource links too.
   1. **meta:**<meta> tag stands for Metadata which is used by browsers, search engines, and other web services so when users search on the browser related to the page they will reach that page.
   2. **title:**<title> defines the title of the document which is shown on the page’s tag.
   3. **links:**<link> used to link CDN or a CSS file to the HTML file.
      1. **CDN**CDN stands for Content Delivery Network. It’s a link to files from the server. CDN includes images, videos, text, and other resources.
      2. **CSS**CSS stands for Cascading Style Sheets. It’s a style sheet language used for styling the page by pointing the tags like <body>, <h1>, and other tags.
4. **Body Section:**Main information like video, text, image, and audio are included in the body section. this is the main tag that contains all the information on the page.

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HTML Headings

HTML offers six types of headings <h1>, <h2>, <h3>, <h4>, <h5>, and <h6>. Which represents different levels of headings

Definitions of the headings:

<h1> represents the highest level of heading in HTML, Used to define the main heading or title of the entire page.

<h2> represents the second level of the heading in HTML, used to define subheadings that are less important than the main heading (H1).

<h3> represents the third level of the heading in HTML, Used to define the subheading of the main heading in the page that are less important than h1 and h2.

<h4> represents the fourth level of the heading in HTML, mainly used to define the topic with the H3 heading.

<h5> and <h6> represent the lowest level of the heading in HTML, mostly used to define Bullet points after subheadings or headings.

Subheading definition

A mini-headline or text that found under the main headline to give more information about the related information.

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HTML PARAGRAPH

The <p> represents the paragraph in HTML. Used to add a paragraph text to the page.

Here's how it works:

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Key point:

Paragraph Spacing: The browser automatically adds some space (margin) before and after every <p> tag

Nested Tags: Nesting allows to apply one element inside another element Like <strong> element used for bolding the text.

Hr used to add a line or separate data on the page.

Br used to break the line and start a new paragraph without using another paragraph tag.

Pre used to display text with fixed width and font.

Strong tag used to make text bold or highlight the text.

Bold tag used to bold a specific part of the text.

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HTML HYPERLINKS

HTML Hyperlinks are used to link pages in HTML that can be added in text, buttons, or images.

Here's an example of how to create a basic hyperlink:

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In this example, "Click here," is linked to "https://www.example.com."

Hyperlinks can also be used to link to sections within the same page by using the id attribute to identify the target element. Here's an example:

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By clicking on "Go to Section 1" the page will scroll to the element with id="section1."

You can make a link open in a new tab or window by using the target attribute:

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Clicking on "Open in New Tab" will open the link in a new browser tab or window.

HTML FILE LINKS

To connect files like CSS and JavaScript to your HTML, you can use the <link> and <script> elements, respectively. Here's how you can do it:

Linking a CSS file:

Typically, put the CSS link in the <head> section of your HTML document.

Use this code, replacing 'your\_css\_file.css' with the actual path to your CSS file:

Linking a JavaScript file:

Usually, place the JavaScript link just before the closing </body> tag. This ensures that the JavaScript code is loaded after the HTML content is parsed.

Use this code, replacing 'your\_js\_file.js' with the actual path to your JavaScript file:

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HTML STYLES

In HTML, you can use CSS (Cascading Style Sheets) to style your webpage elements. CSS helps you manage how elements look, including their color, size, font, layout, and more. There are several methods to apply styles in HTML:

Inline styles: You can set styles directly in HTML elements by using the 'style' attribute.

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Internal styles: You can create styles inside the <style> tag located in the <head> section of your HTML document.

External styles: You can make a separate CSS file with the .css extension and connect it to your HTML document using the <link> tag.

HTML SPAN

In HTML, the <span> element is an inline-level container used to group and apply styles or manipulate specific parts of text within a larger content block. It doesn't carry any specific meaning by itself but enables targeting and styling of text for design or scripting purposes.

Here's an example of how you can use the <span> element:

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In the previous example, the word 'blue' is enclosed within a <span> element with an inline style applied, changing the text color to blue. This enables you to style only that particular portion of text differently from the rest of the paragraph.

You can also assign an id or class attribute to a <span> element, allowing you to style it with CSS or manipulate it with JavaScript.

HTML DIV

In HTML, the <div> element, short for 'division,' serves as a block-level container for organizing and grouping content on a web page. Unlike the <span> element, which is an inline-level container, the <div> element is commonly used to create larger content sections or divisions.

Here's how you can utilize the <div> element:

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In the previous example, the <div> element is employed to group the heading <h1> and paragraph <p> elements. It forms a block-level container that can be styled or accessed with CSS and JavaScript.

The <div> element can also be assigned an id or class attribute, just like other HTML elements, enabling you to apply particular styles or select them with CSS and JavaScript.

HTML SECTION

In HTML, the <section> element is a semantic tag used to define a distinct section of content within a web page. It's commonly utilized to group related content together, providing it with a specific meaning or purpose. The <section> element aids in enhancing the organization and structure of the HTML document.

Here's an example of how you can employ the <section> element:

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In the example on the right side, the <section> element is utilized to enclose content that pertains to providing information about a company. Inside it, you'll find a heading <h2> element and a paragraph <p> element.

Additionally, you can nest <section> elements within other <section> elements or other semantic elements to create a hierarchical structure.

HTML BUTTON

In HTML, the <button> element is used to create interactive buttons on a web page. These buttons can trigger actions or perform specific functions when clicked. The <button> element is versatile and can be customized with text, icons, or other HTML elements.

Here's an example of how to use the <button> element:

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In the example on the right, a simple <button> element is created with the text "Click Me" displayed on it. The type="button" attribute is added to explicitly specify that it's a button element.

You can also use the <button> element to wrap other HTML content, such as text, images, or icons:

In this example, an <img> element is placed inside the <button> element along with the text "Submit." This allows you to show an icon or an image on the button.

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The <button> element can also be used to execute JavaScript functions or navigate to a different page when clicked. This can be accomplished using JavaScript event handlers, like onclick:

HTML CLASS

In HTML, the class attribute helps you add one or more class names to an element. This makes it easy to style it with CSS or find it using JavaScript or CSS selectors. It's like giving elements labels to group them based on their similarities.

Here's an example:

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In the example above, we have a <p> element with a class attribute set to "highlight." This lets you style or add functionality to this specific paragraph using CSS or JavaScript.

You can also assign multiple classes to an element by separating them with spaces:

For instance, the <div> element has two classes: "box" and "large." This way, you can style elements using multiple class names, which makes your styling more flexible and reusable.

In CSS, you target elements with a specific class using the dot notation:

In this CSS example, the .highlight selector is used to style any element with the class "highlight" by making the text yellow.

HTML ID

In HTML, the id attribute gives a special name to an element, making it unique. This unique name helps you identify and control the element with JavaScript or CSS.

Here's an example:

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In the example above, the <h1> element has an id attribute set to "main-heading." This unique name lets you target this heading specifically for styling or other actions.

To target an element with a particular id in CSS, use the hash (#) notation:

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In this CSS example, the #main-heading selector is used to style the element with the id "main-heading" by making its text blue.

HTML image  
  
In HTML, you use the <img> element to put pictures on your webpage. It's a simple tag that doesn't need a closing tag.

Here's how to use it:

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In this example, the src attribute tells the browser where to find the image. The alt attribute provides text to show if the image can't load or for accessibility.

You can also set the image's width and height with the width and height attributes:

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For instance, width="300" and height="200" make it 300 pixels wide and 200 pixels tall. Be careful with this, as it can distort the image.

You can style the <img> element with CSS classes or inline styles:

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In this example, the <img> has a class attribute set to "rounded" for styling.

Depending on the image's location, you can use relative or absolute paths for the src attribute:

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In this example, src uses an absolute path from the website's root.

The <img> element is crucial for adding images to your webpage. It offers options to control the image source, size, alternative text, and appearance.

HTML icons

In HTML, you can make your web page visually appealing by adding icons. Here are two common ways to do it:

1. Using Icon Libraries: Icon libraries like Font Awesome offer a variety of icons to use in your HTML. To include Font Awesome icons, follow these steps:
   1. Add the Font Awesome stylesheet to your HTML's <head> section with this line:

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* 1. Once the Font Awesome stylesheet is added, use icons in your HTML with the <i> element. For example:  
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1. Using Custom Icon Images: If you have your own icon images, you can include them with the <img> element. Make sure you have the image file (e.g., PNG, SVG) ready and use this code:

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Replace 'path/to/icon.png' with your actual image file location. The 'alt' attribute is for accessibility.

You can also apply CSS styles to customize the <img> element's appearance.

Remember to respect licensing when using icons or images from external sources.

By using icon libraries or custom images, you can enhance your web page's design with attractive icons.

HTML tables

In HTML, tables help you organize information into rows and columns. The <table> element is the main container for the table, and it's often followed by <thead>, <tbody>, and <tfoot> elements to structure the table's content. Here's a basic table structure example:

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* <thead> defines the table header with column headings in <th> elements.
* <tbody> contains the main data rows within <tr> (table row) and <td> (table cell) elements.
* You can use <tfoot> for a table footer with summary information.