HTML Notes

Introduction:

HTML stands for Hyper Text Markup Language.

It is the standard markup language used to structure web pages.

Every webpage on the internet uses HTML to give basic structure before adding styles (CSS) and interactivity (JavaScript).

It converts unstructured information into a structured document that browsers can read and display.

HTML works with tags and elements.

Tag: A keyword wrapped in < >.

Element: Opening tag + content + closing tag.

Example: <p>Hello World</p>

Basic Structure (DOCTYPE, html, head, body)

An HTML document always follows a fixed structure:

<!DOCTYPE html>

<html>

<head>

<title>Page Title</title>

</head>

<body>

<h1>Heading</h1>

<p>Paragraph text</p>

</body>

</html>

<!DOCTYPE html> → Defines the document type and version (HTML5).

<html> → The root element of the page.

<head> → Contains metadata about the document (title, meta tags, links to CSS/JS).

<body> → Contains visible page content (headings, text, images, links, etc.).

We do not put all content inside <head> because it is only meant for metadata. All visible content should go inside <body>.

Root Elements

Root elements are the foundation of the HTML page. They appear only once in a document.

<html> → Defines the start and end of the HTML document.

<head> → Contains metadata, title, scripts, and links.

<body> → Holds the actual page content that is shown in the browser.

Container Elements:

Container elements are used to group or wrap other elements. They provide structure and hierarchy.

Child Elements:

Child elements are nested inside parent elements.

<body> is the parent element.

<h1> and <p> are child elements of <body>.

<title> is a child of <head>.

Difference between Block level and Inline Elements:

BLOCK LEVEL ELEMENTS:

1. Starts with new line

2. Nested Block elements will not be allowed

Eg. <h1>Hi Abishek<P>Good Morning</p></h1>

3.It takes full width of the screen

INLINE LEVEL ElEMENTS:

1. Does not start in new line.

2. It takes only width of your content only

3. You can use where ever you want

4. Some self closing tags are musting inline elements.

Tags:

Identify and List Elements

Block-level Elements:

<div> → Creates a container; always starts on a new line.

<h1> → Main heading; block-level by default.

<h2> → Subheading; appears on a new line.

<p> → Paragraph; adds space above and below text.

<ul> → Unordered list; takes full width.

<ol> → Ordered list; also block-level.

<li> → List item; always stacked vertically.

<form> → Form container; spans full width.

<table> → Block-level by default.

<section> → Defines a section; starts on a new line.

Unique Block Property: All of them take up the full width of the parent container by default.

Inline Elements:

<a> → Hyperlink; does not break line flow.

<span> → Inline container; styled without breaking line.

<b> → Makes text bold; inline by default.

<i> → Italic text; inline.

<em> → Emphasized text; inline.

<strong> → Bold with semantic meaning.

<img> → Image; inline element.

<u> → Underlined text; inline.

<sup> → Superscript (x²).

<sub> → Subscript (H O).

Unique Inline Property: They only take up as much width as their content requires and don’t start on a new line.

Sematic Tags:

What is Semantic Tags?

Semantic tags → HTML5 introduced some new tags which clearly describe their meaning to both the browser and the developer.

“Semantic” means having meaning.

Normal <div> doesn’t tell us what the content is, but <header> or <article> directly tells us the purpose.

Benefits of Sematic Tags:

1) Readability- Easily to Developers and Browser

2) SEO - Search Engine Optimization

3) Accessibility - Anybody can use

4) Standardization - Universal for all developers.

Sematic Tags : <header> <footer> <nav> <aside> <article> <main> <section>

Formatting Tags: - To format the Tags - Only for content Transformation

<b> <em> <strong> <mark> <small> <u> <i>

Interactive Tags: - To communicate with Users

<a> <button> <input>

✅ Interactive Tags

Interactive tags in HTML are elements that allow users to interact with the web page in some way—such as clicking, typing, submitting forms, etc.

🔹 Common Interactive Tags:

Tag Description

<a> Creates a hyperlink

<button> Clickable button

<input> Input field (text, checkbox, radio, etc.)

<textarea> Multi-line text input

<select> Drop-down list

<option> Option in a <select> menu

<label> Labels form inputs

<form> Groups input elements for submission

<details> Toggle-able element to show/hide content

<summary> Provides a summary for <details>

<dialog> Modal dialog box

<fieldset> Groups related form elements

<legend> Title/caption for a <fieldset>

These tags usually support event handling via JavaScript (e.g., onclick, onchange).

✅ Formatting Tags

Formatting tags are used to style and structure the visual appearance of text on a web page. They affect how content is displayed but don't inherently allow user interaction.

🔹 Common Formatting Tags:

Tag Description

<b> Bold text (non-semantic)

<strong> Important text (semantic bold)

<i> Italic text (non-semantic)

<em> Emphasized text (semantic italic)

<u> Underlined text

<mark> Highlighted text

<small> Smaller text

<sub> Subscript text

<sup> Superscript text

<del> Deleted (strikethrough) text

<ins> Inserted (underlined) text

<code> Displays code in monospace font

<pre> Preformatted text block

<blockquote> Quoted block of text

<abbr> Abbreviation with tooltip

Difference between Blockline, Inline, Sematic, Non-Sematic, Interactive and Formatting Tags

✅ Full Comparison Table of HTML Tag Categories

Category

1. Block-level Elements :

<div>, <p>, <h1>–<h6>, <ul>, <ol>, <li>, <table>, <article>, <section>, <nav>, <header>, <footer>, <main>, <aside>, <form>, <fieldset>, <legend>, <blockquote>, <canvas>, <hr>, <address>

Occupy full width; start on a new line; used to structure content layout.

2. Inline-level Elements

<span>, <a>, <img>, <br>, <label>, <abbr>, <cite>, <bdi>, <bdo>, <meter>, <progress>, <output>, <ruby>, <rt>, <rp>, <data>, <time>

Do not break flow; occupy only as much width as needed; used inside blocks.

3. Semantic Tags

<article>, <section>, <nav>, <header>, <footer>, <main>, <aside>, <figure>, <figcaption>, <address>, <time>, <summary>, <details>, <mark>, <caption>, <thead>, <tbody>, <tfoot>

Clearly describe meaning or role of content (helps SEO, accessibility).

4. Non-semantic Tags

<div>, <span>, <center>, <font>, <big>, <tt>, <s>, <strike>

Provide no clear meaning; mainly used for styling or layout (not recommended).

5. Interactive Tags

<button>, <input>, <textarea>, <select>, <option>, <details>, <summary>, <dialog>, <form>, <label>, <datalist>, <output>, <menu>, <menuitem>

Allow user interaction or form submission.

6. Formatting Tags

<b>, <strong>, <i>, <em>, <u>, <mark>, <small>, <sub>, <sup>, <del>, <ins>, <code>, <kbd>, <samp>, <var>, <dfn>, <q>

Style or emphasize text; can be semantic (like <strong>) or just visual.

EXAMPLE:

<html>

<head>

<title>My Own Story</title>

</head>

<body>

<!-- Semantic Tags -->

<center>

<header>

<h1>My Own Story</h1>

</header>

</center>

<main>

<article>

<section>

<p>Once upon a time, in <strong>Ponnamaravathy</strong>, there lived a

boy named

<mark>Karthikeyan</mark>.

</p>

<p>He is a <em>MERN Stack Developer</em>.</p>

<p>He loved <u>watching anime</u> and <u>travelling with friends</u>.</p> </section>

<section>

<p>One day, he created his first

<b>website</b> and felt very happy!

</p>

</section>

</article>

</main>

<!-- Non-Semantic Tags -->

<div>

<span>End of Story</span>

</div>

<!-- Formatting Tags -->

<p><small>This is a small note: "Dream big, work hard."</small></p>

<p><del>He was not a developer before.</del> <ins>Now he is!</ins></p>

<p>Karthikeyan's favorite formula: H<sub>2</sub>O and E = mc<sup>2</sup></p>

<!-- Interactive Tags -->

<button>Click Me</button>

<details>

<summary>Fun Fact</summary>

<p>Karthikeyan once created a full-stack contact form project!</p>

</details>

<!-- Footer -->

<footer>

<p>&copy; 2025 My Own Story. All rights reserved.</p>

</footer>

</body>

</html>