HTML Concepts

HTML?

HTML is used to structure and display content on web pages using tags.

HTML (Hypertext Markup Language) is the standard language used to create the structure of web pages. It tells the browser what content to show using tags like headings, paragraphs, images, and links. It works with CSS for styling and JavaScript for interactivity. HTML is the +c basic foundation of every website.

HTML topic with its purpose:

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1. Introduction to HTML

HTML is the basic language used to create web pages. It structures the content we see in a browser.

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2. HTML Document Structure

Every HTML page has a structure with `<!DOCTYPE html>`, `<html>`, `<head>`, and `<body>`. This tells the browser how to read the page.

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3. HTML Tags and Elements

Tags (like `<p>`, `<h1>`, etc.) are used to define content. Elements are the full structure from opening to closing tag.

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4. HTML Attributes

Attributes add extra information to tags (e.g., `src` in `<img>`, `href` in `<a>`). They modify how elements behave.

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5. HTML Headings

Used to define headings on a page. Tags range from `<h1>` (biggest) to `<h6>` (smallest).

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6. HTML Paragraphs

The `<p>` tag defines a block of text or a paragraph.

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7. HTML Text Formatting

Tags like `<b>`, `<i>`, `<u>`, `<strong>`, etc., are used to format text (bold, italic, underline, etc.).

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8. HTML Comments

`<!-- This is a comment -->` is used to leave notes in the code that are not visible on the page.

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9. HTML Links

The `<a>` tag creates hyperlinks to other pages or websites using the `href` attribute.

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10. HTML Images

The `<img>` tag is used to display images on a page using the `src` attribute.

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11. HTML Lists

- `<ul>` = unordered list (bullets)
- `<ol>` = ordered list (numbers)
- `<dl>` = description list (terms and descriptions)

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12. HTML Tables

Used to show data in rows and columns using `<table>`, `<tr>`, `<td>`, `<th>`.

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13. HTML Forms

Forms collect user input using `<form>`, `<input>`, `<textarea>`, `<button>`, etc.

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14. HTML Input Types

Different types of input fields like `text`, `email`, `password`, `checkbox`, `radio`, etc.

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15. HTML Form Attributes

Attributes like `action`, `method`, `name`, `value` control form behavior and where the data goes.

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16. HTML Semantic Elements

Semantic Elements

Tags that **clearly describe the meaning** of the content inside them.
Example: `<header>`, `<nav>`, `<footer>`

Non-Semantic Elements

Tags that **do not tell the meaning** of the content inside.
Example: `<div>`, `<span>`

Diff b/w span and div?

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A **block-level** tag used to group larger content. Starts on a **new line**.

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An **inline** tag used to group small text. Stays on the **same line**.

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17. HTML Block vs Inline Elements

- Block: takes full width (e.g., `<div>`, `<p>`)
- **Take up the full width** of the page, even if the content is small.
  They **start on a new line**.

- Inline: fits in line (e.g., `<span>`, `<a>`)
- Only take up **as much width** as needed by the content.
  They **stay in the same line** with other elements.

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18. HTML Div and Span

- `<div>`: groups block-level content
- `<span>`: groups inline content
  Both are used for styling and layout.

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19. HTML IFrames

The `<iframe>` tag embeds another webpage inside the current page.

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20. HTML Media (Audio, Video)

Tags like <audio> and <video> are used to add sound and video to a web page.

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21. HTML Entities

Used to display special characters like &, <, >, etc. Example: & shows &.

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22. HTML Symbols

Special symbols like ©, ®, ₹, etc., added using codes (e.g., © for ©).

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23. HTML Meta Tags

Found inside <head>, they give info about the page (like character set, description, keywords, etc.) for browsers and search engines.

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24. HTML Doctype Declaration

<!DOCTYPE html> is written at the top to tell the browser this is an HTML5 document.

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25. HTML5 New Elements

New tags like <section>, <article>, <nav>, <aside> improve structure and make code easier to read.

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26. HTML APIs

APIs like Geolocation, Drag-and-Drop, etc., are features added with JavaScript but supported by HTML5.

Difference between HTML and HTML5?

□ HTML

- **Old version** of the language for making web pages.
- Doesn't support video, audio, or new layout tags.
- Needed extra tools (like Flash) for multimedia.

□ HTML5

- **Latest version** of HTML.
- Supports **video**, **audio**, **canvas**, and **new tags** like `<nav>`, `<section>`, `<article>`.
- Works better on **mobile devices**.
- Faster and more **SEO-friendly**.

□ Example:

```
<!-- HTML (old way) -->
<object data="video.mp4"></object>

<!-- HTML5 (new way) -->
<video src="video.mp4" controls></video>
```

□ **In short**:
HTML5 = **Smarter, faster, and easier** way to build modern websites.