

HTML - HyperText Markup Language (Theory Only)

What is HTML?

- HTML stands for HyperText Markup Language.
- It is the standard markup language used to create and design the structure of web pages.
- HTML describes elements of a webpage using tags.
- Every website starts with HTML.

Structure of an HTML Page

- A basic HTML document includes:
 - Document type declaration
 - Root element `<html>`
 - Head section: contains metadata, page title, links to CSS/JS
 - Body section: visible content like text, images, forms, buttons, etc.

HTML Tags

- HTML uses tags enclosed in angle brackets (e.g., `<p>`, `<h1>`)
- Most tags have an opening and a closing tag, some are self-closing (e.g., `
`, ``)

Elements of HTML

- An HTML element consists of:
 - Opening tag
 - Content inside the tag
 - Closing tag (unless it's self-closing)

Attributes in HTML

- Attributes provide additional information about elements.
- They are written inside the opening tag.
- Common attributes: `id`, `class`, `src`, `href`, `alt`, `style`

Head vs Body

- Head section contains non-visible info (title, meta, links).
- Body section contains visible content (headings, text, images, forms, etc.).

Block-Level vs Inline Elements

- Block-Level Elements:
 - - Start on a new line and occupy full width
 - - Examples: headings, paragraphs, divs, lists, tables
- Inline Elements:
 - - Do not start on a new line and only take required width
 - - Examples: a, span, img, b, i, u

Types of Content in HTML

- 1. Text Content - headings, paragraphs, quotes, emphasis
- 2. Multimedia Content - images, audio, video
- 3. Embedded Content - iframes, objects, external files
- 4. Forms and Input - textboxes, buttons, radio/checkboxes
- 5. Tables and Lists - for structured data

Semantic vs Non-Semantic Tags

- Semantic Tags:
 - - Clearly define content purpose, help SEO and accessibility
 - - Examples: header, nav, article, section, footer
- Non-Semantic Tags:
 - - Do not describe content meaningfully
 - - Examples: div, span

Best Practices in HTML

- - Use proper nesting of tags
- - Always close tags properly
- - Use semantic tags

- - Add alt text to images
- - Use external files for CSS/JS

Recap / Key Takeaways

- - HTML is the foundation of web pages
- - Webpage = structure (HTML) + style (CSS) + logic (JS)
- - Tags are block or inline
- - Semantic HTML is better for structure and accessibility