



COURSE: Introduction to Web Development and HTML

Lecture 2: HTML Foundations: Core Concepts and

- ☐ What is HTML
- ☐ What is the DOM?
- ☐ HTML Structure
- ☐ HTML Tags
- ☐ HTML Attributes

- ❑ HTML stands for HyperText Markup Language.
- ❑ It is the standard language for creating web pages.
- ❑ HTML elements form the building blocks of web pages.
- ❑ Web browsers read HTML files and render them into visible web content.

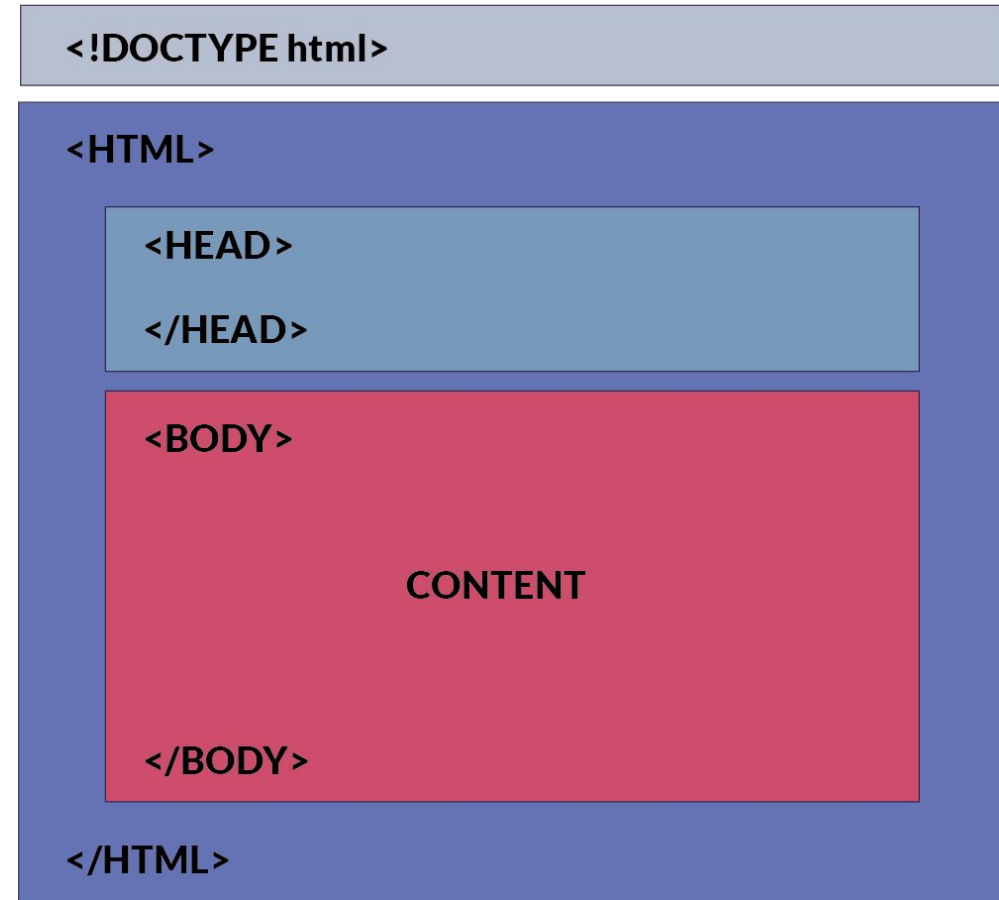
- ❑ What is the DOM?
 - ❑ The Document Object Model (DOM) is a programming interface for web documents
 - ❑ Represents the structure of a document as a tree of objects
 - ❑ Each object corresponds to a part of the document (elements, attributes, text)
- ❑ Key Concepts
 - ❑ Tree Structure: Hierarchy of nodes representing the document
 - ❑ Objects: Represent elements, attributes, text, etc.
 - ❑ Properties and Methods: Allow interaction with and manipulation of the DOM

What Can You Do With the DOM?

- ❑ Select elements
- ❑ Modify content and attributes
- ❑ Add/remove elements
- ❑ Change styles
- ❑ Handle events

Key components of an HTML page:

- ❑ `<!DOCTYPE html>`: Declares the document type.
- ❑ `<html>`: The root element of an HTML page.
- ❑ `<head>`: Contains metadata, such as the title, and links to external resources.
- ❑ `<body>`: Contains the visible content of the page.



❏ Structure & Layout

- ❏ `<!DOCTYPE html>` → Defines document as HTML5
- ❏ `<html>` → Root element
- ❏ `<head>` → Metadata (title, styles, scripts)
- ❏ `<body>` → Main page content
- ❏ `<div>` → Block-level container (groups content, used with CSS/JS)
- ❏ `` → Inline container (for styling part of text or grouping inline elements)

Text & Headings

- ❑ `<h1> ... <h6>` → Headings (h1 = most important)
- ❑ `<p>` → Paragraph
- ❑ `
` → Line break
- ❑ `<hr>` → Horizontal line
- ❑ `` → Bold (important text)
- ❑ `` → Italic (emphasized text)

Lists

- ❏ `` → Unordered list (bullets)
- ❏ `` → Ordered list (numbers)
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Links & Media

- ❏ `` → Hyperlink
- ❏ `` → Image
- ❏ `<audio src="" controls>` → Audio file
- ❏ `<video src="" controls>` → Video file
- ❏ `<iframe src="">` → Embed another page (e.g., YouTube)

Forms

- ❑ `<form>` → Form container
- ❑ `<input>` → Input field (text, email, password, etc.)
- ❑ `<textarea>` → Multi-line text input
- ❑ `<button>` → Clickable button
- ❑ `<select>` → Dropdown list
- ❑ `<option>` → Option inside `<select>`
- ❑ `<label>` → Label for inputs

Tables

- ❑ `<table>` → Table container
- ❑ `<tr>` → Table row
- ❑ `<td>` → Table data cell
- ❑ `<th>` → Table header cell
- ❑ `<thead>`, `<tbody>`, `<tfoot>` → Table sections

Semantic HTML5

- ❑ `<header>` → Top section of a page
- ❑ `<nav>` → Navigation bar
- ❑ `<main>` → Main content area
- ❑ `<section>` → Group of related content
- ❑ `<article>` → Self-contained content
- ❑ `<aside>` → Sidebar
- ❑ `<footer>` → Bottom of the page

Common Attributes

- ❑ `id="name"` → Unique identifier
- ❑ `class="name"` → Assigns element to a CSS/JS group
- ❑ `style="..."` → Inline styling
- ❑ `src="..."` → Source (image, video, iframe, etc.)
- ❑ `href="..."` → Link destination
- ❑ `alt="..."` → Alternative text for images
- ❑ `target="_blank"` → Open link in new tab

Common Attributes

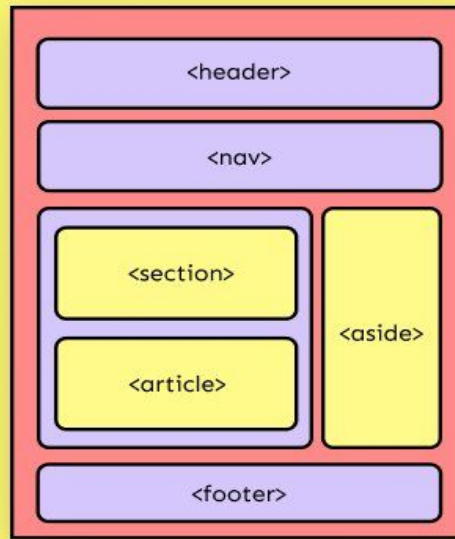
- ❑ `title="..."` → Tooltip text
- ❑ `width=""` / `height=""` → Size attributes
- ❑ `value="..."` → Default value in input
- ❑ `name="..."` → Input name (used in form submission)
- ❑ `type="..."` → Defines input type (`text`, `email`, `password`, etc.)
- ❑ `placeholder="..."` → Hint text in input fields

Common Attributes

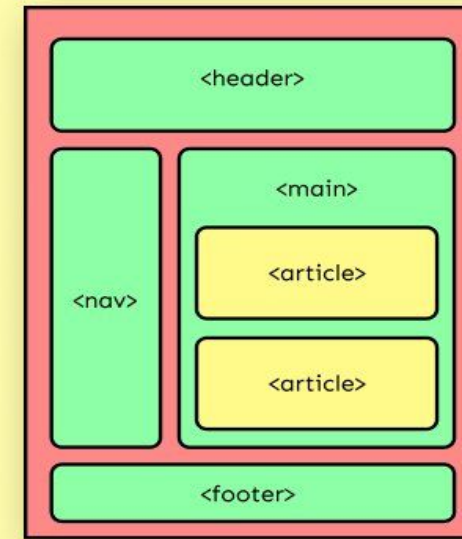
- ☐ **disabled** → Makes input uneditable
- ☐ **checked** → Pre-selects checkbox/radio
- ☐ **readonly** → Visible but not editable
- ☐ **required** → Field must be filled

- ❑ HTML elements can have attributes that provide additional information.
- ❑ Semantic HTML provides meaning to web page elements.
 - Examples of semantic tags: `<header>`, `<footer>`, `<nav>`, `<article>`, `<section>`, `<aside>`.
- ❑ These elements improve SEO, accessibility, and overall structure

SEMANTIC ELEMENTS IN HTML



SEMANTIC BLOG STRUCTURE



@eyeshreya

- ❑ HTML elements can have attributes that provide additional information.
- ❑ Ensure proper nesting of elements.
- ❑ Always include a DOCTYPE declaration.
 - tells browsers which version of HTML you're using. It helps the browser render your page correctly.
- ❑ Use semantic HTML where appropriate for better structure and accessibility.
- ❑ Make sure all tags are closed properly.

THANKS