

Introduction to HTML

Presented by Muhammad Munim

What is HTML?

- HTML (HyperText Markup Language) is the standard markup language for creating web pages.

Purpose:

- Structures content (headings, paragraphs, images, links)
- Used by all browsers to interpret and render websites
- HyperText = Text with links
- Markup = Tags that describe structure and presentation
- **Note:** HTML is not a programming language – it does not have logic or control flow.



Anatomy of an HTML Element

```
<p class="intro">Hello, world! </p>
```

- <p> – Opening tag
- class="intro" – Attribute
- Hello, world! – Content
- </p> – Closing tag

Nested Elements:

```
<p>This is <strong>important</strong> text.</p>
```

- Always close tags
- Do not overlap opening and closing tags incorrectly



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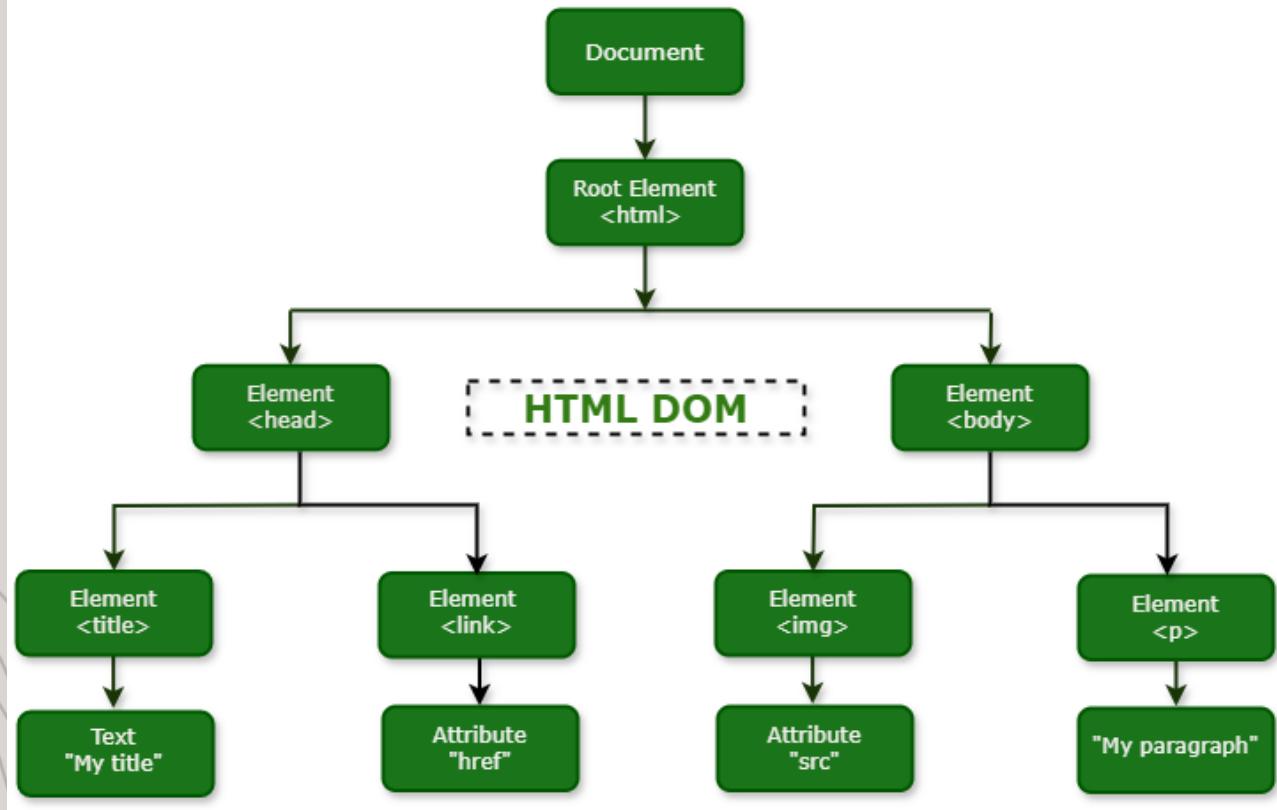
Basic HTML Document Structure

```
<!DOCTYPE html>
<html>
  <head>
    <title>My First Page</title>
  </head>
  <body>
    <h1>Hello World</h1>
    <p>Welcome to HTML</p>
  </body>
</html>
```

- <!DOCTYPE html>: Declares HTML5
- <html>: Root of document
- <head>: Meta info (not visible on page)
- <title>: Shown on browser tab
- <body>: Visible page content



Web Development



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Headings and Paragraphs

```
<h1>This is H1</h1>
<h2>This is H2</h2>
...
<h6>This is H6</h6>
<p>This is a paragraph of text.</p>
```

Use:

- <h1> for the main title (only one per page)
- <h2>–<h6> for subtitles/subsections
- <p> for blocks of text



Text Formatting Tags

- ``: bold (semantic emphasis)
- ``: italic (semantic emphasis)
- ``, `<i>`: visual only (non-semantic)
- `<mark>`: highlighted text
- `<u>`: underline
- `<small>`: smaller text
- ``: deleted text
- `<ins>`: inserted text
- `<sup>`, `<sub>`: superscript & subscript

Example:

```
<p>Water is H<sub>2</sub>O</p>
<p>E = mc<sup>2</sup></p>
```



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Line Breaks & Horizontal Rules

-
 – Line break (no closing tag(self closing))
- <hr/> – Thematic break (horizontal line)

```
<p>Line 1<br>Line 2</p>
<hr />
```

Comments in HTML

```
<!-- This is a comment -->
```

- Comments are not shown on the web page
- Used to document code or temporarily disable code
- Shortcut: cntrl + /



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Attributes in HTML

- Attributes provide additional information about an element.

```
<a href="https://example.com" target="_blank">Visit</a>

```

Common attributes:

href, src, alt, title, id, class, target

- Values must be in double quotes
- Boolean attributes (e.g., checked, disabled) don't need values



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Tools You'll Need

- Code editor: VS Code
- Browser: Chrome or Firefox
- Optional:
- Live Server Extension
- Emmet shortcuts (! + Tab creates HTML boilerplate)



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Real Example — Simple Web Page

```
<!DOCTYPE html>
<html>
<head>
  <title>My Web Page</title>
</head>
<body>
  <h1>Welcome!</h1>
  <p>This is my first HTML page.</p>
  <hr>
  <p><strong>Thanks</strong> for visiting.</p>
</body>
</html>
```



Interactive Student Exercise

“Let’s build a mini personal intro page right now.”

- Name as a heading
- Short bio in a paragraph
- Add `<hr />` between sections
- Use `` and `` for keywords

Home Tasks for Class 1

Create an HTML page with:

- Your name, age, hobbies using `<h1>`, `<p>`, `
`
- Use formatting tags like ``, ``, `<mark>`
- Add 2 comments in your code
- **Bonus:** Use `<sup>`, `<sub>`, `<small>`, and `<hr />` creatively



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Class: 02



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Layout, Lists, Links, Semantic Elements, and Media

Learning Objectives

By the end of this class, students will:

- Understand how to organize and group content using containers
- Add lists (ordered and unordered)
- Insert hyperlinks and navigate between pages
- Use semantic HTML5 layout elements properly
- Embed images, audio, and video into web pages



Grouping Elements – div and span

<div>: Block-level container

Used to group elements for styling or layout.

```
<div>
  <h2>My Bio</h2>
  <p>I love coding and design.</p>
</div>
```



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: Inline container

Used to apply style or behavior inline within a block.

```
<p>This is a <span style="color: red;">red word</span> in a sentence.</p>
```

Lists in HTML

Unordered List ()

```
<ul>
  <li>HTML</li>
  <li>CSS</li>
  <li>JavaScript</li>
</ul>
```



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Ordered List ()

```
<ol>
  <li>Open VS Code</li>
  <li>Create index.html</li>
  <li>Write HTML code</li>
</ol>
```

Nesting Lists:

```
<ul>
  <li>Frontend
    <ul>
      <li>HTML</li>
      <li>CSS</li>
    </ul>
  </li>
</ul>
```



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Hyperlinks – <a> Tag

```
<a href="https://example.com">Visit Example</a>
```

Open in new tab:

```
<a href="..." target="_blank" rel="noopener">External </a>
```

Link to an internal section:

```
<a href="#contact">Go to Contact</a>
```

...

```
<h2 id="contact">Contact Section</h2>
```



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Mail and Phone Links:

```
<a href="mailto:info@example.com">Email Me</a>  
<a href="tel:+923001234567">Call Now</a>
```



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Adding Images –

```

```

Attributes:

- src: Path to the image
- alt: Alternative text for accessibility
- width, height: Control size

Best Practices:

- Always include alt
- Optimize image size for performance



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Embedding Videos and Audio

Video:

```
<video src="video.mp4" controls width="400"></video>
```

controls, autoplay, loop, muted

Audio:

```
<audio src="song.mp3" controls></audio>
```

Always use controls so users can pause/stop



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Semantic HTML5 Layout Tags

Tag

<header>

<footer>

<nav>

<main>

<section>

<article>

<aside>

Purpose

Page or section header

Page or section footer

Navigation links

Main content

Thematic grouping of content

Independent content block

Sidebar or extra content



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Example:

```
<header>
  <h1>My Portfolio</h1>
  <nav>
    <a href="#home">Home</a>
    <a href="#contact">Contact</a>
  </nav>
</header>
<main>
  <section>
    <h2>About Me</h2>
    <p>I build websites.</p>
  </section>
</main>
<footer>
  &copy; 2025 Munim. All rights reserved.
</footer>
```



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Hands-On Code Example

Ask students to build:

- A personal landing page with:
- div, span
- ul and ol lists
- A few links
- An embedded image
- A semantic layout with header, main, footer



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Home Tasks for Class 2

1. Create a portfolio homepage using:

- <header>, <nav>, <main>, <footer>
- Add an image using with alt
- Add 2 unordered lists and 1 ordered list

2. Add at least 3 working <a> tags:

- Link to an external site
- Email link
- Link to a section on the same page

3. Embed an audio file and a video file (use any royalty-free media)

4. Use <div> and for grouping and styling purposes



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Resources

Videos:

- HTML Semantic Tags – Kevin Powell
- HTML Lists & Links – freeCodeCamp

Practice:

- W3Schools Lists Practice
- HTML5 Semantic Game (drag and drop)



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Class: 3



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Forms, Tables, Metadata, Advanced Elements & Final Practice

Learning Objectives

By the end of this class, students will:

- Build forms to capture user input
- Use tables to organize structured data
- Understand <meta> tags and their importance
- Learn advanced and lesser-known HTML5 elements
- Combine everything into real-world HTML mini-projects



HTML Forms – Capture User Input

Forms collect user data (e.g., contact info, logins, feedback)

Essential Tags:

```
<form>
  <label for="name">Name:</label>
  <input type="text" id="name" name="username">
  <button type="submit">Submit</button>
</form>
```

- <form>: Main form wrapper
- action: URL to send data to (in real apps, backend)
- method: GET or POST



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Common Form Elements

Tag

```
<input type="text">  
<input type="email">  
<input type="password">  
<input type="checkbox">  
<input type="radio">  
<input type="file">  
<textarea>  
<select> + <option>  
<button>
```

Purpose

Single-line text
Email address
Password field
Multiple selection
Single selection
Upload file
Multiline input
Dropdown menu
Clickable button



```
<label for="country">Country:</label>
<select id="country">
  <option value="pk">Pakistan</option>
  <option value="us">USA</option>
</select>
```

Always use label with for accessibility.



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HTML Tables – Displaying Structured Data

- <table> – Table wrapper
- <tr> – Table row
- <td> – Table data
- <th> – Table header
- <thead>, <tbody>, <tfoot>

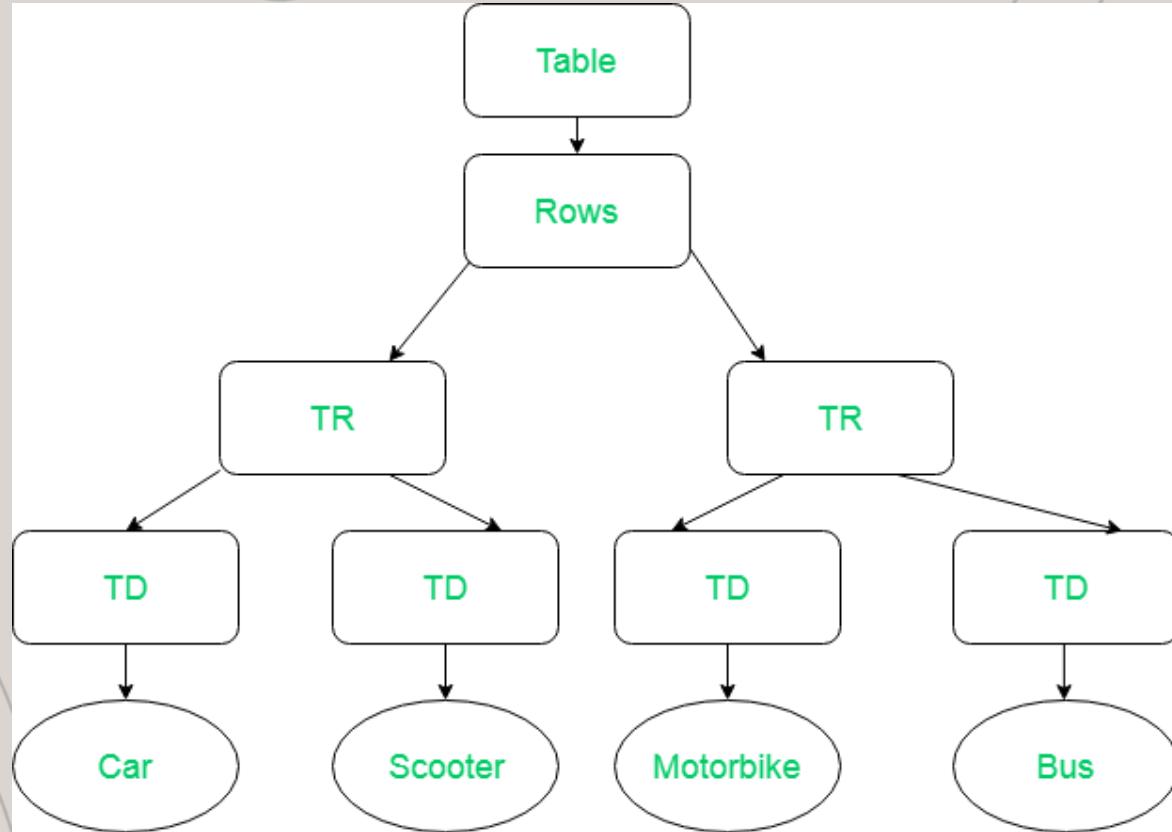
Basic Example:

```
<table border="1">
  <thead>
    <tr><th>Name</th><th>Email</th></tr>
  </thead>
  <tbody>
    <tr><td>Ali</td><td>ali@example.com</td></tr>
  </tbody>
</table>
```

- Add colspan, rowspan to merge cells.



Web Development



Meta Tags & Page Info (Inside <head>)

```
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<meta name="description" content="Learn HTML in 3 days">
<meta name="keywords" content="HTML, Web Development, Beginner">
<meta name="author" content="Munim">
```

Why Meta Tags Matter:

- Help browsers render correctly
- Improve SEO (Search Engine Optimization)
- Control how your page looks on mobile



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Advanced HTML Elements

Tag

<iframe>
<details> & <summary>
<progress>
<meter>
<time>
<code>, <kbd>, <pre>
<abbr>, <cite>, <mark>

Purpose

Embed web pages or YouTube
Expandable content
Show task progress
Gauge or measurement
Represent date/time
Show code or keyboard inputs
Semantic enhancements



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Examples:

```
<details>
  <summary>Click to read more</summary>
  This is hidden content.
</details>

<progress value="70" max="100">70%</progress>
```



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Accessibility and Best Practices

- Use alt for images
- Link <label> to <input> with for
- Use semantic tags over div when possible
- Write clean indentation
- Comment your code
- Don't abuse
 and <hr> for layout

Hands-On Practice

Ask students to:

- Build a form with all input types
- Build a table with header, body, and 3+ rows
- Add meta tags to their page
- Try out <details>, <progress>, <iframe>



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Home Tasks for Class 3

Task 1: Form Challenge

Build a form with:

- Full Name, Email, Gender (radio), Interests (checkboxes)
- A dropdown to select country
- A file input to upload profile picture
- Submit & Reset buttons
- Use proper labels and placeholder

Task 2: Data Table Task

- Create a table displaying 5 students with:
- Name, Roll No, Grade, Email, Status (active/inactive)
- Use `<thead>`, `<tbody>`, and color rows alternatively with inline style or class



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Task 3: Embed YouTube

Embed a motivational video from YouTube into your HTML page using <iframe>

Task 4: Try All Advanced Tags

Use the following in a creative way:

- <details>, <summary>
- <progress>, <meter>
- <abbr>, <time>, <mark>
- <code>, <pre>, <kbd>



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Project 2 – Product Showcase Page

Objective:

Create a single-page HTML website for a fake product or service

Requirements:

- Product title and description
- Product image
- Features list
- Pricing table
- Embedded product demo (video/iframe)
- Contact form for "order now"
- Use `<section>`, `<aside>`, `<details>` for feature expansion
- Include metadata and semantic structure



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Resources for Class 3

Videos:

- HTML Forms – FreeCodeCamp
- HTML Tables – Web Dev Simplified

Practice Platforms:

- HTML5 Doctor (Semantic Elements)
- MDN Form Guide

Extra:

- Placeholder.com for image testing
- [Open Props & Emojis](#) for fun visuals



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Submission Notes

Capture Evidence:

- Take screenshots or record a short video for each task.
- Ensure your evidence clearly shows the completed task.

Upload Tasks:

- Upload each task as a separate folder or file in your GitHub repository.

LinkedIn Post:

- Create a short post summarizing what you learned and how you completed the tasks.
- Highlight your key takeaways.
- Mention the following account in your post:
- **Muhammad Munim**



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Thank You



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