Introduction to HTML

- **HTML (HyperText Markup Language)**: The standard language for creating web pages and applications.
- Uses **tags** to structure content like headings, paragraphs, links, images, and more.
- HTML documents are interpreted by web browsers.

History and Versions of HTML

1. **HTML 1.0 (1993)**: The first version; basic text formatting.
2. **HTML 2.0 (1995)**: Introduced forms, tables, and basic features.
3. **HTML 3.2 (1997)**: Added scripting support (JavaScript) and improved styling.
4. **HTML 4.01 (1999)**: Introduced better structure with strict, transitional, and frameset DTDs.
5. **HTML5 (2014)**: Current standard; supports multimedia, semantic tags, and responsive design.

Key Characteristics of HTML:

1. **Platform-Independent**: HTML works across different operating systems and browsers.
2. **Simple Syntax**: Uses tags enclosed in angle brackets (< >).
3. **Static Language**: HTML alone is used for static content; dynamic behavior requires scripting languages like JavaScript.
4. **Web Standard**: Maintained by the **World Wide Web Consortium (W3C)** and **WHATWG (Web Hypertext Application Technology Working Group)**.

Difference Between HTML and Other Markup Languages

Difference Between HTML and Other Markup Languages

Feature	HTML	XML	XHTML
Purpose	Used to structure web pages.	Designed for data storage and transport.	Combines HTML's features with XML's strictness.
Tag Usage	Predefined tags (<p>, <h1>).	Custom tags allowed.	Same as HTML, but stricter.
Case Sensitivity	Not case-sensitive (<P> = <p>).	Case-sensitive (<Tag> ≠ <tag>).	Case-sensitive.
Error Handling	Browsers handle errors leniently.	Errors must be corrected.	Strict error handling.
Syntax Rules	Less strict, allows empty tags without /.	Requires closing tags.	Requires proper nesting and closing tags.
Usage	For web page layout and content.	For structured data exchange.	For creating web pages with strict syntax.

HTML Document Structure

1. **<!DOCTYPE> Declaration**
   - Specifies the HTML version used (e.g., <!DOCTYPE html> for HTML5).
   - Ensures browser renders the document correctly.
2. **<html> Tag**
   - Root element of an HTML document.
   - All other tags are nested within <html>.

```
<html>
 <head></head>
 <body></body>
</html>
```

3. **<head> Tag**
   - Contains metadata, title, and links to external resources like stylesheets or scripts.
   - Metadata is not displayed on the webpage but provides information to the browser.
   - Common elements inside <head>:
     - **<title>:** Defines the title displayed on the browser tab.

➢ **<meta>:** Provides metadata like charset, viewport, and keywords.
➢ **<link>:** Links to external stylesheets.
➢ **<script>:** Links to JavaScript files.

Example:

```
<head>
    <title>Page Title</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta name="keywords" content="HTML, Web Development">
</head>
```

4. <body> Tag

- Contains the visible content of the webpage (text, images, links, etc.).

```
<body>
    <h1>Welcome to HTML</h1>
    <p>This is a paragraph.</p>
</body>
```

Meta Tags (<meta>)

- **<meta charset="UTF-8">**: Defines character encoding (UTF-8 for universal compatibility).
- **<meta name="viewport" content="width=device-width, initial-scale=1.0">**: Enables responsive design for mobile devices.
- **<meta name="keywords" content="HTML, CSS, Web Development">**: Provides search engine optimization (SEO) keywords.

Text Formatting Tags

These tags control the appearance of text.

Tag	Description	Example
****	Displays text in bold without adding semantic importance.	Bold Text → Bold Text
****	Displays text in bold and adds semantic importance, indicating strong emphasis.	Important Text → Important Text
<i>	Displays text in *italic* without adding semantic importance.	<i>Italic Text</i> → *Italic Text*
****	Displays text in *italic* and adds semantic importance, indicating emphasis.	Emphasized Text → *Emphasized Text*
<mark>	Highlights text by rendering it with a yellow background by default.	<mark>Highlighted Text</mark> → Highlighted Text
<small>	Displays text in a smaller font size than the surrounding text.	Small Text → Small Text
<u>	Underlines the text.	<u>Underlined Text</u> → Underlined Text
<sup>	Displays text as a superscript, which appears slightly above the normal text line.	E=mc² → $E=mc^2$
<sub>	Displays text as a subscript, which appears slightly below the normal text line.	H₂O → H_2O
** **	Inserts a line break, starting the text on a new line.	Line 1 Line 2 → Line 1 Line 2
<h1> to <h6>	Define headings, with <h1> being the most important and <h6> the least.	Main Heading Subheading
<ins>	Represents inserted text, typically underlined.	This is <ins datetime="2024-12-20">new</ins> content.
<del>	Represents deleted text, typically struck through.	This is <del datetime="2024-12-19">old</del> content.

<hr>	Inserts a horizontal rule, often used as a thematic break or separator.	<hr> → A horizontal line
<s>	Represents text that is no longer correct or relevant (strikethrough).	This product costs <s>$50</s> $30 now!

<pre>	The pre tag preserves line breaks, tabs, white space, and other formatting characters.	<pre> this
		    Preserve
		      this format </pre>

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <title>HTML Text Formatting Example</title>
</head>
<body>
    <h1>HTML Text Formatting Tags Example</h1>

    <!-- Bold Text -->
    <p>This is <b>bold</b> text.</p>

    <!-- Strong Text -->
    <p>This is <strong>strong emphasis</strong> text.</p>

    <!-- Italic Text -->
    <p>This is <i>italicized</i> text.</p>

    <!-- Emphasized Text -->
    <p>This is <em>emphasized</em> text.</p>

    <!-- Highlighted Text -->
    <p>This is <mark>highlighted</mark> text.</p>

    <!-- Small Text -->
    <p>This is <small>small</small> text.</p>

    <!-- Underlined Text -->
    <p>This is <u>underlined</u> text.</p>

    <!-- Superscript Text -->
    <p>This is an example of superscript: 10<sup>2</sup> = 100.</p>

    <!-- Subscript Text -->
    <p>This is an example of subscript: H<sub>2</sub>O represents water.</p>

    <!-- Line Break -->
    <p>This is a line of text.<br>This text appears on the next line.</p>

    <!-- Horizontal Rule -->
    <p>This is some text before the horizontal rule.</p>
    <hr>
    <p>This is some text after the horizontal rule.</p>
</body>
</html>
```

HTML Text Formatting Tags Example

This is **bold** text.

This is **strong emphasis** text.

This is *italicized* text.

This is *emphasized* text.

This is highlighted text.

This is small text.

This is underlined text.

This is an example of superscript: $10^2 = 100$.

This is an example of subscript: H_2O represents water.

This is a line of text.
This text appears on the next line.

This is some text before the horizontal rule.

_____

This is some text after the horizontal rule.

Semantic Tags

Semantic tags clearly define the role and purpose of the content within them, making web pages more accessible and easier to understand by browsers, developers, and search engines.

Tag	Description	Important Properties/Attributes	Example
\<header>			
	• Represents the header section of a document or section, often containing introductory content or navigation.		
	• Can contain \<h1>-\<h6>, \<nav>, \<logo>.		
	• \<header>\ Welcome\ \<nav>...\</nav>\</header>		
\<nav>			
	• Defines a navigation section containing links to other parts of the website or external links.		
	• No specific attributes; typically contains \<a> tags for links.		
	• \<nav>\Home\ \About\\</nav>		
\<main>			
	• Represents the main content of the document, excluding headers, footers, and sidebars.		
	• No specific attributes.		
	• \<main>\ Main Content\ \ Details...\ \</main>		
\<section>			
	• Groups related content within a document, often with its own heading.		
	• No specific attributes; can contain headings (\<h1>-\<h6>) and other structural elements.		
	• \<section>\ About Us\ \ Details...\ \</section>		
\<article>			
	• Represents self-contained content that could be independently distributed, like blog posts or news articles.		
	• Can contain \<header>, \<footer>, and other semantic tags.		
	• \<article>\ Blog Title\ \ Content...\ \</article>		
\<aside>			
	• Represents content indirectly related to the main content, such as sidebars or advertisements.		
	• No specific attributes.		
	• \<aside>\ Related Links\ \</aside>		
\<footer>			
	• Represents the footer of a document or section, typically containing copyright or contact information.		
	• No specific attributes.		
	• \<footer>\© 2024 My Website\</footer>		
\<figure>			
	• Represents self-contained content, often used with images or diagrams, along with captions.		
	• No specific attributes; typically used with \<figcaption> for captions.		
	• \<figure>\<img src="image.jpg" alt="Example">\<figcaption>Image Caption\</figcaption>\</figure>		
\<figcaption>			
	• Provides a caption or description for the content in a \<figure> tag.		
	• No specific attributes.		
	• \<figcaption>This is a caption for the image.\</figcaption>		
\<address>			
	• Represents contact information for the author or owner of the document.		
	• No specific attributes.		
	• \<address>Contact us at: example@example.com\</address>		

<time>
- Represents either a specific point in time or a duration.
- Attributes: datetime (ISO 8601 format for machine-readable time).
- <time datetime="2024-12-19">December 19, 2024</time>

<mark>
- Highlights text, often used to indicate relevance or search matches.
- No specific attributes.
- <mark>Important</mark>

<details>
- Represents additional details the user can view or hide.
- Attributes: open (indicates the details are visible by default).
- <details><summary>Click to view</summary><p>More info...</p></details>

<summary>
- Provides a summary or legend for the <details> element.
- No specific attributes.
- <summary>Click to expand</summary>

<dialog>
Represents a dialog box or interactive component.
Attributes: open (indicates the dialog is open).
<dialog open><p>Dialog Content</p></dialog>

<abbr>
Represents an abbreviation or acronym, providing an optional expansion.
Attributes: title (provides the full form of the abbreviation).
<abbr title="HyperText Markup Language">HTML</abbr>

<cite>
Represents the title of a creative work, such as a book, song, or movie.
No specific attributes.
<cite>The Great Gatsby</cite>

<code>
Represents a fragment of computer code.
No specific attributes.
<code>console.log("Hello, World!");</code>

<kbd>
Represents user input, typically from a keyboard or other input device.
No specific attributes.
<kbd>Ctrl + C</kbd>

<samp>
Represents sample output from a computer program.
No specific attributes.
<samp>Error: File not found</samp>

****
Represents the result of a calculation or user action.
Attributes: for (associates the output with one or more <input> elements).
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\<template\>
Defines a reusable HTML fragment that is not displayed until it is rendered using JavaScript.
- id: Identifier for referencing the template.
- content: Property to access the template's content in JS.
\<template id="my-template"\>\<p\>This is a template.\</p\>\</template\>

\<span\>
Inline container for text or elements, used for applying styles or scripting.
- id, class, style, and data-*: Same as \<div\>.
\<p\>This is \<span style="color: red;"\>highlighted\</span\> text.\</p\>

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <title>HTML Structural and Semantic Tags Example</title>
</head>
<body>
    <!-- Header -->
    <header>
        <h1>Welcome to My Website</h1>
        <nav>
            <ul>
                <li><a href="#home">Home</a></li>
                <li><a href="#about">About</a></li>
                <li><a href="#contact">Contact</a></li>
            </ul>
        </nav>
    </header>

    <!-- Main Content -->
    <main>
        <!-- Section 1 -->
        <section id="home">
            <h2>Home</h2>
            <p>Welcome to the home page.
                This section provides an overview of the website.</p>
        </section>

        <!-- Article -->
        <article>
            <h2>Latest Article</h2>
            <p>This is an article about web development.
                It includes some useful tips and tricks.</p>
            <time datetime="2024-12-19">
                Published on December 19, 2024</time>
        </article>

        <!-- Figure with Figcaption -->
        <figure>
            <img src="example.jpg" alt="Example Image" style="width:300px;">
            <figcaption>An example image with a caption.</figcaption>
        </figure>

        <!-- Section 2 -->
        <section id="about">
            <h2>About Us</h2>
            <p>We are a team of web developers
                dedicated to creating user-friendly websites.</p>
        </section>
    </main>

    <!-- Aside -->
    <aside>
        <h3>Related Links</h3>
        <ul>
            <li><a href="https://example.com">Example Link 1</a></li>
            <li><a href="https://example.com">Example Link 2</a></li>
        </ul>
    </aside>
```
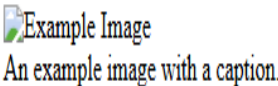
Welcome to My Website

- Home
- About
- Contact

Home

Welcome to the home page. This section provides an overview of the website.

Latest Article

This is an article about web development. It includes some useful tips and tricks.

Published on December 19, 2024

An example image with a caption.

About Us

We are a team of web developers dedicated to creating user-friendly websites.

Related Links

- Example Link 1
- Example Link 2

Contact us at: *info@example.com*
Visit us: 123 Web Street, Internet City, 45678

© 2024 My Website

```
<!-- Footer -->
<footer>
    <address>
        Contact us at: <a href="mailto:info@example.com">
                info@example.com</a><br>
        Visit us: 123 Web Street, Internet City, 45678
    </address>
    <p>&copy; 2024 My Website</p>
</footer>
</body>
</html>
```

Multimedia Tags in HTML

Multimedia tags are used to embed and display various types of multimedia content like images, audio, video, and animations on a web page.

Tag	Description	Important Properties/Attributes	Example
<img>	• Embeds an image into the webpage. • Attributes: src: URL of the image.alt: Alternative text for the image.width, height: Specifies dimensions (in pixels or percentage).loading: Specifies lazy or eager loading.title: Tooltip text. • <img src="image.jpg" alt="Description" width="300" height="200">		
<audio>	• Embeds audio content into the webpage. • Attributes: src: URL of the audio file. controls: Displays audio controls (play, pause, volume). autoplay: Automatically starts playing the audio. loop: Repeats the audio. muted: Mutes the audio by default. • <audio src="audio.mp3" controls autoplay loop></audio>		
<video>	• Embeds video content into the webpage. • Attributes: src: URL of the video file.controls: Displays video controls.autoplay: Automatically starts playing the video.loop: Repeats the video.muted: Mutes the video by default.poster: Specifies an image to be shown while the video is downloading or until the user hits play.width, height: Specifies dimensions. • <video src="video.mp4" controls autoplay loop poster="poster.jpg" width="640" height="360"></video>		
<source>	• Specifies multiple media resources for <audio> or <video> tags. • Attributes: src: URL of the media file.type: MIME type (e.g., audio/mpeg, video/mp4). • <video controls><source src="video.mp4" type="video/mp4"><source src="video.ogg" type="video/ogg"></video>		
<track>	• Adds subtitles, captions, or other text tracks to <video> or <audio>. • Attributes: src: URL of the track file.kind: Type of track (subtitles, captions, descriptions, chapters, metadata).srclang: Language of the track (e.g., en, fr).label: Title of the track.default: Specifies the default track. • <video controls><source src="video.mp4" type="video/mp4"><track src="subtitles.vtt" kind="subtitles" srclang="en" label="English" default></video>		
<iframe>	• Embeds an external webpage or multimedia content, such as YouTube videos. • Attributes: src: URL of the external content.width, height: Specifies dimensions.frameborder: Specifies the border width (deprecated; use CSS).allow: Specifies permissions (e.g., autoplay, fullscreen).allowfullscreen: Enables		

fullscreen mode.
- <iframe src="https://www.youtube.com/embed/video_id" width="560" height="315" allow="autoplay; fullscreen" allowfullscreen></iframe>

<embed>
- Embeds external content, such as plugins, multimedia players, or Flash content.
- Attributes: src: URL of the embedded content.type: MIME type of the content.width, height: Specifies dimensions.
- <embed src="animation.swf" type="application/x-shockwave-flash" width="400" height="300">

<object>
- Embeds external content, such as multimedia files, applications, or interactive content.
- Attributes: data: URL of the resource.type: MIME type of the content.width, height: Specifies dimensions.name: Name of the object (used for scripting).usemap: Specifies an image map.
- <object data="file.pdf" type="application/pdf" width="600" height="400"></object>

<param>
- Defines parameters for <object> elements.
- Attributes: name: Name of the parameter.value: Value of the parameter.
- <object data="file.swf" type="application/x-shockwave-flash"><param name="autoplay" value="true"></object>

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <title>HTML Multimedia and Interactive Tags Example</title>
</head>
<body>
    <h1>HTML Multimedia and Interactive Tags Example</h1>

    <!-- Object and Param Tags -->
    <section>
        <h2>Object and Param Example</h2>
 <object data="example.pdf" type="application/pdf" width="400" height="300">
            <param name="autoplay" value="false">
            <p>Your browser does not support the object tag.</p>
        </object>
    </section>

    <!-- Embed Tag -->
    <section>
        <h2>Embed Example</h2>
 <embed src="example.pdf" type="application/pdf" width="400" height="300">
    </section>

    <!-- Iframe Tag -->
    <section>
        <h2>Iframe Example</h2>
        <iframe src="https://www.example.com" width="400"
                height="300" title="Example Website"></iframe>
    </section>

    <!-- Video, Source, and Track Tags -->
    <section>
        <h2>Video Example</h2>
        <video controls width="400">
            <source src="example.mp4" type="video/mp4">
            <source src="example.ogg" type="video/ogg">
 <track src="subtitles.vtt" kind="subtitles" srclang="en" label="English">
            Your browser does not support the video tag.
        </video>
    </section>

    <!-- Audio and Source Tags -->
    <section>
        <h2>Audio Example</h2>
        <audio controls>
            <source src="example.mp3" type="audio/mpeg">
            <source src="example.ogg" type="audio/ogg">
            Your browser does not support the audio tag.
        </audio>
    </section>

    <!-- Img Tag -->
    <section>
        <h2>Image Example</h2>
        <img src="example.jpg" alt="Example Image" width="400">
    </section>
</body>
</html>
```
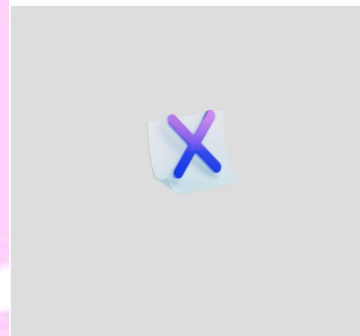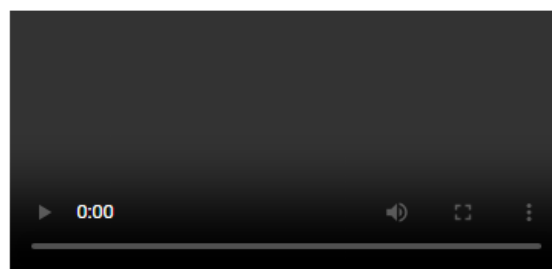
HTML Multimedia and Interactive Tags Example

Object and Param Example

Your browser does not support the object tag.

Embed Example

Iframe Example

Example Domain

This domain is for use in illustrative examples in documents. You may use this domain in literature without prior coordination or asking for permission.

More information...

Video Example

   0:00

Audio Example
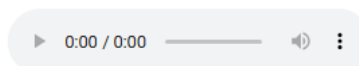
▶ 0:00 / 0:00   🔊 ⋮

Image Example

Example Image

HTML Table Tags

HTML provides a set of tags to create and structure tables in a web page.

Tag	Description	Important Properties/Attributes	Example
<table> Defines the table structure. <table border="1"></table>			
<tr>	Defines a row in the table.	No specific attributes.	<tr></tr>
<th>	Defines a header cell in a table (bold and centered by default).	Attributes: colspan: Merges cells horizontally. rowspan: Merges cells vertically. scope: Defines the scope of the header (e.g., row, col, rowgroup, colgroup).	<th colspan="2">Header</th>
<td>	Defines a standard data cell in a table.	Attributes: colspan: Merges cells horizontally. rowspan: Merges cells vertically.	<td rowspan="2">Data</td>
<caption>	Provides a title or summary for the table.	No specific attributes.	<caption>Table Title</caption>
<colgroup>	Groups one or more columns for styling purposes.	Attributes: span: Specifies the number of columns in the group.	<colgroup span="2"></colgroup>
<col>	Specifies properties for individual columns within a <colgroup>.	Attributes: span: Specifies the number of columns this <col> applies to.	<col span="2" style="background-color: lightblue;">
<thead>	Groups header rows in a table.	No specific attributes.	<thead><tr><th>Header</th></tr></thead>
<tbody>	Groups the body rows in a table.	No specific attributes.	<tbody><tr><td>Data</td></tr></tbody>
<tfoot>	Groups footer rows in a table.	No specific attributes.	<tfoot><tr><td>Footer</td></tr></tfoot>

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>HTML Table Tags Example</title>
    <style>
        table {
            width: 100%;
            border-collapse: collapse;
        }
        th, td {
            border: 1px solid black;
            padding: 8px;
            text-align: center;
        }
        caption {
            font-size: 1.5em;
            font-weight: bold;
            margin-bottom: 10px;
        }
    </style>
</head>
<body>
    <h1>HTML Table Tags Example</h1>

    <!-- Table Example with All Tags -->
    <table>
        <!-- Caption Tag -->
        <caption>Monthly Sales Report</caption>

        <!-- Column Group and Column Tags -->
        <colgroup>
            <col style="background-color: lightgray">
            <col style="background-color: lightblue">
            <col style="background-color: lightgreen">
        </colgroup>

        <!-- Table Header -->
        <thead>
            <tr>
                <th>Product</th>
                <th>Sales</th>
                <th>Profit</th>
            </tr>
        </thead>
```

HTML Table Tags Example

Monthly Sales Report

Product	Sales	Profit
Product A	$1000	$400
Product B	$1500	$600
Product C	$2000	$800
Total	$4500	$1800

```
        <!-- Table Body -->
        <tbody>
            <tr>
                <td>Product A</td>
                <td>$1000</td>
                <td>$400</td>
            </tr>
            <tr>
                <td>Product B</td>
                <td>$1500</td>
                <td>$600</td>
            </tr>
            <tr>
                <td>Product C</td>
                <td>$2000</td>
                <td>$800</td>
            </tr>
        </tbody>

        <!-- Table Footer -->
        <tfoot>
            <tr>
                <th>Total</th>
                <th>$4500</th>
                <th>$1800</th>
            </tr>
        </tfoot>
    </table>
</body>
</html>
```

HTML Form Tags

HTML forms are used to collect user input and send it to a server for processing.

Tag	Description	Important Properties/Attributes	Example
<form>	Defines a form for collecting user input.	Attributes: action: URL where the form data is sent. method: HTTP method (GET or POST). enctype: Encoding type for form data (application/x-www-form-urlencoded, multipart/form-data, etc.). target: Specifies where to display the response (_self, _blank, etc.).	<form action="/submit" method="POST"></form>
<input>	Defines an input field for user data.	Attributes: type: Specifies input type (text, password, email, etc.). name: Name of the input field. value: Default value. placeholder: Text hint inside the field. required: Ensures the field is filled before submission. readonly: Makes the field non-editable. disabled: Disables the field.	<input type="text" name="username" placeholder="Enter Name">
<textarea>	Defines a multi-line text input.	Attributes: rows: Number of visible text lines. cols: Width of the text area. maxlength: Maximum characters allowed. placeholder: Hint text.	<textarea rows="4" cols="50" placeholder="Enter your comments"></textarea>
<button>	Defines a clickable button.	Attributes: type: Specifies button type (submit, reset, button). disabled: Disables the button.	<button type="submit">Submit</button>
<select>	Defines a dropdown list.	Attributes: name: Name of the dropdown. multiple: Allows multiple selections.	<select name="cars"><option value="volvo">Volvo</option></select>
<option>	Defines an option in a dropdown list.	Attributes: value: Value sent to the server when selected. selected: Pre-selects the option.	<option value="volvo" selected>Volvo</option>
<label>	Associates a label with a form element.	Attributes: for: ID of the associated form element.	<label for="username">Username:</label>
<fieldset>	Groups related elements in a form.	No specific attributes.	<fieldset><legend>Personal Info</legend><input type="text"></fieldset>
<legend>	Provides a caption for a <fieldset>.	No specific attributes.	<legend>Personal Info</legend>
<datalist>	Provides a list of predefined options for an <input> element.	Attributes: id: Identifies the datalist.	<input list="browsers"><datalist id="browsers"><option value="Chrome"></datalist>
<output>	Displays the result of a calculation or script.	Attributes: name: Identifies the output. for: Associates the output with input elements.	<output name="result" for="a b">10</output>
<progress>	Represents the completion progress of a task.	Attributes: value: Current progress value. max: Maximum value (default is 1).	<progress value="50" max="100"></progress>

	Represents a scalar measurement within a known range.	Attributes: value: Current value. min: Minimum value. max: Maximum value. low: Lower bound of the range. high: Upper bound of the range.	`<meter value="0.7" min="0" max="1"></meter>`
<meter>			

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>HTML Form Tags Example</title>
</head>
<body>
    <h1>HTML Form Tags Example</h1>

    <!-- Form Example -->
    <form action="/submit_form" method="post">
        <fieldset>
            <legend>Personal Information</legend>

            <!-- Input Tag -->
            <label for="name">Name:</label>
            <input type="text" id="name" name="name" required><br><br>

            <!-- Textarea Tag -->
            <label for="message">Message:</label><br>
            <textarea id="message" name="message" rows="4"
             cols="50" required></textarea><br><br>

            <!-- Button Tag -->
            <button type="submit">Submit</button><br><br>

            <!-- Select and Option Tags -->
            <label for="color">Favorite Color:</label>
            <select id="color" name="color">
                <option value="red">Red</option>
                <option value="green">Green</option>
                <option value="blue">Blue</option>
                <option value="yellow">Yellow</option>
            </select><br><br>

            <!-- Datalist Tag -->
            <label for="fruit">Favorite Fruit:</label>
            <input list="fruits" id="fruit" name="fruit">
            <datalist id="fruits">
                <option value="Apple">
                <option value="Banana">
                <option value="Orange">
                <option value="Grapes">
            </datalist><br><br>

            <!-- Output Tag -->
            <label for="result">Result:</label>
            <output id="result" name="result">None</output><br><br>

            <!-- Progress Tag -->
            <label for="progress">Upload Progress:</label><br>
            <progress id="progress" value="70" max="100"></progress><br><br>

            <!-- Meter Tag -->
            <label for="meter">Battery Level:</label><br>
            <meter id="meter" value="0.6" min="0" max="1"></meter><br><br>
        </fieldset>
    </form>
</body>
</html>
```

HTML Form Tags Example

Personal Information
Name: [_____]

Message:
[_____]

[Submit]

Favorite Color: [Red ▾]

Favorite Fruit: [_____]

Result: None

Upload Progress:
[██████████░░░░]

Battery Level:
[████░░░]

Some Other tags

Tag	Description	Attributes	Example
<bdo>	Overrides the text direction.	dir: Specifies direction (ltr or rtl).	<bdo dir="rtl">This text is displayed right-to-left.</bdo>
<wbr>	Specifies a line break opportunity.	None.	Here is a verylong<wbr>word that might need breaking.
<abbr>	Represents an abbreviation or acronym.	title: Specifies the expanded form of the abbreviation.	<abbr title="HyperText Markup Language">HTML</abbr>
<cite>	Represents the title of a creative work (e.g., book, movie).	None.	<cite>The Great Gatsby</cite>
<q>	Defines a short inline quotation.	cite: Specifies the source URL of the quote.	<q cite="https://example.com">This is a short quote.</q>
<dfn>	Represents a term being defined.	None.	<dfn>HTML</dfn> stands for HyperText Markup Language.
<address>	Provides contact information.	None.	<address>Contact us at: info@example.com</address>
<bdi>	Isolates text that may have a different directionality.	None.	<bdi>Username123</bdi> logged in.
<progress>	Displays progress of a task.	value: Current progress value. max: Maximum value (default is 1).	<progress value="50" max="100"></progress>
<script>	Embeds or references JavaScript.	src: URL of the external script. type: MIME type (default is text/javascript). async: Loads the script asynchronously. defer: Defers script execution until after the document is parsed.	<script src="app.js" defer></script>
<noscript>	Displays content when JavaScript is disabled.	None.	<noscript>Your browser does not support JavaScript.</noscript>
<a>	Defines a hyperlink to another resource.	href: URL of the link. target: Specifies where to open the link (_self, _blank, etc.). rel: Relationship (nofollow, noopener, etc.). download: Downloads the linked file.	Visit Example

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>HTML Tags Example</title>
</head>
<body>
    <h1>HTML Tags Example</h1>

    <!-- <bdo> Tag (Bidirectional Override) -->
    <p>
        <bdo dir="rtl">This text is displayed right-to-left.</bdo>
    </p>

    <!-- <wbr> Tag (Word Break Opportunity) -->
    <p>
        This is a very long word that may break
        at a specific point: supercalifragilistic<wbr>expialidocious.
    </p>

    <!-- <abbr> Tag (Abbreviation) -->
    <p>
        The <abbr title="HyperText Markup Language">
        HTML</abbr> is the standard markup
         language for creating web pages.
    </p>

    <!-- <cite> Tag (Cite a Source) -->
    <p>
        This is a quote from <cite>Shakespeare's Hamlet</cite>.
    </p>

    <!-- <q> Tag (Short Quotation) -->
    <p>
        He said, <q>To be, or not to be, that is the question.</q>
    </p>

    <!-- <address> Tag (Contact Information) -->
    <address>
        You can contact us at
        <a href="mailto:info@example.com">info@example.com</a>.
    </address>

    <!-- <bdi> Tag (Bidirectional Isolation) -->
    <p>
        <bdi>Text with a different directionality: 123456789</bdi>
    </p>

    <!-- <progress> Tag (Progress Bar) -->
    <p>
        <label for="progress-bar">Progress:</label>
        <progress id="progress-bar" value="70" max="100">70%</progress>
    </p>

    <!-- <script> Tag (JavaScript Code) -->
    <script>
        document.write("This is a message generated by JavaScript.");
    </script>

    <!-- <noscript> Tag (Content for Browsers with JavaScript Disabled) -->
    <noscript>
        JavaScript is not enabled in your browser.
    </noscript>

    <!-- <a> Tag (Anchor Link) -->
    <p>
        Visit <a href="https://www.example.com" target="_blank">
        Example Website</a> for more information.
    </p>
</body>
</html>
```

HTML Tags Example

.tfel-ot-thgir deyalpsid si txet sihT

This is a very long word that may break at a specific point: supercalifragilisticexpialidocious.

The HTML is the standard markup language for creating web pages.

This is a quote from *Shakespeare's Hamlet*.

He said, "To be, or not to be, that is the question."

The *HTML* tag is used to define the meaning of a term.

You can contact us at info@example.com.

Text with a different directionality: 123456789

Progress: ▭▭▭▭▭▭▭

This is a message generated by JavaScript.

Visit Example Website for more information.

HTML List tags

- In HTML, a list is a structured way to display a collection of related items.
- Lists can be ordered (with a sequence) or unordered (without a sequence).
- HTML provides specific tags to create and format these lists, such as <ul> for unordered lists, <ol> for ordered lists, and <dl> for description lists. Each list item is represented using the <li> (list item) tag.

Tag	Description	Attributes	Example
	Defines an unordered list. Items are typically displayed with bullet points.	type: Specifies the bullet style (disc, circle, square).	html <ul type="circle"> - Item 1 - Item 2
	Defines an ordered list. Items are displayed with numbers, letters, or Roman numerals.	type: Specifies the numbering style (1, A, a, I, i). start: Specifies the starting number. reversed: Reverses the order.	html <ol type="I" start="5" reversed> - Item 1 - Item 2
	Defines a list item within or .	value: Overrides the numbering for ordered lists.	html <li value="10">Item 1 - Item 2
<dl>	Defines a description list. Used for key-value pairs like terms and descriptions.	None.	html <dl><dt>HTML</dt><dd>A markup language for web pages.</dd></dl>
<dt>	Defines a term in a description list.	None.	html <dl><dt>CSS</dt><dd>Styles web pages.</dd></dl>
<dd>	Defines the description or value of a term in a description list.	None.	html <dl><dt>JavaScript</dt><dd>Adds interactivity to web pages.</dd></dl>
<menu>	Represents a list of commands or options (usually for a context menu).	None.	html <menu> - Save - Load </menu>
<dir>	Deprecated. Represents a directory list. Use instead.	None.	html <dir> - Folder 1 - Folder 2 </dir>

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>HTML List Tags Example</title>
</head>
<body>
    <h1>HTML List Tags Example</h1>

    <!-- <ul> Tag (Unordered List) -->
    <h2>Unordered List (<code>&lt;ul&gt;</code>)</h2>
    <ul>
        <li>Item 1</li>
        <li>Item 2</li>
        <li>Item 3</li>
    </ul>

    <!-- <ol> Tag (Ordered List) -->
    <h2>Ordered List (<code>&lt;ol&gt;</code>)</h2>
    <ol>
        <li>First item</li>
        <li>Second item</li>
        <li>Third item</li>
    </ol>
```

HTML List Tags Example

Unordered List (<ul>)

- Item 1
- Item 2
- Item 3

Ordered List (<ol>)

1. First item
2. Second item
3. Third item

Description List (<dl>)

HTML
    Hypertext Markup Language, the standard language for creating web pages.
CSS
    Cascading Style Sheets, used to style web pages.
JavaScript
    A programming language used to create interactive effects within web browsers.

```
<!-- <dl> Tag (Description List) -->
<h2>Description List (<code>&lt;dl&gt;</code>)</h2>
<dl>
    <dt>HTML</dt>
    <dd>Hypertext Markup Language, the
    standard language for creating web pages.</dd>
    <dt>CSS</dt>
    <dd>Cascading Style Sheets, used to style web pages.</dd>
    <dt>JavaScript</dt>
    <dd>A programming language used to
    create interactive effects within web browsers.</dd>
</dl>

    <!-- <menu> Tag (Menu List) -->
    <h2>Menu List (<code>&lt;menu&gt;</code>)</h2>
    <menu>
        <li><a href="#home">Home</a></li>
        <li><a href="#about">About</a></li>
        <li><a href="#contact">Contact</a></li>
    </menu>

    <!-- <dir> Tag (Directory List) - Deprecated in HTML5 -->
    <h2>Directory List (<code>&lt;dir&gt;</code>)</h2>
    <dir>
        <li>Documents</li>
        <li>Pictures</li>
        <li>Music</li>
    </dir>

</body>
</html>
```

Menu List (<menu>)

- Home
- About
- Contact

Directory List (<dir>)

- Documents
- Pictures
- Music

Tag	Description	Important Properties/Attributes	Example
** ** A container for grouping and styling elements; used for layout and structure. - id: Unique identifier. - class: For grouping multiple elements. - style: Inline CSS. - data-*: Custom data attributes. <div class="container"> Content inside a div.			
<link> Defines the relationship between the current document and an external resource, often used for stylesheets. <link rel="stylesheet" href="styles.css" type="text/css" media="screen">			
<style> Embeds CSS directly within the HTML document. <style type="text/css" media="screen">body { background-color: lightblue; }</style>			
<script> Embeds or references JavaScript code in the document. <script src="script.js" defer></script>			
<base> Specifies the base URL for all relative URLs in the document. <base href="https://example.com/" target="_blank">			