# HTML

**HTML syntax**

Under this topic I have learnt that HTML is a language that is used to structure webs.

It also has two tags which are the opening tag <p> and the closing tag </P>.

This topics explore HTML elements and their usage, aiming to provide meaning to content and aid computer understanding. It also demonstrates for us how elements can be nested within one another, such as paragraphs, which cam emphasized using <p> tags and <em> tags.

**HTML HEADLINES**

Headlines in HTML come in six types: h1, h2, h3, h4, h5 and h6. Each has a distinct visual effect and hierarchy. The largest is h1, while the is the h6. Selecting the appropriate headline level is straightforward, starting with the opening tag and ending with the closing tag.

Hierarchical headlines provide meaning to the browser and ensure consistency for screen reader users. Follow use cases for each level of headline and consider how they will be utilized across the site. Longe teams often have design systems for sematic design.

**HTML BOLD AND ITALIC**

The use of italics in HTML is used to make a strong point or visually distinguish between two use case. The word “Favorite’+ is italicized to emphasize a specific character, while ‘’Sesame Street” is italicized to highlight the title of the TV show.

The browser should understand when to verbally emphasize or visually distinguish these two cases. Two elements are used to convey this distinction: the <i> element for visual italic and the <em> element for adding emphasis.

These elements serve different purposes, communicating semantic and human meaning.

The ‘’<strong>’’ element emphasizes importance, seriousness, or urgency, while the ‘’<b>’’element is more genetic and neutral, allowing for bold visuals without implying on alternative voice or mood.

**HTML LISTS**

In html there are three types of lists: unordered lists, ordered lists and definition lists.

Unordered lists are commonly used in web design, such as a recipe list. Each item is enclosed in an <il> element, with a dot or marker before it. The entire list is wrapped in an <ul> element. Indentation can be added for readable code, but the default appearance is determined by the browser.

An ordered list is a list with a specific order of items. If differs from on unordered list in that t uses <ol> to wrap the list items, displaying numbered steps.

A definition list in html is a key-value pair in computer science, consisting of terms and their corresponding description, and is wrapped in a tag, representing the entire list. Multiple descriptions can be added, and the tags are placed side by side.

**HTML QUOTES**

Html elements like paragraphs, headlines, bold and italic styles, and listed help format text on webpages. However, including a quote can be challenging, as seen Jeremy keith’s quote, which can be enclosed in tags.

these elements, <cite> and <blockquote>, serve a semantic purpose and they provide a convenient way to apply custom styling.

The ‘’’<p> ‘’ element in HTML stands for quote, and it automatically provides the appropriate quote marks for users. Inline elements like <strong>, <b>, <l>, and <em> wrap around inline phrase of text.

Block-level elements like block quotes, paragraphs, and unordered lists create separate blocks on the page. CSS can switch the layout behavior of elements from block to inline or vice versa. Black quotes and the ‘’<q>’’ element serve different purpose, with one used for inline phrases and the other for creating a block context. Understanding the elements is crucial before implementation layout or CSS.

The datetime attribute in HTML allows us to specify a date or time in a machine-readable format, such as May 8, 2025. The format must be specific, starting with the year, followed by the month and date.

Website often use phrases like ‘’five hours ago’’ or ‘’10 days ago’’ for time stamps, but they still use a machine-readable format. Machines prefer 24-hour clock format and can specify time zones like New York city’s time zone, which is five behind Greenwich Mean Time.

The datetime attribute allows for the combination of date and time, with options for separation them using a T or space. This format is acceptable in various programming languages and can be used in various combinations, ensuring time is easily understood by computers.

**HTML DATE AND TIME INPUTS**

HTML simplifies programming by using a single element called <time> to mark specific time ranges, such as day, date, or duration. This element consists of an opening and closing tag and can be used in any human-readable format. The main purpose of the <time> element is o convey the exact date or time to computers, using an HTML attribute called ‘’datetime.’’

The datetime attribute in HTML allows us to specify a date or time in a machine-readable format, such as May 8, 2025. The format must be specific, starting with the year, followed by the month and date. Examples include ‘’2025-05-08’’, ‘May 8, 2025’ or ’05,08’.

The datetime attribute allows for the combination of date and time, with options separating them using a T or space. This format is acceptable in various programming languages and can be used in HTML and other formats. It allows for machine-readable time communication.

**HTML CAPABILITIES**

A demo was demonstrated in various HTML elements and can be accessed using the “inspect element” or “tools” menu.

The left plane displays the HTML, including the document object model created by the browser. The inspector shows the DOM tree, a family of elements, Popular browser like Safari, chrome, and edge have similar developer tools with similar HTML panels, using indentation and triangles to understand the DOM tree. This allows users to inspect websites and learn from other developers’ use of HTML.

The code displays an unordered list with four items, but the count is incorrect. The browser is adding an extra set of tags, causing the DOM tree to believe there should be five items. To fix this, add a missing slash before the third item and use the developer tools in your browser.

**HTML ATTRIBUTE**

Attributes that enhance the capabilities of any element. These attributes, such as day, are specific to specific elements like the time element. They also work with multiple elements, such as images and videos.

Class and ID attributes are essential for naming HTML elements and referencing them in other parts of code stack. They can be used for CSS targeting but are more specific, causing issues. IDs are useful for addressing specific JavaScript elements or targeted links. In a demo, classes and IDs were added to CSS, and a table of contents with links jumped to ID-element.

HTML attributes enhance user interaction and provide browser powder. Content editable attributes allow interaction with screen, keyboard, and assistive devices. The “lang” attribute specifies language of content using a short code, while the “dir” attribute indicates text flow direction. These attributes are Global Attribute and can be used on any HTML element.

**ARIA ROLES**

ARIA roles are additional attributes added to HTML elements to enhance their meaning and help browsers understand their content. However, sometimes compromises must be made to ensure accessibility. The accessibility tree, a companion to the DOM tree, is crucial for assistive devices like screen readers. To improve accessibility, add an ARIA label to the HTML and hide individual letters within a div element. This removes the div and its contents from the accessibility tree while keeping them in the DOM tree. ARIA is a powerful tool for web accessibility, especially for teams working with semantic HTML or complex application interfaces.

**FORMATTING HTML**

HTML files have an opening and closing tag for most elements, with newer elements having both. Older elements, like the image element, have no closing tag. Back then people favored adding a slash at the of elements without a closing tag, but around twenty ten, people started reducing their importance. Browsers now accept various formatting options, but it’s up to the user to decide.

**UNSUAL CHARACTORS**

HTML symbols <, >, and are essential for content formatting. However, they disappear when written with spaces, causing the browser to assume it’s part of HTML code. To handle this, use a character entity in HTML, such as an ampersand, short code, or semicolon. These entities convert characters into desired ones and can be used to replace greater than or less than symbols. The W3C provides a reference chart for these entities. Non-breaking spaces in HTML prevent the browser from breaking the line between two words, ensuring to create multiple spaces between words, allowing for more precise formatting. Overall, HTML characters are displayed on webpages.

**HTML NAVIGATION AND LINKING**

Web links have become an integral part of our daily lives, with links appearing in various online forms such as navigation bars, menus, and article titles.

The concept of linking dates to the 1980s, when computer innovators focused on hypertext, hypermedia, and hyperlinks. The web’s birth is a testament to this obsession. To create a link, use the A element and an href attribute with a URL enclosed in quotes.

The A element can be inline or wrapped around text, images, or complex elements. Absolute URLs, which point to a precise location on the web, can be included without a trailing slash.

The HTTPS part, or Hypertext Transport Protocol, defines the rules for communication on the web and is crucial for linking. Nowadays, experts recommend using HTTPS enhanced security.

**HTML URL PATHWAYS**

Absolute URLs are used for linking to the same site and domain as the page contains the link, but relative URLs can be used when linking to something within the same site and domain. For example, if a website is launched at http://www.awesomedogs.com, all links should point to the local copy of the files, while links on a testing server should direct to files on that server.

Relative URLs are useful for referencing images files, video files, CSS, JavaScript files, or any other file in the images folder can be written as /images/logo.gif. This creates a URL relative to the location of the file, allowing the browser to locate the file. However, this trick only works for HTML files, not for images or CSS.