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Title: HTML & CSS

[GitHub Link](#)

## HTML AND CSS: AN INTRODUCTION

The HyperText Markup Language or HTML is the standard markup language for documents designed to be displayed in a web browser.

### 1. HTML Elements

<code>&lt;h1&gt; - &lt;h6&gt;</code>	Heading
<code>&lt;p&gt;</code>	Paragraph
<code>&lt;i&gt; or &lt;em&gt;</code>	Italic / Emphasis
<code>&lt;b&gt; or &lt;strong&gt;</code>	Bold / Strong
<code>&lt;a&gt;</code>	Anchor
<code>&lt;ul&gt; &amp; &lt;li&gt;</code>	Unordered List & List Item
<code>&lt;ol&gt; &amp; &lt;li&gt;</code>	Ordered List & List item.
<code>&lt;blockquote&gt;</code>	Blockquote
<code>&lt;hr&gt;</code>	Horizontal Rule
<code>&lt;img&gt;</code>	Image

<code>&lt;div&gt;</code>	Division
<code>&lt;!-- --&gt;</code>	Comments

## HEADINGS:

- The `<h1>` to `<h6>` HTML elements represent six levels of section headings. `<h1>` is the highest section level and `<h6>` is the lowest. It's important to not skip header levels for better accessibility. Headings are important for search engine optimization.

## `<p>`: The Paragraph element

HTML paragraphs can be any structural grouping of related content, such as images or form fields. Paragraphs are block-level elements, and notably will automatically close if another block-level element is parsed before the closing `</p>` tag.

A paragraph always starts on a new line.

## HTML Quotations

- `<blockquote>`

Indicates that the enclosed text is an extended quotation. A URL for the source of the quotation may be given using the `cite` attribute.

- `<q>`

May be used for shorter quotes rather than a `blockquote`.

- `<abbr>`

Used to denote an abbreviation.

- `<address>`

Used for addresses

- `<cite>`

Used to describe a reference to a cited creative work, and must include the title of that work. A URL for the source of the quotation may be given using the `cite` attribute, while a text representation of the source can be given using the `<cite>` element.

- `<bdi>`

Tells the browser's bidirectional algorithm to treat the text it contains in isolation from its surrounding text. It's particularly useful when a website dynamically inserts some text and doesn't know the directionality of the text being inserted.

- `<bdo>`

This is used to override the current direction flow of text. The direction is specified using the `dir` attribute.

## Comments

Comments hide code from the browser, they can come in handy when documenting code.

**Iframe:** used to nest(embed) a webpage inside another page. Allows various attributes including:

- `allow` - specifies feature policy ie. what features are allowed in the iframe eg mic, camera etc.
- `allow="fullscreen"`
- `allow="payment"`
- `fetchpriority`
- `sandbox`
- `src`
- `width`

## HTML Forms

An HTML form is used to collect user input and submit the information.

It is possible to use the `:valid` and `:invalid` CSS pseudo-classes to style a `<form>` element based on whether or not the elements inside the form are valid. The `<form>` element is a container for different input elements, eg textfield, checkbox, radio buttons, submit buttons etc

## HTML `<form>` Elements

The HTML `<form>` element can contain one or more of the following form elements:

- `<input>`
- `<label>`
- `<select>`
- `<textarea>`
- `<button>`
- `<fieldset>`
- `<legend>`
- `<datalist>`
- `<output>`
- `<option>`
- `<optgroup>`

The `<input>` element can be displayed in various ways depending on the type attribute.

The types include:

- text - can have a placeholder, spell check etc.
- radio - can select only one option
- checkbox - can tick more than 1 option
- submit
- button
- email
- search
- tel
- url
- number
- range
- Datetime-local

- color
- password
- image
- reset

### Input attributes:

- value: specifies an initial value for an input field
- readonly: specifies that an input field is read-only.
- disabled: A disabled input field is unusable and unclickable.
- size
- maxlength
- min and max attributes - set the minimum length required.
- multiple - works for email and file
- pattern - uses regex to compare input for validation.
- placeholder
- required
- step - sets an interval for count. The step attribute works with number, range, date, datetime-local, month, time and week.
- autofocus
- height and width
- list - refers to a datalist ie a predefined options to choose from.
- autocomplete
- formmethod
- formtarget

The `<label>` tag defines a label for many form elements. It is useful for screen readers, it also helps with user experience because when the label is clicked it toggles to that input.

The `for` attribute of the `<label>` tag should be equal to the `id` attribute of the `<input>` element to bind them together.

### Other form attributes:

**Syntax** `<form attribute="">`

- Action attribute: defines the action to be performed when the form is submitted.

- Target : specifies where to display the response that is received after submitting the form. Its value can be `_blank`, `_self`, `_parent`, `_top`, `framename`
- Method: specifies the HTTP method to be used when submitting the form data. Eg. `method="get"` with get method data submitted is visible in the url so it's not safe. Always use `"post"` if the data is sensitive.
- Autocomplete: specifies whether a form should have autocomplete on or off.
- Novalidate - a boolean attribute that specifies that the form-data (input) should not be validated when submitted.
- Rel - specifies the relationship between a linked resource and the current document

## HTML Multimedia

Multimedia on the web is sound, music, videos, movies, and animations.

- `<video>` - show video on html
- `<audio>` - show and play audio
- Youtube - to play youtube just wrap the video in a `Iframe`.

## CSS

Cascading Style Sheets (CSS) is a stylesheet language used to describe the presentation of a document written in HTML. CSS describes how elements should be rendered on screen, on paper, in speech, or on other media. Like the colors, positioning and decorations. The css syntax reflects this in its building blocks which are:

1. The selector
2. The **property** which is an identifier, that is a human-readable *name*, that defines which feature is considered.
3. The **value** which describes how the feature must be handled by the engine.

CSS attributes

CSS grid

CSS flexbox

Media queries

Other attributes.

References:

<https://developer.mozilla.org/en-US/docs/Web/CSS/Syntax>

<https://www.w3schools.com/html/>

<https://css-tricks.com/snippets/css/a-guide-to-flexbox/>

<https://yoksel.github.io/flex-cheatsheet/#section-justify-content>

<https://learncssgrid.com/>

<https://scrimba.com/learn/cssgrid>