

# Basic HTML and HTML5

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- Headers (1-6): `<h1>text</h1>`
- Paragraphs : `<p>text</p>`
- Commenting looks like:

```
<!--  
<h1>BOOM, here's a comment.</h1>  
-->
```

- HTML elements like `<main>` help with SEO and accessibility, but don't do anything visually
- Some elements need to include attributes. Throw them inside the element's **opening** tag.
- Images (self-closing): ``
  - Alt text will slightly improve SEO and is extremely recommended.
- Anchor tags `<a></a>` link to content outside of the web page, require the **href** attribute as well as anchor text (content in between both tags can also be an image), ex: `<a href="https://google.com">Google</a>`
  - Anchors create hyperlinks
  - The href attribute contains the URL address of the link
  - Anchor tags can link within a webpage, use the hash symbol # along with the id attribute of an element (a unique element identifier) as the target in the href attribute
  - The # symbol may also be used to create a dead link (useful as a placeholder), ex: `<a href="#"></a>`
  - Adding the target attribute (specifies where to open the link) with "\_blank", will open the document in a new window tab
  - Anchor tags can be nested in other text elements, ex : `<p>Paragraph text goes here..  
<a href='...'> Nested anchor </a></p>`

- You may also nest elements inside the anchor tag to turn them into links (like images)
- Bullet point style lists are done with the `<ul></ul>` tag, numbered lists use the ordered list element `<ol></ol>`
  - List elements `<li>text</li>` are to be nested inside of unordered or ordered list elements

Ex:  

```
<ul>
  <li>first list element</li>
  <li>second list element</li>
</ul>
```

- Input elements (self-closing) are useful for capturing input from the user, ex: `<input type="text">`
  - The type attribute determines what input is going to be captured. ex: text, password, submit, etc.
  - The placeholder attribute can be used to create placeholder text
- The Form element `<form></form>` is used to create forms that submit data to a server
  - The action attribute is used to specify where to submit the data, ex: `<form action="/url-goes-here">...</form>`
  - To submit data, use the button element `<button></button>` along with a type attribute to send the form's data to the specified URL. Ex: `<button type="submit">Submit</button>`
  - Both the input element and button element are enclosed by the form element
  - You can add a required attribute to the input element to require user input before submitting is allowed. This attribute isn't set to anything. Ex. `<input type="text" required>`
- Radio Buttons and Checkboxes
  - Each radio button should be enclosed by its own label element. The radio button itself is an input element with type attribute set to 'radio'
    - Label elements should have a for attribute and radio input elements should have an id attribute, where both are set to the same value. This links them.
  - Radio buttons exist as groups. To declare multiple under the same group, put a name attribute on each one, setting it to the group name. Selecting one radio button in a group deselects the rest.

- Everything previously mentioned applies to checkboxes as well

```
<form action="/submit-your-selection">
  <label for="indoor"><input id="indoor" type="radio" name="indoor-outdoor"> Indoor</label>
  <label for="outdoor"><input id="outdoor" type="radio" name="indoor-outdoor"> Outdoor</label>
  <button type="submit">Submit</button>
</form>
```

- Including a checked attribute selects a radio button or checkbox by default
- The div element `<div></div>` is a container for other elements. More on this later? If I recall correctly from previous study, it's extremely important.
- Every HTML document has a basic structure. It's easiest to provide an example of this.

```
<!DOCTYPE html>
<html>
  <head>
</head>
  <body>
</body>
</html>
```

- Doctype declares the HTML version being used
- Metadata goes in the head, and page content goes in the body