

1.a. HTML(cr:free code camp)

What Makes Up an HTML Document?

The following tags define the basic HTML document structure:

- `<html>` tag – This tag acts as a container for every other element in the document except the `<!DOCTYPE html>` tag.
- `<head>` tag– Includes all the document's metadata.
- `<title>` tag – Defines the title of the document which is displayed in the browser's title bar.
- `<body>` tag – Acts as a container for the document's content that gets displayed on the browser.

Here's what all that looks like:

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title> My HTML Cheat Sheet </title>
  </head>
  <body></body>
</html>
```

`<!DOCTYPE html>` specifies that we are working with an HTML5 document.

The following tags give additional information to the HTML document:

- `<meta>` tag – This tag can be used to define additional information about the webpage.
- `<link>` tag – Used to link the document to an external resource.
- `<style>` tag – Used for defining styles for the document.
- `<script>` tag – Used to write code snippets (usually JavaScript) or to link the document to an external script.

```
<head>
  <meta charset="UTF-8" />
  <meta http-equiv="X-UA-Compatible" content="IE=edge" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <link rel="stylesheet" href="style.css" />
  <title>My HTML Cheat Sheet</title>

  <style>
```

```
* {  
  font-size: 100px;  
}  
</style>  
  
<script>  
  alert('This is an alert');  
</script>  
</head>
```

HTML Document Structure

When you're fleshing out your HTML document, you'll use certain tags to create the structure.

The `<h1>` to `<h6>` tags show different levels of headings in a document, with `<h1>` being the largest and `<h6>` being the smallest.

```
<h1> Heading 1 </h1>  
<h2> Heading 2 </h2>  
<h3> Heading 3 </h3>  
<h4> Heading 4 </h4>  
<h5> Heading 5 </h5>  
<h6> Heading 6 </h6>
```

You use the `<p>` tag to create a paragraph.

```
<p> This is a paragraph </p>
```

The `<div>` tag can be used to divide and style separate sections of the document. It also acts as a parent container for other elements. Here's how it works:

```
<div class="newsSection">  
  <h1> This is the news section </h1>  
  <p> Welcome to the news section! </p>  
</div>  
  
<div class="contactSection">  
  <h1> This is the contact us section </h1>  
  <p> Hello world! </p>  
</div>
```

We also have the `` tag. This is similar to `<div>` but you use it as an inline container.

```
<p> I love <span class="keyword"> coding! </span></p>
```

There's the `
` tag, which we use for creating line breaks. This has no closing tag.

```
<p> I love <br/> freeCodeCamp </p>
```

The `<hr/>` tag is used to create a horizontal line. It also has no closing tag.

Images in HTML

In HTML, we use the `` tag to display images.

Here are some attributes of the `` tag:

- `src` is used to specify the path to the location of the image on your computer or the web.
- `alt` defines an alternate text that displays if the image cannot be rendered. The alt text is also good for screen readers.
- `height` specifies the height of the image.
- `width` specifies the width of the image.
- `border` specifies the thickness of the borders, which is set to 0 if no border is added.

```

```

Text Formatting in HTML

We have many ways to format text in HTML. Let's go over them now briefly.

- `<i>` displays text in italics.
- `` displays text in bold.
- `` displays text in bold. Used to make important emphasis.
- `` another emphasis tag that displays text in italics.
- `<sub>` defines subscript text, like the two atoms of oxygen in CO₂.
- `<sup>` defines a superscript like the power of a number, 10².
- `<small>` reduces the size of text.
- `` defines deleted text by striking a line through the text.
- `<ins>` defines inserted text which is usually underlined.
- `<blockquote>` is used to enclose a section of text quoted from another source.
- `<q>` is used for shorter inline quotes.
- `<cite>` is used for citing the author of a quote.

- `<address>` is used for showing the author's contact information.
- `<abbr>` denotes an abbreviation.
- `<code>` displays code snippets.
- `<mark>` highlights text.

```
<p><i> italic text </i></p>
<p><b>bold text </b></p>
<p><strong> strong text </strong></p>
<p><em> strong text </em></p>
<p><sub> subscripted text </sub></p>
<p><sup> superscripted text </sup></p>
<p><small> small text </small></p>
<p><del> deleted text </del></p>
<p><ins> inserted text </ins></p>
<p><blockquote> quoted text </blockquote></p>
<p><q> short quoted text </q></p>
<p><cite> cited text </cite></p>
<p><address> address </address></p>
<p><abbr> inserted text </abbr></p>
<p><code> code snippet </code></p>
<p><mark> marked text </mark></p>
```

Links

The `<a>` tag, also known as the anchor tag, is used to define hyperlinks that link to other pages (external web pages included) or to a section of the same page.

Here are some attributes of the `<a>` tag:

- `href` specifies the URL the link takes the user to when clicked.
- `download` specifies that the target or resource clicked is downloadable.
- `target` specifies where the link is to be opened. This could be in the same or separate window.

```
<a href="https://www.freecodecamp.org/" target="_blank"> Learn to code </a>
```

Lists

The `` tag defines an ordered list while the `` tag defines an unordered list.

The `` tag is used to create items in the list.

```
<!-- Unordered list -->
<ul>
  <li> HTML </li>
  <li> CSS </li>
```

```
<li> JavaScript </li>
</ul>

<!-- Ordered list -->
<ol>
  <li> HTML </li>
  <li> CSS </li>
  <li> JavaScript </li>
</ol>
```

Forms

The `<form>` tag is used to create a form in HTML. Forms are used to get user inputs. Here are some attributes associated with the `<form>` element:

- `action` specifies where the form information goes when submitted.
- `target` specifies where to display the form's response.
- `autocomplete` can have a value of on or off.
- `novalidate` specifies that the form should not be validated.
- `method` specifies the HTTP method used when sending form data.
- `name` specifies the name of the form.
- `required` specifies that an input element cannot be left empty.
- `autofocus` gives focus to the input elements when the page loads.
- `disabled` disables an input element so the user can no longer interact with it.
- `placeholder` is used to give users a hint on what information is required for an input element.

Here are other input elements associated with forms:

- `<textarea>` for getting user text input with multiple lines.
- `<select>` specifies a list of options the user can choose from.
- `<option>` creates an option under the select element.
- `<input>` specifies an input field where the user can enter data. This has a `type` attribute that specifies what type of data the user can input.
- `<button>` creates a button.

```
<form action="/info_url/" method="post">

  <label for="firstName"> First name: </label>
  <input type="text"
    name="firstName"
    placeholder="first name"
    required
  >
```

```

<label for="lastName"> Last name: </label>
<input type="text"
      name="lastName"
      placeholder="last name"
      required
>

<label for="bio"> Bio: </label>
<textarea name="bio"></textarea>

<select id="age">
  <option value="15-18">15-18</option>
  <option value="19-25">19-25</option>
  <option value="26-30">26-30</option>
  <option value="31-36">31-36</option>
</select>

<input type="submit" value="Submit">

</form>

```

Tables

- The <table> tag defines a HTML table.
- <thead> specifies information for each column in a table.
- <tbody> specifies the body or content of the table.
- <tfoot> specifies the footer information of the table.
- <tr> denotes a row in the table.
- <td> denotes a single cell in the table.
- <th> denotes the value column's heading.

```

<table>

  <thead>
    <tr>
      <th> Course </th>
      <th> Progress </th>
    </tr>
  </thead>

  <tbody>
    <tr>
      <td> HTML </td>
      <td> 90% </td>
    </tr>
    <tr>
      <td> CSS </td>
      <td> 80% </td>
    </tr>
  </tbody>
</table>

```

```
</tbody>

<tfoot>
  <tr>
    <td> JavaScript </td>
    <td> 95% </td>
  </tr>
</tfoot>

</table>
```

Tags introduced in HTML5

Here are some tags introduced in HTML5:

- <header> specifies the webpage header
- <footer> specifies the webpage footer.
- <main> specifies a main content section.
- <article> specifies an article's section, usually for content that can stand alone on the webpage.
- <section> is used to create separate sections.
- <aside> is usually used to when placing items in a sidebar.
- <time> is used for formatting date and time.
- <figure> is used for figures like charts.
- <figcaption> denotes a description of a figure.
- <nav> is used to nest navigation links.
- <meter> is used to measure data within a range.
- <progress> is used as a progress bar.
- <dialog> is used to create a dialog box.
- <audio> is used to embed an audio file in the web page.
- <video> is used to embed video.

```
<header>
  <h1> Welcome </h1>
  <h3> Hello World! </h3>
</header>

<nav>
  <ul>
    <li><a href="#">Home</a></li>
    <li><a href="#">Services</a></li>
    <li><a href="#">About us</a></li>
  </ul>
</nav>

<article>
```

```
<h1> An article about us </h1>
<p> Article content </p>

<aside>
  <p> It's sunny today </p>
</aside>

</article>

Progress: <progress min="0" max="100" value="50"> </progress>

<footer> Copyright 2022-2099. All Rights Reserved. </footer>
```

Conclusion

In this article, we have seen a lot of HTML tags, elements, and attributes commonly used by developers. This is not all there is, but should serve as a good reference resource.