

HTML5 Basics

What is HTML?

- HTML = Hyper Text Markup Language
- Not a programming language
 - It is a markup language for creating HTML websites and documents
 - Used to display and format elements of a webpage (no conditional statements)
 - Strictly presentational, no logic
- Building blocks of the Web
 - Every site you see outputs HTML to the browser, no matter what other higher language is used in the background

What We Need to Start:

- A web browser
 - Google Chrome
- A Text Editor
 - Notepad++
 - Visual Studio Code

Creating an HTML File:

- Does NOT need a server
- Files must end with the **.html** extension
- Runs in a web browser
- **index.html** is the root/home page of a website
 - Homepage should always be named this
 - Examples:
 - **http://www.something.com**
 - Loads the **index.html** file
 - **http://www.something.com/about.html**
 - Loads the **about.html** file

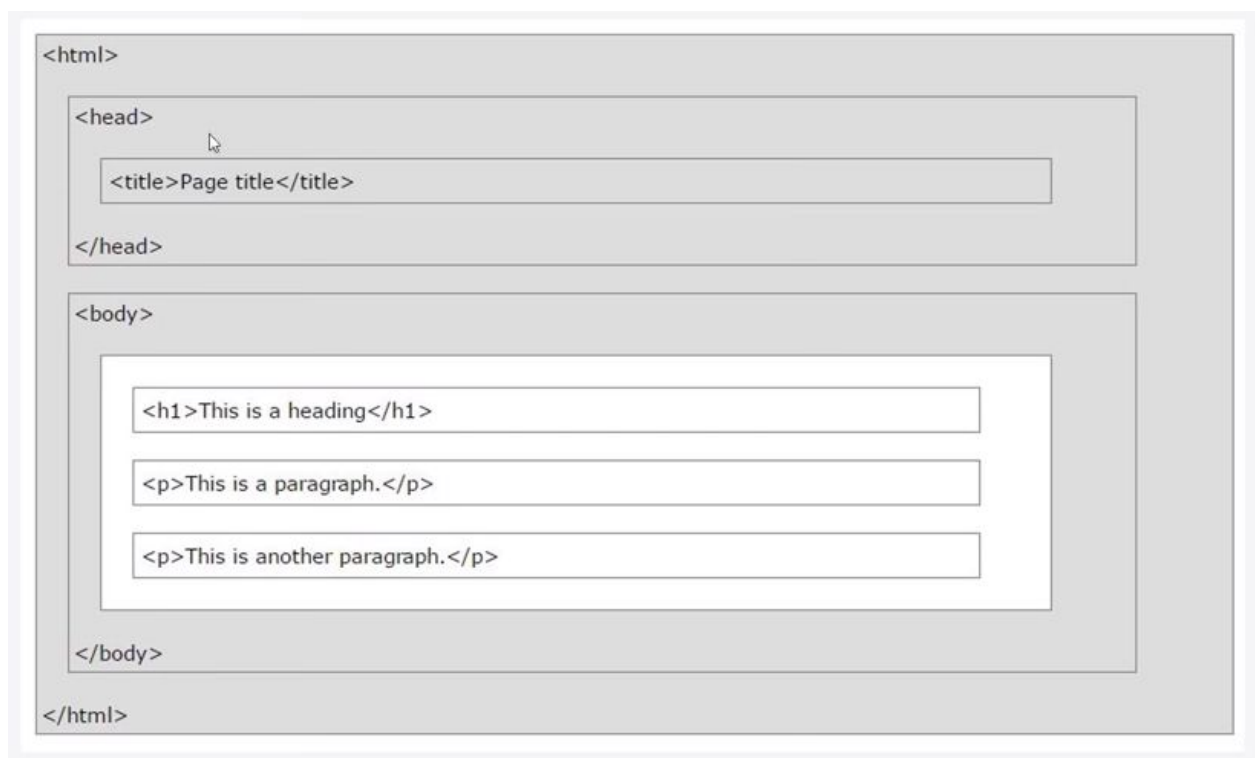
Tag Syntax:

- An HTML tag is the basic building block of any webpage
 - Tags format the way that information and text is displayed
- Element names surrounded by angle brackets
- Normally come in pairs (start tag and end tag)
- End tag usually the same but with a forward slash
- Some tags close themselves (Remnant of XHTML)
 - These tags do not contain any content
- Example:
 - `<tagname> content </tagname>`
 - `<h1> About Us </h1>`
 - `<p> This is a paragraph </p>`

- `
` (self closing)
- `
` (Fine in HTML5)

HTML Page Structure:

- HTML file surrounded by `<html>`
- Head has things like:
 - Page title
 - Links to CSS files or JavaScript files
 - Metadata such as the description and keywords
 - Descriptions and keywords used by search engines so that it knows more information about what's actually on the webpage
- Body:
 - Has the actual markup that's going to display in the browser
 - Headings
 - Text
 - Images
- `<!DOCTYPE html>`
 - Not a HTML tag, but instead is a declaration of the document type
 - Should always be the first thing on the web page
 - Tells the browser what type of HTML the web page is written in



```

<!DOCTYPE html>
<html>
  <head>
    <title>Page Title</title>
  </head>
  <body>
    <h1>My First Heading</h1>
    <p>My first paragraph.</p>
  </body>
</html>

```

Inline vs. Block Level Elements:

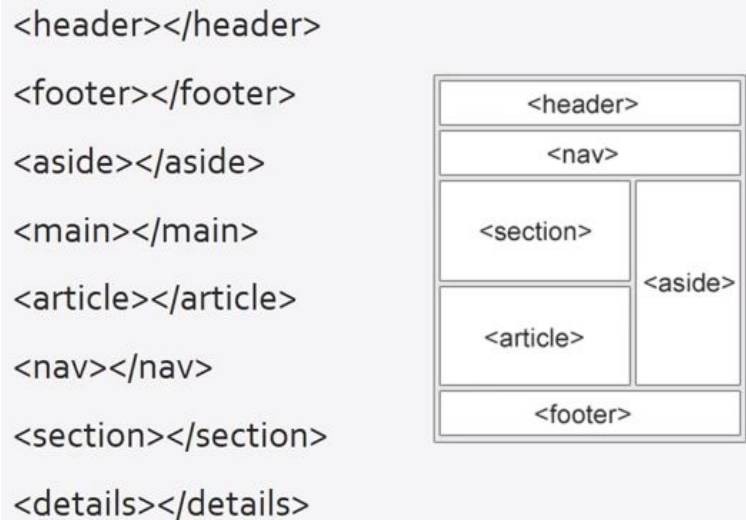
- **Inline Elements:**
 - Do not start on a new line
 - Take only the necessary width
 - Inline Level:
 -
 -
 - <a>
- **Block Elements:**
 - Start on a new line
 - Take full width available
 - Block Level:
 - <div>
 - <h1> - <h6>
 - <p>
 - <form>

Tag Attributes:

- All tags can have attributes
- Provide information about an element
- Placed within the start tag
- Formatted as key/value pairs (id = "someId")
 - The attribute itself is the key and what is within " " is the target
- Example:
 - **<tagname attributename="attributevalue">content</tagname>**
 - **<h1 title="My Company">AboutUs</h1>**

HTML5 Semantic Tags:

- A semantic element clearly describes its meaning to both the browser and the developer
- Used to layout and structure the website



Tags:

- **<!DOCTYPE html>**
 - Not a real tag, but should start every HTML file
 - Declares the document type and lets browser know what type of HTML the file is written in
- **<html>**
 - Encompasses the whole HTML file
- **<head>**
 - Contains things such as
 - Page title
 - Links to CSS files or JavaScript files
 - Metadata such as descriptions and keywords
- **<title>**
 - Page title
- **<body>**
 - Has the actual markup that's going to display in the browser
 - Headings
 - Text
 - Images
- **<h1> - <h6>**
 - Heading h1 through h6
- **<p>**
 - Paragraph
- ****
 - Semantics tag for making text stick out
 - By default it bolds the text, but through CSS this tag can do other things such as change the font size, italicize, etc
 - Inline

- ****
 - Emphasize
 - By default, it italicizes text, but through CSS this tag can do other things
- **<a>**
 - A link
 - Allows you to connect a link to another page/website to text
- ****
 - Unordered list
 - Bullet point list by default
 - Typically used as a navigation bar when styled
- ****
 - Ordered list
 - List items numbered by default
- ****
 - List element
 - Every element in a list needs to be encompassed by
- **<table>**
 - Table
 - Use tables for tabular data only
 - Example:
 - List of customers with their names, emails, and ages
- **<thead>**
 - Table head
- **<tbody>**
 - Table body
- **<tr>**
 - Table row
- **<th>**
 - Table head
 - Each table row needs a <th> or <td>
- **<td>**
 - Table data
 - Each table row needs a <th> or <td>
- **
**
 - Break
 - Inserts blank line
- **<hr>**
 - Horizontal Rule
 - Adds horizontal line to page
- **<form>**
 - Document with spaces in which to write input
 - Contains <label> and <input>
- **<label>**

- A label to fill out in a form
- **<input type="text" name="firstName">**
 - Takes text input, labels that input as firstName
- **<textarea>**
 - Creates text area field to input a large amount of text
- **<select>**
 - Select from a list of options
- **<div>**
 - Divider
 - Divides data
- **<button>**
 - Creates a button
 - Need JavaScript to let the button do anything
- ****
 - Displays an image
- **<blockquote>**
 - Displays a piece of text in a blockquote style
- **<abbr title="Full title of abbreviation">**
 - Allows you to insert the full title of an abbreviation
 - Full title will display when user hovers cursor over abbreviation
- **<cite>**
 - Lets browser know text is being cited

Attributes:

- **href="website link goes here"**
 - Reference
 - Attaches link
 - When clicked on, user will be taken to that reference in the same page
 - Great to use when navigating to another section of the same website
- **target="_blank"**
 - Opens link in new tab
 - Typically used when linking an external site where the user does not want to lose their place on the current page
- **action="process.php"**
 - Submits something (like a form) to a certain page (like a PHP page)
- **method="POST"**
 - Makes a post request to the server
 - Used to add data to a database
 - Secure compared to GET