Section 3: Introduction To HTML

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# HTML Basics

Hypertext Markup Language is the structure and content of the page, not the styling! It was produced between 1989 and 1990 back in the day when academics were exchanging research papers that had structured formatting. Back then there was no standardised way of exchanging these across the web. HTML was developed in response to the need for a way for researchers to send papers to each other in a format that allowed for the structure of the papers to remain consistent in structure and content.

HTML works in tags, it allows developers to designate what content is, and how it is structured (for example, this is a bullet point, this is a link, this is a paragraph). A big contribution was the inclusion of document linking via hyperlinks (It wasn’t revolutionary, but it suited what the language set out to do well).

HTML is built on the idea of <tags> </tags>. Content is sandwiched between an opening tag (<>) and a closing tag (</>). Each tag has a tag name to specify how the sandwiched content is to be structured. Tags can also have attributes to give each element additional properties (such as a href to another source or document).

For example, if we want a heading, we could do:

<h1>Abstract</h1>.

Or a paragraph:

<p>This is a paragraph tag. It is used to separate individual paragraphs.</p>.

# Introduction to Mozilla Developer Network

Mozilla Developer Network (or MDN) is a useful resource for guidance around HTML, CSS and JavaScript. Find it at <https://developer.mozilla.org>. The notes for this are enclosed in a separate document.

# HTML Boilerplate And Comments

First tag to write is the basic header 1 tag. This can be written as follows:

<h1>This is my first tag</h1>

This will now display a header when the file is loaded as shown below:

* Though this markup is valid in context of the language syntax, it is however, invalid by itself. All HTML documents need to implement the same boilerplate framework, consisting of a DOCTYPE, a <html>, a <head> and a <body> set of tags as shown below:

<!DOCTYPE html>

* + <html>
    - <head>
      * <title></title>
    - </head>
  + <body>
    - <h1>This is my first tag</h1>
  + </body>
  + </html>

**Note: In the Sublime editor, the easiest way to have this automatically implemented is to write “html” then press tab.**

* The following contains a brief description of each section of the boilerplate. These are explained in more detail in the Mozilla Developer Network notes for this section:
* <!DOCTYPE>: Doctype is an artifact of the old days of HTML where all HTML documents required a DOCTYPE to identify the page as HTML and a link to the set of HTML rules the page was adhering to. Nowadays, a HTML page just requires a Doctype to function as expected and to indicate the page is implementing HTML. The code below is the shortest valid DOCTYPE that can be implemented in order to ensure the page runs as expected.
* <html>: The HTML root element. The base of all HTML documents. All other elements are descendants of the root element.
* <head>: Metadata for the HTML doc goes here. This contains the "data about the data" such as the title of the page, the author, and the character set being used. Links to scripts (JavaScript) and style sheets (CSS) are also provided here.
* <body>: The body is where the HTML used to represent physical content to be displayed on the page goes.
* Some tags must have an opening tag and a closing tag. Empty tags (like the DOCTYPE example) only require one tag and contain attributes and data inside it.

Elements are defined as an object consisting of tags, and the content that is wrapped by the tag/s.

* Comments allow developers to document what certain markup does and why it has been written. Comments are not read by the browser and are not displayed as part of the content. In HTML comments are implemented with arrow like wrappers like the example below:

<!— This is a comment. It doesn’t do anything! -->

* A nifty trick for sublime is to highlight the line of text you want to comment and hit CTRL+/ to comment it out automatically.
* The <title> is the title of the document as a whole. It is used in the browser tab to display what the page is, and is used by search engines to display a page title in it’s search results.

# Basic Tags