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Web Application Development: Introduction to HTML

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Objective and Scope

This document is intended to facilitate the development, maintenance, and securing of websites, web services, and web applications.

This document is intended for use by those tasked with overseeing the development or maintenance of a website, web service, or web application.

1. Introduction

The materials presented within the contents of this document have been collected from several sources across the Internet. These organizations include, but are not limited to, the Open Web Application Security Project (OWASP), the National Institute of Standards and Technology (NIST), the SANS Institute, and other recognized sources of industry best practices.

2. What is HTML?

Hypertext markup language, or HTML, is a programming language used for the development of web pages, which are displayed by web browsers. When a web browser accesses an HTML page, the browser is compiling the HTML code. HTML is what I would refer to as a client-side programming language, as the client accesses the pages rendered from the HTML code directly.

Figure 1.0: This figure represents a standard HTML page. As one may see, I've defined a clear section for the head and body tags.

In the previous image, I have denoted two distinct areas of an HTML page. The first area of an HTML page I defined is the head area, which is not to be confused with header elements. This is a space to place meta information about the document, such as the author, page description, and different properties of the page. One may even define meta tags for keyword searches into this section.

While meta tagged keywords are relevant to search engines, I don't believe they impact search engine results as much as the content of the page would. Many search engines generate results from document content. A sophisticated search engine would not generate results based off of meta defined keywords. However, if you're going to define keywords, you're best off using as little definitions

as possible. This will help improve readability for search engines, and this may increase the chances of having a page displayed by search engine results.

In the second section of Figure 1.0, I have defined a body tag, which is the area to define the elements of a page. For example, I could define a header element with a few paragraph elements.

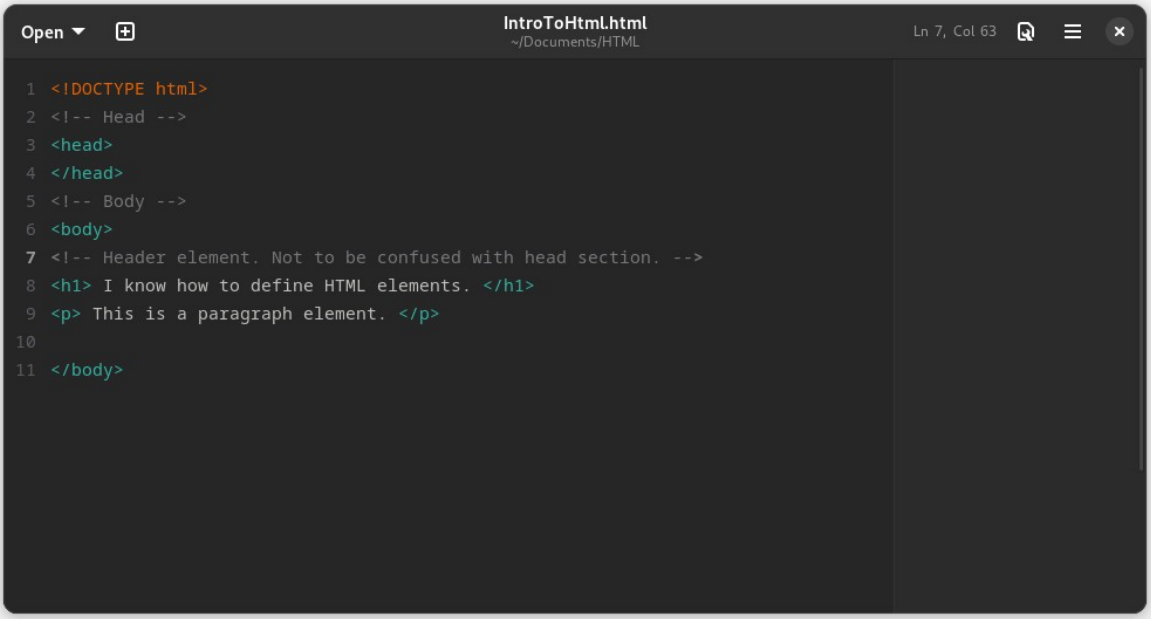

Figure 1.1: In this image, take note that I have defined a few elements in the body of my HTML document. The <h1> element tags are used to define the header section, while the <p> tags are used to define a paragraph.

After writing this code into an HTML document, we can use a web browser to render the code, or compile the code. For the sake of this introduction, I do not intend to open this code in a web browser, but the output would look very simple. There would be a section of the document displaying the <h1> element definitions, and there would be a section of the document displaying the <p> element definitions.

While HTML can be much more complex then I have demonstrated in the previous examples, this was intended to be a primer on the subject of HTML. I do not intend to dive deeper into the complexities of HTML, as this would be beyond the scope of this document.