

Complete Digital Notes

HTML **DEEP DIVE DIGITAL** **NOTES**



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CHAPTER 1: INTRODUCTION TO HTML



1.1 Introduction of HTML

HTML, or HyperText Markup Language, is the standard language for creating and designing web pages. It serves as the backbone of the World Wide Web, enabling the presentation and structuring of content on browsers.

HTML utilizes a system of tags, known as "Markup," to define the structure and elements within a document. These tags tell the browser how to display the content, whether it's text, images, links, or other media.

Every HTML document follows a basic structure, often referred to as the HTML document structure, consisting of two main sections: the head and the body.

- **Head:** Contains meta-information about the document, such as the title, character set, and linked stylesheets.
- **Body:** Houses the actual content visible on the web page, including text, images, links, and other elements.

HTML documents are made up of elements, each represented by tags. Tags are enclosed in angle brackets (< >) and usually come in pairs—an opening tag and a closing tag. The content to be affected by the tag is placed between these two tags.

HTML is often called a programming language, but it doesn't have logic like other programming languages do. Instead, it's a markup language. In simple terms, HTML uses tags to give meaning and make content on a webpage readable by machines.

Summary

- HTML is the standard language for creating web pages.
- It uses tags to structure content like text, images, and links.
- An HTML document has a head (meta-info) and a body (visible content).
- Elements in HTML are represented by opening and closing tags.
- HTML is a markup language, not a traditional programming language.

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- It uses tags to give meaning and structure to content on web pages.

1.2 Evaluation of HTML

In the early 1990s, Sir **Tim Berners-Lee** conceptualised HTML to facilitate document sharing among researchers, marking the inception of the World Wide Web.

Introduced in 1993, HTML 1.0 laid the foundation for structuring documents with simple tags, focusing on basic text formatting and linking.

HTML 2.0, released in 1995, brought additional features like forms and tables, advancing the structuring and presentation of content on the web.

HTML 3.2 (1997) saw enhancements and support for scripting languages. This period witnessed the "Browser Wars," influencing HTML with some browser-specific features.

In the early 2000s, XHTML emerged, aiming to create a stricter, XML-based syntax for HTML to enhance consistency and compatibility with XML technologies.

HTML5, released in 2014, is a milestone version emphasizing semantics, multimedia support, and improved accessibility. It introduced new elements, attributes, and APIs, making it a versatile choice for modern web development.

HTML5 has become the standard, providing a powerful foundation for creating diverse web content, from static pages to dynamic applications. As we progress through the upcoming chapters, we'll explore the features and capabilities of HTML5, empowering you to craft engaging and interactive web experiences.

Summary

- In the early 1990s, Sir Tim Berners-Lee created HTML for sharing documents, leading to the birth of the World Wide Web.
- HTML 1.0, from 1993, introduced basic tags for text formatting and linking in document structure.
- HTML 2.0 (1995) added features like forms and tables, enhancing content structuring.
- HTML 3.2 (1997) supported scripting languages amid the "Browser Wars" and browser-specific features.
- In the early 2000s, XHTML aimed for a stricter XML-based syntax for HTML to boost consistency.
- HTML5, from 2014, is a significant version emphasizing semantics, multimedia support, and accessibility.
- HTML5 has become the standard, offering a robust foundation for creating varied web content.

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1.3 Structure of HTML Document

An HTML document consists of several elements that define the structure and content of a web page.

HTML uses tags as building blocks, where each tag has an opening and closing part. The content between these tags is affected by them. For instance, `<p>` is an opening tag for a paragraph, and `</p>` is its closing tag.

The basic structure of an HTML document includes the `<!DOCTYPE html>` declaration, `<html>` as the cover of the "book," `<head>` for important information like the title, and `<body>` for the actual content such as text and images.

Structure of HTML:

```
<!DOCTYPE html> <----- Declares the HTML version for correct browser interpretation.

<html> <-----The root element wrapping all content on an HTML page. [Opening of HTML Tag]

  <head> <-----Contains meta-info like title and links to stylesheets or scripts. [Opening of Head Tag]

    <title>Your Page Title</title><----- Sets the webpage title displayed on the browser tab.

  </head><----- Closing Head Tag

  <body> <----- Holds the main content—text, images, links—visible on the webpage.
    [Opening Body tag]

    <!-- Your content goes here --><----- The Content of Webpage

  </body><----- Closing Body Tag

</html><----- Closing of HTML Tag
```

- **<!DOCTYPE html>**: This declaration defines the document type and version of HTML. In this case, it specifies HTML5.
- **<!DOCTYPE html>**: This declaration defines the document type and version of HTML. In this case, it specifies HTML5.
- **<html lang="en">**: The root element of an HTML document. The lang attribute is used to declare the language of the document (in this case, English).
- **<head>**: Contains metadata about the HTML document, including character set, viewport settings, and the title of the page.
 - **<meta charset="UTF-8">**: Specifies the character encoding for the document. UTF-8 is a widely used encoding that supports a vast range of characters.

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- **<meta name="viewport" content="width=device-width, initial-scale=1.0">**: Configures the viewport settings, helping ensure proper rendering on various devices by adapting to the device's width and initial scale.
- **<title>**: Sets the title of the HTML document, which appears in the browser's title bar or tab.
- **<body>**: Contains the main content of the HTML document.
 - Your content goes here: This is where you include elements like headings (<h1>, <h2>, etc.), paragraphs (<p>), images (), links (<a>), lists (, ,), and more to structure and present your content.

This is a minimal structure, and you can expand it based on the complexity of your web page. The HTML document can include additional sections like headers (<header>), main content (<main>), navigation (<nav>), and footers (<footer>) to provide a more semantic and structured layout.

Summary

- An HTML document structures a webpage with various elements.
- HTML utilizes tags with both opening and closing parts to define content.
- Tags, like <p> and </p>, enclose content like paragraphs.
- Basic HTML structure includes <!DOCTYPE html>, <html> as the "cover," <head> for vital info, and <body> for actual content.

Tags Use:

- **<!DOCTYPE html>**: Declares the HTML version for correct browser interpretation.
- **<html>**: The root element wrapping all content on an HTML page.
- **<head>**: Contains meta-info like title and links to stylesheets or scripts.
- **<title>**: Sets the webpage title displayed on the browser tab.
- **<body>**: Holds the main content—text, images, links—visible to users on the webpage.

What are Tags and Elements?

HTML uses tags and elements as its basic building blocks. Think of tags like instructions that tell a web browser how to show different parts of a web page. These tags have names like <html> or <body>, and they're written inside angle brackets (< >).

Some tags come with extra information called attributes, which describe things like size, color, or where the element should appear on the page.

Now, an element is what's between an opening tag and a closing tag. This could be text, pictures, links, or forms. For example, if you see <p> and </p>, anything written between

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those is a paragraph on the webpage.

Web developers use various tags and elements together to make web pages look interesting and do different things. Understanding these tags and elements is really important for anyone who wants to create or change web pages using HTML.



CHAPTER 2: HTML DOCUMENT ESSENTIALS



Text formatting in HTML

Text formatting in HTML involves using various tags to structure and style textual content on a web page.

Structural elements like the `<p>` tag define paragraphs, while tags such as `` and `` are employed for bold and italic text, respectively. Additionally, headings `<h1>` to `<h6>` establish a hierarchical structure in the content.

The `` tag is a versatile container for applying custom styles or classes to specific text portions. Through these HTML tags, web developers can create visually appealing and well-organized text presentations, enhancing the readability and aesthetics of the overall web page.

Moreover, HTML offers a range of attributes and inline styling options to further customize text formatting. CSS (Cascading Style Sheets) can be linked or embedded within HTML documents to provide extensive control over typography, color, spacing, and other visual aspects.

Lists, such as `` (unordered list) and `` (ordered list), contribute to structuring information, and the `<blockquote>` tag is employed for citing or emphasizing quoted text.

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HTML's versatility in text formatting allows for the creation of visually appealing and semantically meaningful content, crucial for an effective and well-designed web presence. By combining these elements, web developers can achieve a balance between aesthetic presentation and clear communication of information.

Headings

In HTML, headings are used to define the hierarchical structure and importance of different sections of a document.

Headings range from `<h1>` to `<h6>`, with `<h1>` being the highest level and `<h6>` the lowest. The choice of heading indicates the relative significance of the content it encompasses, helping both browsers and search engines understand the organization of the page.

For instance, `<h1>` is typically reserved for the main heading or title of the page, while subsequent levels represent subheadings in descending order of importance. Proper use of heading tags not only aids in visually organizing content but also enhances accessibility and search engine optimization by providing a meaningful structure to the document.

Web developers use CSS styles in conjunction with heading tags to control the appearance and formatting of the text, ensuring a cohesive and well-designed presentation.

Headings in HTML serve a dual purpose: they provide a visual hierarchy for structuring content on a webpage and contribute to the semantic markup of the document. Screen readers and other assistive technologies use heading tags to help users navigate through the page, offering a more accessible and inclusive experience.

It's crucial to use headings appropriately, ensuring that they accurately reflect the content's structure and meaning. Web developers often leverage CSS styles to customize the appearance of headings, adjusting properties such as font size, color, and spacing to achieve a visually appealing design that aligns with the overall aesthetic of the website.

By incorporating well-organized and properly styled headings, HTML contributes to both the aesthetic and functional aspects of web development, enhancing user experience and search engine optimization.

Let's understand the code:

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```
<!DOCTYPE html>
<html>
<body>

<h1>This is heading 1</h1>
<h2>This is heading 2</h2>
<h3>This is heading 3</h3>
<h4>This is heading 4</h4>
<h5>This is heading 5</h5>
<h6>This is heading 6</h6>


</body>
</html>

}
```

The output looks like this:

This is heading 1
This is heading 2
This is heading 3

Example-



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

Tip: Use h1 to h6 elements only for headings. Do not use them just to make text bold or big. Use other tags for that.

Paragraph

In HTML, paragraphs are created with the `<p>` tag. They act as containers for text, helping to structure and separate content on your webpage. Just like writing in a book, each `<p>` tag signifies a new block of text, making your content clean and easy to read.

Let's understand Using code:

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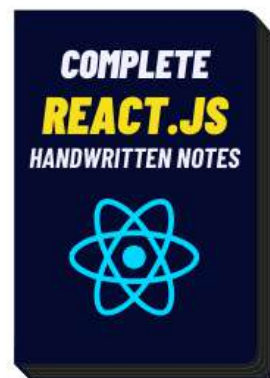


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