Getting Started with Basics

History of Web

Tim Berners-Lee created HTML in late 1991 but didn't release it officially. He published it later in 1995 as HTML 2.0. The idea behind creating the Web was to create a service that helps everyone communicate, share, and receive information. Then came HTML 4, which served as a major version of HTML. HTML has evolved very much and received various updates since its creation. With each version, the creation of web pages got
easier and more stylish.

HTML is generally used to design the basic **structure** of the web pages, which will be improved using other technologies like CSS and JavaScript. **CSS** controls the **looks**, feel, layout and formatting, whereas **JavaScript** is used to control different elements' **behaviour** on the page.

What is HTML:

HTML, or Hypertext Markup Language, serves as the backbone of the World Wide Web, providing a standardized method for creating and structuring content on web pages. It is a markup language that uses a system of tags to define and organize various elements, such as headings, paragraphs, links, images, forms, and more. These tags instruct web browsers on how to present and display content to users. HTML plays a crucial role in web development, facilitating the creation of visually appealing, well-organized, and interactive websites.

HTML uses a system of tags, which are enclosed in angle brackets (< >), to define different components and attributes of a webpage. At its core, HTML is a markup language, not a programming language, as it doesn't possess the logical and computational capabilities of languages like JavaScript or Python. Instead, HTML focuses on defining the structure and semantics of a document. Each HTML tag has a specific purpose, and by combining these tags, developers can create a hierarchy of elements that form the structure of a webpage.

HTML lays the foundation for web development, working in tandem with cascading style sheets (CSS) for styling and presentation, and JavaScript for interactivity. As the cornerstone of the web,   HTML empowers developers to create structured, accessible, and user-friendly content that can be seamlessly viewed across various devices and platforms. Understanding HTML is a fundamental step for anyone entering the field of web development.

History of HTML:

The history of HTML can be traced back to 1989 when Sir Tim Berners-Lee, a British computer scientist, envisioned the World Wide Web. The first version, HTML 1.0, was introduced in 1991, laying the foundation with basic tags for text formatting. HTML 2.0, released in 1995, expanded its capabilities by introducing features like tables. HTML 3.2, in 1997, further evolved by adding support for scripting languages, paving the way for more dynamic web pages. HTML 4.01,   arriving in 1999, marked a significant milestone with advanced features such as stylesheets and scripting capabilities, enhancing the overall web development experience.

The subsequent introduction of XHTML in 2000 aimed to align HTML with XML standards, emphasizing the importance of a more structured and rigorous syntax. However, HTML5, finalized in 2014, emerged as a game-changer. HTML5 not only addressed the shortcomings of its predecessors but also introduced groundbreaking features, including native support for audio and video, improved semantics, and enhanced support for creating responsive and interactive websites. HTML5 has since become the standard for modern web development, shaping the way websites are built and experienced across a variety of devices.

Versions of HTML:

- HTML 1.0 (1991): The inaugural version, introducing basic text formatting tags.
- HTML 2.0 (1995): Expanded features to include tables, enhancing the layout possibilities for developers.
- HTML 3.2 (1997): Added support for scripting languages, enabling the development of more interactive web pages.
- HTML 4.01 (1999): Significantly advanced web development with features like stylesheets and scripting capabilities.

- XHTML (2000): Aimed to align HTML with XML standards, emphasizing a stricter and more structured syntax.
- HTML5 (2014): The latest and most comprehensive version, revolutionizing web

  development with native multimedia support, improved semantics, and enhanced capabilities for creating modern and responsive websites. HTML5 has become the industry standard, shaping the landscape of contemporary web development practices.

HTML Boilerplate:

HTML boilerplate refers to a standardized and basic structure of HTML code that serves as a starting point for building a web page. It is essentially a template that includes the essential elements required for every HTML document. Creating an HTML boilerplate is a common practice among web developers to ensure consistency, save time, and adhere to best practices. Here's a breakdown of the key components of an HTML boilerplate:

Document Type Declaration (<!DOCTYPE html>): This declaration specifies the version of HTML that the document follows. In modern web development, <!DOCTYPE html> is used to indicate HTML5.

HTML Opening and Closing Tags (<html>...</html>): The root element of an HTML document. All other elements are nested within these tags.

Head Section (<head>...</head>): This section contains meta-information about the HTML document, such as the title of the page, links to external stylesheets or scripts, and other metadata.

Meta Charset Tag (<meta charset="utf-8">): This meta tag declares the character encoding for the document, ensuring proper interpretation of the text.

Title Tag (<title>...</title>): This tag defines the title of the HTML document, which is displayed in the browser's title bar or tab.

Body Section (<body>...</body>): The main content of the HTML document resides within these tags. Elements like headings, paragraphs, images, links, and other

visible content are placed here.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>My Web Page</title>
    <!-- Additional meta tags, links, and stylesheets can be included here -->
</head>
<body>
    <!-- Content of the web page goes here -->
    <h1>Hello, World!</h1>
    <h2>This is a basic HTML boilerplate.</h2>
    <!-- Additional content and elements can be added as needed -->
</body>
</html>
```

H1 and H2 Tags:

HTML <h1> and <h2> tags are part of the heading elements used to define headings or titles within a webpage. These tags play a crucial role in structuring content and indicating the hierarchy of information.

<h1> Tag: -

- The <h1> tag is the highest-level heading in HTML and signifies the main heading or title of a webpage.
- It carries significant semantic weight, representing the primary topic or purpose of the document.
- There should be only one <h1> tag per page, reflecting the most important heading on that page.

```
<h1>Welcome to My Website</h1>
```

<h2> Tag:

- The <h2> tag is a lower-level heading that comes after <h1> in the hierarchy.
- It is used to create subheadings or section titles within the content of the webpage.
- Multiple <h2> tags can be employed to organize and structure the page effectively.

```
<h2>About Us</h2>
```

Heading Hierarchy:

- HTML heading tags follow a hierarchy from <h1> to <h6, where <h1> is the highest and <h6> is the lowest.
- It is crucial to maintain a logical and sequential order in using heading tags to ensure a proper document structure.

Example of Hierarchy:

```
<h1>Main Heading</h1>
<h2>Subheading 1</h2>
<h2>Subheading 2</h2>
<h3>Sub-subheading</h3>
```

Semantic Meaning:

Heading tags in HTML provide semantic meaning to content, aiding both accessibility and search engine optimization.

They assist screen readers in understanding the structure of a document, making it more accessible to users with disabilities.

Search engines use heading tags to comprehend the content hierarchy, influencing page ranking.

We will be going to learn in detail about these tags in the next Lecture.

Conclusion:

In summary, delving into the fundamentals of web development reveals a rich history of HTML, initiated by Tim Berners-Lee in the early 1990s. From the foundational HTML 1.0 to the transformative HTML5, each version has contributed to simplifying web page creation and enhancing stylistic possibilities. HTML, as the backbone of the World Wide Web, collaborates with CSS and JavaScript to structure, style, and add interactivity to web content. The journey through HTML's evolution and its role in web development is complemented by exploring various resources for in-depth understanding.

Moving forward, the exploration extends to HTML boilerplate, a standardized template streamlining the creation of web pages. The HTML boilerplate comprises essential elements like the document type declaration, HTML tags, head and body sections, and meta information. This structured foundation aligns with best practices in web development, ensuring consistency and efficiency. The narrative then shifts to the significance of heading elements (<h1> and <h2>) in HTML, emphasizing their hierarchical structure, semantic meaning, and pivotal role in accessibility and SEO. The conclusion underscores the promise of continued learning in upcoming lectures, solidifying the foundation for comprehensive understanding and proficiency in web development.

References:

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