Introduction

HTML is the standard markup language for creating Web pages.

What is HTML?

- HTML stands for Hyper Text Markup Language
- HTML is the standard markup language for creating Web pages
- HTML describes the structure of a Web page
- HTML consists of a series of elements
- HTML elements tell the browser how to display the content
- HTML elements label pieces of content such as "this is a heading", "this is a paragraph", "this is a link", etc.
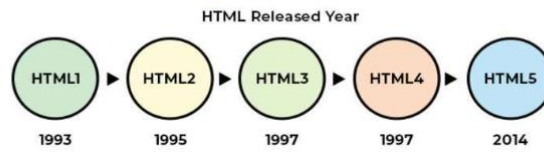
Introduction

Features

- HTML is the standard markup language for Web pages.
- With HTML you can create your own Website.
- HTML is easy to learn - You will enjoy it!
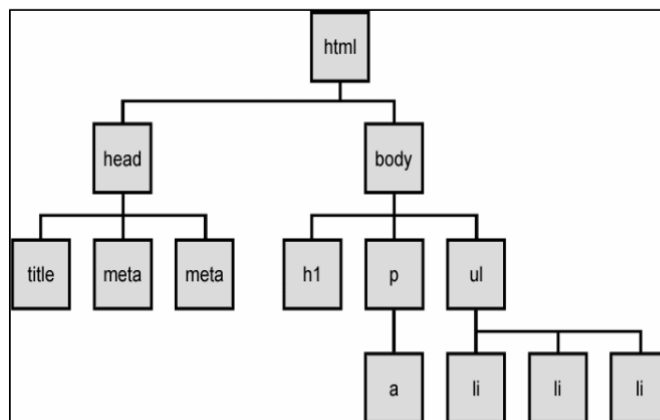
Note: HTML files are saved with .html or .htm extension

History & Evolution

HTML Released Year

HTML1 ▶ HTML2 ▶ HTML3 ▶ HTML4 ▶ HTML5
1993   1995   1997   1997   2014

- The history of HTML began in 1991 with **Tim Berners-Lee** creating a simple language for structuring documents on the web.

- **HTML 1.0** introduced basic text formatting and links, while **HTML 2.0 (1995)** standardized forms and images.

- **HTML 3.2 (1997)** added tables and multimedia, and **HTML 4.01 (1999)** separated content from design using CSS.

- **XHTML (2000)** enforced stricter rules, but **HTML5 (2014)** revolutionized the web with support for multimedia, APIs, and semantic elements, forming the foundation of modern web applications.

Basic Structure

The basic structure of an HTML5 document is designed to define the essential parts of a web page and ensure it's properly formatted. Here's the general structure:

Basic Structure

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

- The <!DOCTYPE html> declaration defines that this document is an HTML5 document
- The <html> element is the root element of an HTML page
- The <head> element contains meta information about the HTML page
- The <title> element specifies a title for the HTML page (which is shown in the browser's title bar or in the page's tab)
- The <body> element defines the document's body, and is a container for all the visible contents, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.
- The <h1> element defines a large heading
- The <p> element defines a paragraph

Key Elements of HTML5 Structure:

- **<!DOCTYPE html>:** Declares the document as HTML5. This is important for the browser to render the page correctly.

- **<html lang="en">:** The root element that wraps all the content of the web page. The lang attribute specifies the language of the document (in this case, English).

<head>: Contains metadata (data about the document), including:

- <meta charset="UTF-8">: Specifies the character encoding, ensuring proper text display.

- <meta name="viewport" content="width=device-width, initial-scale=1.0">: Ensures responsive design by setting the viewport.

- <title>: Defines the title of the page shown in the browser tab.

- <link>: Links external files like CSS stylesheets.

<body>: Contains all the visible content of the page, including:

- <header>: Typically contains the site's title and navigation links.

- <main>: The primary content of the document, often divided into sections.

- <section>: Groups related content.

- <footer>: Contains footer information like copyright or links.

This structure ensures compatibility, proper display, and easy navigation within an HTML5 document.

Elements

An HTML element is defined by a start tag, some content, and an end tag.

> **Syntax: <h1>My First Heading</h1>**

Nested HTML Elements

- HTML elements can be nested (this means that elements can contain other elements).

- All HTML documents consist of nested HTML elements.

Example:

```
<body>
    <h1>My First Heading</h1>
    <p>My first paragraph.</p>
</body>
```

Elements

Empty HTML Elements

- HTML elements with no content are called empty elements.

<p>This is a <br> paragraph with a line break.</p>

<hr>

Note: HTML is Not Case Sensitive. The HTML standard does not require lowercase tags, but W3C

recommends lowercase in HTML.

Attributes

- All HTML elements can have attributes.
- Attributes provide additional information about elements.
- Attributes are always specified in the start tag.
- Attributes usually come in name/value pairs like: name="value".

The <a> tag defines a hyperlink. The href attribute specifies the URL of the page the link goes to. Ex:

Visit Link

The <img> tag is used to embed an image in an HTML page. The src attribute specifies the path to the

image to be displayed: Ex.

<img src="img.jpg">

Attributes

The <img> tag should also contain the width and height attributes, which specifies the width and height of the image (in pixels). Ex:

<img src="img_girl.jpg" width="500" height="600">

The style attribute is used to add styles to an element, such as color, font, size, and more. Ex:

<p style="color:red;">This is a red paragraph.</p>

Comments

- HTML comments are not displayed in the browser, but they can help document your HTML source code.
- You can add comments to your HTML source by using the following syntax:

- With comments you can place notifications and reminders in your HTML code. Example:

- Comments are also great for debugging HTML, because you can comment out HTML lines of code, one at a time, to search for errors. Example:

<!-- Write your comments here -->

<!-- This is a comment -->
<p>This is a paragraph.</p>

<!-- Do not display this image at the moment
<img border="0" src="pic_trulli.jpg" >
-->

Note: There is an exclamation point (!) in the start tag, but not in the end tag.