

Lesson : Modern HTML

Basics of HTML5:

- The latest version of HTML.
- Designed for creating structured web content.
- Backward compatible with older HTML versions.
- Improved support for multimedia.
- Better error handling.

Features of HTML5:

- New elements, attributes, and behaviors; support for multimedia; better error handling.
- New tags like `<article>`, `<aside>`, `<figure>`.
- Enhanced forms with new input types.
- Built-in audio and video support with `<audio>` and `<video>`.
- Local storage for offline use.
- Graphics and animations with `<canvas>` and `<svg>`.

Semantic Tag and Its Importance:

- Provide meaning to web content.
- Help with SEO and accessibility.
- Improve code readability.

New Semantic Tags:

- `<nav>`: Defines navigation links.
- `<header>`: Represents introductory content or top section of a page..
- `<section>`: Groups related content.
- `<footer>`: Contains footer information or for the bottom section of a page.
- `<main>`: Main content of the document.

What are HTML Entities?:

- Special codes to display reserved characters.
- Help display symbols that have special meanings in HTML.
- Ensure characters are rendered correctly.
- Prevent HTML code from breaking.
- Used to display invisible characters

Purpose and Usage of HTML Entities:

- To display reserved characters, invisible characters, and non-keyboard characters.
- To show symbols like `&`, `<`, `>`.
- To avoid conflicts with HTML syntax.
- Enhance text presentation.
- Improve readability and user experience.

ASCII Character Set and Unicode:

- Standard character encoding sets.

Commonly Used HTML Entities:

- `&` for `&`
- `<` for `<`
- `>` for `>`
- `"` for `"`
- `'` for `'`

Numeric Character References vs. Named Character Entities:

- Numeric: `<` (based on character code).
- Named: `<` (based on character name).

Easier to read and remember named entities.

Numeric entities are useful for obscure characters.

Both types work similarly in HTML.

Special Tags:

- `<kbd>`: For keyboard input.
- `<code>`: For code snippets.
- `<pre>`: Preserves whitespace and line breaks.
- `<samp>`: Sample output from a program.
- `<var>`: Variable in mathematical expressions or programming context.
- `<code>`: Code snippets

What is Accessibility?:

- Making web content usable for everyone.
- Includes people with disabilities.
- Ensures equal access to information.
- Enhances user experience.
- Part of web development best practices.

Why to Use Accessibility?:

- Legal compliance (e.g., ADA, WCAG).
- Inclusivity and social responsibility.
- Expands audience reach.
- Improves SEO.
- Benefits all users, not just those with disabilities.

Best Practices to follow for Accessibility:

- Use semantic HTML tags.
- Provide alt text for images.
- Ensure keyboard navigability.
- Use ARIA (Accessible Rich Internet Applications) landmarks.
- Test with screen readers and other assistive technologies.

Introduction to Chrome DevTools for HTML:

- A set of web developer tools built directly into the Google Chrome browser.

- Helps inspect and debug web pages.
- Accessed via right-click "Inspect" or F12 key.
- Provides multiple panels for different tasks.
- Essential for web developers.

Inspecting and Modifying HTML Elements:

- Right-click an element and select "Inspect" to view and edit.
- See real-time changes.
- Diagnose layout issues.
- Identify element properties and styles.

Viewing and Editing Element Attributes:

- Directly modify attributes in the Elements panel.
- Add, modify, or delete attributes.
- Test different settings quickly.
- See instant visual feedback.
- Useful for debugging.

Understanding the HTML DOM Structure:

- View and navigate the Document Object Model (DOM).
- Understand parent-child relationships.
- See how elements are nested.
- Locate specific elements easily.
- Visualize HTML structure.

Testing and Debugging Form Elements:

- Inspect form elements.
- Test form validation.
- Debug form submission.
- Check input types and constraints.
- Ensure forms are accessible.

Accessibility Auditing and Testing:

- Use the Accessibility pane to audit accessibility.
- Check for common issues like missing alt text.
- Test keyboard navigation.
- Simulate different disabilities.
- Improve overall accessibility of web pages.

Lesson : SEO

What is SEO?

SEO (Search Engine Optimization):

- It helps optimize websites for better rankings on search engines like Google, Bing, and Yahoo.
- SEO is essential for businesses that want to succeed in the digital age.

Goal:

- The ultimate goal is to rank higher in search engine results pages for relevant keywords and phrases.
- Higher rankings can increase visibility, traffic, and ultimately, revenue for the website.

Key Elements:

- **Keywords:** Identifying and using relevant keywords and phrases that potential visitors might use in search engines.
- **Content Quality:** Creating high-quality, valuable, and relevant content that meets the needs of the target audience.
- **Backlinks:** Obtaining links from other reputable websites to enhance site credibility and authority.
- **Site Structure:** Ensuring the website is well-organized and easy to navigate for both users and search engines.
- **User Experience:** Providing a positive user experience with fast loading times, mobile-friendliness, and easy navigation.

Introduction to Head Tag :-

- An HTML element that contains metadata and links to resources.
- The <head> tag is placed between the <html> tag and the <body> tag.
- It contains important information and metadata about the document.

Tags Used Inside the Head Tag (title, link, style, meta) :-

<title> tag:

- Specifies the title of the document.
- Displayed in the browser's title bar or tab.
- Helps users identify the webpage and assists search engines in understanding the page's content.

<link> tag:

- Used to reference external resources like CSS stylesheets or icon files.
- Also utilized for alternate versions of the page for different devices or languages.
- Example: Linking to an external stylesheet for consistent styling across multiple pages.

<style> tag:

- Defines internal CSS styles applied to the document.
- Allows specifying custom styling rules for elements on the page.

- Example: Changing the background color of the web pages directly within the HTML document.

<meta> tag:

- Provides metadata about the document.
- Includes character encoding, viewport settings for responsive design, author information, keywords, and descriptions for search engines.
- Essential for Search Engine Optimization (SEO) as it signals important information to search engines about the webpage's content.

Introduction to Meta Tags and Their Usage

HTML tags that provide metadata about the webpage.

Usage:

- Enhance SEO.
- Improve user experience.
- Control how content is displayed.

Benefits of Using Meta Tags

Improves SEO:

- Helps search engines understand and rank the content.
- Example: `<meta name="description" content="A brief description of the webpage.">`

Enhances User Experience:

- Provides information like page description and viewport settings for responsive design.
- Example: `<meta name="viewport" content="width=device-width, initial-scale=1.0">`

Controls Content:

- Prevents duplication: `<meta name="robots" content="noindex, nofollow">`
- Sets refresh intervals: `<meta http-equiv="refresh" content="30">`
- Specifies content type: `<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">`

Favicon

Purpose : A small icon displayed in the browser tab, bookmarks, and address bar.

Implementation:-

```
<link rel="icon" href="favicon.ico" type="image/x-icon">
```