### Semantic HTML and Structure

#### Class Outline

**Objective:** By the end of this class, students will understand the importance of semantic HTML, be able to use semantic tags to structure content, and create well-organized web pages.

#### 1. Introduction to Semantic HTML

**What is Semantic HTML?**

* + Semantic HTML uses tags that provide meaning to the content they contain.
  + Helps search engines and assistive technologies better understand web content.
  + Enhances readability and maintainability of the code.

**Importance of Semantic HTML**

* + Improves accessibility for screen readers.
  + Enhances SEO by giving search engines meaningful information about the page's structure.
  + Makes the code more readable and maintainable.

**Examples of Semantic Tags**

* + <header>: Defines a header for a document or a section.
  + <nav>: Defines a set of navigation links.
  + <main>: Specifies the main content of a document.
  + <section>: Defines a section in a document.
  + <article>: Defines independent, self-contained content.
  + <aside>: Defines content aside from the main content.
  + <footer>: Defines a footer for a document or a section.

#### 2. Practical Exercise 1: Using Semantic Tags

**Objective:** Create a web page using semantic HTML tags to structure the content meaningfully.

**Instructions:**

*Open your text editor and create a new HTML file named semantic.html*

*Write the following HTML code:*

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<title>Semantic HTML Example</title>

</head>

<body>

<header>

<h1>My Website</h1>

<nav>

<ul>

<li><a href="#home">Home</a></li>

<li><a href="#about">About</a></li>

<li><a href="#contact">Contact</a> </li>

</ul>

</nav>

</header>

<main>

<section id="home">

<h2>Welcome to My Website</h2>

<p>This is the main content of the website.</p>

</section>

<article>

<h3>Blog Post Title</h3>

<p>This is a blog post.</p>

</article>

<aside>

<h3>Related Links</h3>

<ul>

<li><a href="#link1">Link 1</a></li>

<li><a href="#link2">Link 2</a></li>

</ul>

</aside>

</main>

<footer>

<p>&copy; 2024 My Website</p>

</footer>

</body>

</html>

*Save the file and open it in a web browser to see the structured content.*

#### 3. Understanding the HTML Document Structure (20 minutes)

**HTML Document Structure**

* + A well-structured HTML document should have a clear hierarchy.
  + The root element <html> contains the entire document.
  + <head> contains meta-information, links to stylesheets, and scripts.
  + <body> contains the content visible to users.

**Organizing Content with Semantic Elements**

* + Use <header> for the top section of a page.
  + Use <nav> for navigation menus.
  + Use <main> for the primary content.
  + Use <section> for different sections of the main content.
  + Use <article> for independent, self-contained content.
  + Use <aside> for supplementary content.
  + Use <footer> for the bottom section of a page.

#### 4. Practical Exercise 2: Creating a Structured HTML Document

**Objective:** Create a web page with a header, navigation menu, main content area, sidebar, and footer using semantic tags.

**Instructions:**

*Open your text editor and create a new HTML file named structured.html*

*Write the following HTML code:*

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<title>Structured HTML Document</title>

</head>

<body>

<header>

<h1>My Blog</h1>

<nav>

<ul>

<li><a href="#home">Home</a></li>

<li><a href="#about">About</a></li>

<li><a href="#blog">Blog</a></li>

<li><a href="#contact">Contact</a></li>

</ul>

</nav>

</header>

<main>

<section id="home">

<h2>Welcome to My Blog</h2>

<p>This is the home section where introductory content goes.</p>

</section>

<section id="about">

<h2>About Me</h2>

<p>This section contains information about the blog author.</p>

</section>

<section id="blog">

<h2>Blog Posts</h2>

<article>

<h3>Blog Post 1</h3>

<p>This is the first blog post.</p>

</article>

<article>

<h3>Blog Post 2</h3>

<p>This is the second blog post.</p>

</article>

</section>

<aside>

<h3>Related Links</h3>

<ul>

<li><a href="#link1">Related Link 1</a></li>

<li><a href="#link2">Related Link 2</a></li>

</ul>

</aside>

</main>

<footer>

<p>&copy; 2024 My Blog</p>

</footer>

</body>

</html>

*Save the file and open it in a web browser to see the structured layout.*