WEB development – Document Structure

**Learning Outline: HTML Document Structure**

**Objective**

By the end of this lesson, learners will:

1. Understand the structure of an HTML document.
2. Differentiate between block and inline elements.
3. Recognize the importance and usage of semantic HTML elements.
4. Be able to use <div> and <span> effectively for structuring content.
5. Apply their knowledge through practical exercises.

**Outline**

1. **Introduction to HTML Document Structure.**

**Learn more in** [**MDN Web Docs**](https://developer.mozilla.org/en-US/docs/Learn/HTML/Introduction_to_HTML/Document_and_website_structure)

* **Topics Covered**:
  + Basic structure of an HTML document:

html

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<!DOCTYPE html>

<html>

<head>

<title>Document Title</title>

</head>

<body>

<!-- Main content goes here -->

</body>

</html>

* + Importance of the <!DOCTYPE> declaration.
  + Purpose of <head> and <body> tags.

**2. Block-Level Elements**

* **Definition**:
  + Block elements create new "blocks" in the layout and take up the full width of their container.
* **Examples**:
  + <div>, <p>, <h1>-<h6>, <ul>, <ol>, <section>, <article>, <footer>.
* **Use Cases**:
  + Structuring sections of a webpage.
* **Code Example**:

html

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<div>

<h1>Welcome to My Website</h1>

<p>This is a paragraph.</p>

</div>

**3. Inline Elements**

* **Definition**:
  + Inline elements flow within the same line and don't start on a new line.
* **Examples**:
  + <span>, <a>, <strong>, <em>, <img>.
* **Use Cases**:
  + Styling text and inline content.
* **Code Example**:

html

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<p>This is a <span style="color: blue;">blue word</span> in a sentence.</p>

**4. <div> and <span> Elements**

* **Definition**:
  + <div>: Block-level container for grouping content.
  + <span>: Inline container for applying styles or grouping inline elements.
* **Best Practices**:
  + Use <div> for layout and structure.
  + Use <span> for styling inline text or elements.
* **Code Examples**:

html

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<div class="content-section">

<h2>Section Title</h2>

<p>Some paragraph text here.</p>

</div>

<p>This is <span style="font-weight: bold;">bold text</span>.</p>

1. **Semantic HTML Elements**

**Learn more in** [**MDN Web docs**](https://developer.mozilla.org/en-US/docs/Learn/HTML/Introduction_to_HTML/Document_and_website_structure#html_layout_elements_in_more_detail)

* **Definition**:
  + Semantic elements convey meaning and structure to both browsers and developers.
* **Examples**:
  + <header>, <footer>, <nav>, <main>, <section>, <article>, <aside>.
* **Importance**:
  + Improves accessibility and SEO.
* **Code Example**:

html

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<header>

<h1>Welcome to My Blog</h1>

</header>

<main>

<article>

<h2>Post Title</h2>

<p>Content goes here...</p>

</article>

</main>

<footer>

<p>© 2024 My Blog</p>

</footer>

**6. Difference Between Inline and Block Elements**

* **Comparison Table**:

| **Property** | **Block** | **Inline** |
| --- | --- | --- |
| Starts on a new line | Yes | No |
| Width | Fills container by default | Only as wide as content |
| Examples | <div>, <p> | <span>, <a> |

**7. Exercises**

**Beginner Level**

1. Create a basic HTML page with:
   * A header, main section, and footer.
   * Use <div> to group content and <span> to style inline text.

**Intermediate Level**

1. Create a layout with:
   * A <header> for the title.
   * A <nav> with links styled inline.
   * A <main> with two <section> elements for articles.
2. Use inline and block elements to format text, such as:
   * Bold text using <strong>.
   * Highlighted text using <span>.

**Advanced Level**

1. Design a simple blog page using semantic elements:
   * Use <article> for posts and <aside> for related links.
   * Style with CSS to differentiate sections visually.
2. Convert a <div>-based layout into a semantic layout using appropriate HTML5 tags.

**Conclusion**

* Recap the importance of document structure.
* Highlight the roles of <div>, <span>, inline vs block elements, and semantic HTML.
* Encourage practicing by converting existing HTML documents into more semantic versions.