**1. What is HTML?**

**Answer:** HTML (HyperText Markup Language) is the standard markup language used to create web pages. It structures content on the web using elements defined by tags, which can include text, images, links, and other multimedia.

**2. What are HTML elements and tags?**

* **Tags** are the basic building blocks of HTML. They are used to create elements and typically come in pairs: an opening tag (e.g., <p>) and a closing tag (e.g., </p>).
* **Elements** are the complete structure that includes the opening tag, content, and closing tag. For example, <p>This is a paragraph. </p> is a paragraph element.

**3. What is the purpose of the <!DOCTYPE html> declaration?**

**Answer:** The <!DOCTYPE html> declaration informs the browser about the version of HTML being used, ensuring that the document is rendered in standards mode. It helps avoid rendering issues across different browsers.

**4. What are semantic HTML elements?**

**Answer:** Semantic HTML elements clearly describe their meaning in a human- and machine-readable way. Examples include <header>, <footer>, <article>, <section>, and <nav>. Using semantic elements improves accessibility and SEO.

**5. What is the difference between <div> and <span>?**

* **<div>:** A block-level element used to group larger sections of content. It starts on a new line and takes up the full width available.
* **<span>:** An inline element used to group small portions of text or other inline elements without breaking the flow of the content.

**6. What are attributes in HTML?**

**Answer:** Attributes provide additional information about HTML elements. They are always specified in the opening tag and consist of a name and value pair. Example:

html

Copy code

<a href="https://www.example.com" target="\_blank">Visit Example</a>

Here, href and target are attributes of the <a> tag.

**7. What is the difference between id and class attributes?**

* **id:** A unique identifier for an HTML element. Each id must be unique within a page and is referenced with a # in CSS.
* **class:** A reusable identifier that can be applied to multiple elements. Classes are referenced with a . in CSS.

**8. What is the purpose of the <meta> tag?**

**Answer:** The <meta> tag provides metadata about the HTML document, such as character set, author, description, and viewport settings. It is placed in the <head> section and helps with SEO and responsive design.

**9. What are forms in HTML?**

**Answer:** Forms are used to collect user input. They are created using the <form> element and can include various input elements such as <input>, <textarea>, <select>, and buttons. Forms can be submitted to a server for processing.

**10. How can you create a hyperlink in HTML?**

**Answer:** A hyperlink is created using the <a> tag. The href attribute specifies the URL to which the link points. Example:

html

Copy code

<a href="https://www.example.com">Visit Example</a>

**11. What is the purpose of the <alt> attribute in images?**

**Answer:** The alt attribute provides alternative text for an image. It is essential for accessibility, allowing screen readers to describe the image to visually impaired users. It also displays when the image cannot be loaded.

**12. What is the <head> section used for?**

**Answer:** The <head> section contains metadata and links to resources for the document, such as the title, character set, stylesheets, and scripts. It does not contain content that is displayed directly on the page.

**13. What is the <script> tag used for?**

**Answer:** The <script> tag is used to embed or reference JavaScript code in an HTML document. It can be placed in the <head> or <body> section but placing it at the end of the body is often recommended for better page load performance.

**14. What is an HTML entity?**

**Answer:** An HTML entity is a way to represent characters that have special meaning in HTML (like <, >, &) or characters not easily typed on a keyboard. For example, &lt; represents <, and &amp; represents &.

**15. How do you include CSS in an HTML document?**

**Answer:** CSS can be included in an HTML document in three ways:

* **Inline CSS:** Using the style attribute in individual elements.

html

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<h1 style="color: blue;">Hello</h1>

* **Internal CSS:** Using a <style> tag within the <head>.

html

Copy code

<style>

h1 { color: blue; }

</style>

* **External CSS:** Linking to an external stylesheet using the <link> tag.

html

Copy code

<link rel="stylesheet" href="styles.css">

**16. What are data attributes in HTML?**

**Answer:** Data attributes are custom attributes that allow you to store extra information on HTML elements. They are prefixed with data- and can be accessed via JavaScript. Example:

html

Copy code

<div data-user-id="12345">User Info</div>

**17. What is the <iframe> tag used for?**

**Answer:** The <iframe> tag is used to embed another HTML document within the current document. It can display external content, such as other web pages, videos, or maps.

html

Copy code

<iframe src="https://www.example.com" width="600" height="400"></iframe>

**18. What are the new features in HTML5?**

**Answer:** HTML5 introduced several new features, including:

* New semantic elements (e.g., <article>, <section>, <header>, <footer>)
* The <video> and <audio> elements for multimedia support
* The <canvas> element for drawing graphics via scripting
* Improved form controls (e.g., <input type="date">, <input type="email">)
* Native support for local storage with the Web Storage API.

**19. What is the <link> tag used for in HTML?**

**Answer:** The <link> tag is used to link external resources to the HTML document, most commonly for stylesheets. It is placed within the <head> section. Example:

html

Copy code

<link rel="stylesheet" href="styles.css">

**20. What is the difference between a block-level and an inline element?**

* **Block-level elements:** Take up the full width available and start on a new line (e.g., <div>, <h1>, <p>).
* **Inline elements:** Take up only as much width as necessary and do not start on a new line (e.g., <span>, <a>, <img>).

**21. What is the purpose of the <title> tag in HTML?**

**Answer:** The <title> tag defines the title of the HTML document, which is displayed in the browser's title bar or tab. It is also used by search engines as the clickable headline for search results, making it important for SEO.

**22. What are the different types of lists in HTML?**

**Answer:** HTML supports three types of lists:

* **Ordered List (<ol>):** A list where items are numbered.
* **Unordered List (<ul>):** A bulleted list.
* **Definition List (<dl>):** A list of terms and their descriptions, containing <dt> (definition term) and <dd> (definition description) elements.

**23. What is the <blockquote> tag used for?**

**Answer:** The <blockquote> tag is used to indicate that the enclosed text is a quotation from another source. It typically displays as an indented block of text. Example:

html

Copy code

<blockquote cite="https://www.example.com">

This is a quoted text.

</blockquote>

**24. What is the purpose of the href attribute in links?**

**Answer:** The href attribute specifies the URL that the link points to. When a user clicks on the link, the browser navigates to the URL provided in the href attribute.

**25. How can you create a table in HTML?**

**Answer:** A table is created using the <table> tag, along with <tr> for table rows, <th> for header cells, and <td> for data cells. Example:

html

Copy code

<table>

<tr>

<th>Name</th>

<th>Age</th>

</tr>

<tr>

<td>John</td>

<td>30</td>

</tr>

</table>

**26. What is the <form> element used for?**

**Answer:** The <form> element is used to create an HTML form for user input. It can contain various types of input elements, such as text fields, radio buttons, checkboxes, and buttons, to gather user data. Example:

html

Copy code

<form action="/submit" method="POST">

<input type="text" name="username" required>

<input type="submit" value="Submit">

</form>

**27. What is the difference between GET and POST methods in forms?**

* **GET:** Appends form data to the URL, making it visible in the address bar. It is suitable for retrieving data and has length limitations. It is less secure as sensitive information can be exposed.
* **POST:** Sends form data in the request body, which is not visible in the URL. It is suitable for submitting sensitive information and allows larger amounts of data.

**28. What is the purpose of the action attribute in a form?**

**Answer:** The action attribute specifies the URL where the form data should be sent when the form is submitted. If omitted, the form will submit to the same page.

**29. What are the differences between <strong> and <b> tags?**

**Answer:**

* **<strong>:** Indicates that the text is of strong importance and is typically displayed in bold. It has semantic meaning for accessibility and SEO.
* **<b>:** Simply styles the text as bold without implying any additional importance.

**30. What is the <header> element used for in HTML5?**

**Answer:** The <header> element is a semantic element that defines the header section of a document or a section. It typically contains introductory content, such as a logo, navigation links, or headings.

**31. What are the <section> and <article> tags?**

**Answer:**

* **<section>:** Represents a thematic grouping of content, typically with a heading. It can contain multiple <article> elements.
* **<article>:** Represents a self-contained piece of content, such as a blog post or news article, that could be distributed independently.

**32. What does the <canvas> element do?**

**Answer:** The <canvas> element is used to draw graphics via scripting (usually JavaScript). It provides a space on the webpage where graphics can be rendered dynamically, such as images, charts, or animations.

**33. How can you make a webpage accessible?**

**Answer:** To make a webpage accessible, consider the following:

* Use semantic HTML to enhance screen reader compatibility.
* Provide alt text for images.
* Ensure sufficient color contrast for readability.
* Use proper heading structures.
* Implement ARIA (Accessible Rich Internet Applications) roles and attributes when necessary.

**34. What is the difference between the <link> and <script> tags?**

**Answer:**

* **<link>:** Used to link external resources, typically stylesheets. It is placed in the <head> section and does not execute any code.
* **<script>:** Used to include JavaScript files or inline scripts. It can be placed in the <head> or <body> and executes code.

**35. What is the purpose of the target attribute in a link?**

**Answer:** The target attribute specifies where to open the linked document. Common values include:

* **\_blank:** Opens the link in a new tab or window.
* **\_self:** Opens the link in the same frame as it was clicked (default).
* **\_parent:** Opens the link in the parent frame.
* **\_top:** Opens the link in the full body of the window.

**36. What are the benefits of using HTML5?**

**Answer:**

* Improved semantics with new elements (e.g., <article>, <section>).
* Native support for multimedia (audio and video) without plugins.
* Better performance with local storage and offline capabilities.
* Enhanced form controls for better user input handling.

**37. What is the src attribute in <img> tags?**

**Answer:** The src attribute specifies the path to the image file that the <img> element will display. Example:

html

Copy code

<img src="image.jpg" alt="Description of image">

**38. How do you create a checkbox input in HTML?**

**Answer:** A checkbox input is created using the <input> element with the type attribute set to checkbox. Example:

html

Copy code

<input type="checkbox" name="subscribe" value="yes"> Subscribe to newsletter

**39. What is the <footer> element used for?**

**Answer:** The <footer> element defines the footer section of a document or a section. It typically contains copyright information, links to terms of service, or contact information.

**40. What are iframes, and what are their uses?**

**Answer:** Iframes (<iframe>) are used to embed another HTML document within the current document. Common uses include:

* Displaying external content (like videos from YouTube).
* Embedding maps (like Google Maps).
* Integrating third-party widgets.