**HTML**

**Q1. Are the HTML tags and elements the same thing?**

**Ans. No HTML tags and elements are not the same thing.**

**HTML tags are used to mark up the content of a web page and provide structure to the page. They are enclosed in angle brackets (< >) and typically come in pairs - an opening tag and a closing tag. For example <p> is an opening tag for a paragraph and </p> is a closing tag for the same paragraph.**

**HTML elements on the other hand consist of both the opening and closing tags along with the content placed between them. They represent the individual components or elements of a web page such as headings paragraphs images links lists etc. For example the element <p>This is a paragraph.</p> represents a paragraph element with the content "This is a paragraph."**

**Q2. What are tags and attributes in HTML?**

**Ans. In HTML, tags are used to define elements on a webpage. They are enclosed in angle brackets (<>) and usually come in pairs, with an opening tag and a closing tag. The opening tag starts with the name of the element, followed by any attributes, and ends with a closing angle bracket. The closing tag starts with a forward slash (/) before the element name and ends with a closing angle bracket.**

**For example, in the code snippet provided, <table> is the opening tag for the table element, and </table> is the closing tag.**

**Attributes provide additional information about an element and are specified within the opening tag. They are composed of a name-value pair, where the name is followed by an equal sign (=) and the value is enclosed in double quotes (""). Attributes can modify the behavior or appearance of an element.**

**In the given example, colspan and rowspan are attributes used to specify how many columns or rows an element should span across.**

**Overall, tags define the structure and content of an HTML document, while attributes provide additional information or modify the behavior of elements.**

**Q3. What are void elements in HTML?**

**Ans. Void elements in HTML are elements that do not require a closing tag. They are self-closing and do not have any content or nested elements. Void elements are used to insert specific types of content or elements into a webpage.**

**Some examples of void elements in HTML include:**

**- <br>: Inserts a line break.**

**- <img>: Inserts an image.**

**- <input>: Creates an input field.**

**- <link>: Links an external resource, such as a CSS stylesheet.**

**- <meta>: Provides metadata about the HTML document.**

**- <hr>: Inserts a horizontal rule.**

**Void elements do not have a closing tag and are written with a single tag, followed by a closing slash within the opening tag (e.g., <br />). This is known as the self-closing syntax.**

**It's important to note that void elements cannot have any content or nested elements. They are standalone elements used for specific purposes within the structure of an HTML document.**

**Q4. What are HTML Entities?**

**Ans. HTML entities are special characters that cannot be directly used in HTML code because they have special meanings or reserved purposes. Instead, HTML entities are used to represent these characters in a way that can be interpreted and displayed correctly by web browsers.**

**HTML entities are written using an ampersand (&) followed by a specific code or name, and then a semicolon (;). For example, the HTML entity for the less than symbol (<) is &lt; and for the greater than symbol (>) is &gt;.**

**HTML entities are useful when you want to display special characters, such as mathematical symbols, currency symbols, trademark symbols, or characters from different languages, within your HTML code. They ensure that these characters are correctly rendered by web browsers and do not interfere with the structure or functionality of the HTML document.**

**Here are some examples of commonly used HTML entities:**

**- &copy;: © - Copyright symbol**

**- &reg;: ® - Registered trademark symbol**

**- &amp;: & - Ampersand symbol**

**- &nbsp;: - Non-breaking space**

**- &ldquo;: “ - Left double quotation mark**

**- &rdquo;: ” - Right double quotation mark**

**By using HTML entities, you can include special characters in your HTML code without causing any conflicts or errors.**

**Q5. What are defferent type of lists in HTML?**

**Ans. There are three types of lists in HTML:**

**1. Ordered Lists (<ol>): An ordered list is a numbered list where each item is preceded by a number. The numbers are automatically generated by the browser and typically displayed as 1, 2, 3, etc. To create an ordered list, you use the <ol> element and wrap each list item with the <li> element. Here's an example:**

**<ol>**

**<li>First item</li>**

**<li>Second item</li>**

**<li>Third item</li>**

**</ol>**

**2. Unordered Lists (<ul>): An unordered list is a bulleted list where each item is preceded by a bullet point. The bullet points are automatically generated by the browser and typically displayed as small black circles. To create an unordered list, you use the <ul> element and wrap each list item with the <li> element. Here's an example:**

**<ul>**

**<li>First item</li>**

**<li>Second item</li>**

**<li>Third item</li>**

**</ul>**

**3. Definition Lists (<dl>): A definition list is a list of terms and their corresponding definitions. Each term is wrapped with the <dt> element, and each definition is wrapped with the <dd> element. Here's an example:**

**<dl>**

**<dt>Term 1</dt>**

**<dd>Definition 1</dd>**

**<dt>Term 2</dt>**

**<dd>Definition 2</dd>**

**<dt>Term 3</dt>**

**<dd>Definition 3</dd>**

**</dl>**

**These different types of lists can be nested within each other to create more complex structures.**

**Q6. What is ‘class’ attribute in HTML?**

**Ans.** **In HTML a class attribute is used to assign one or more classes to an element. It allows you to group together elements that have similar characteristics or styling. By assigning a class to an element you can apply CSS styles or JavaScript functions to all the elements within that class. This makes it easier to style or manipulate multiple elements at once rather than individually targeting each element. The class attribute is defined using the "class" keyword and the name of the class or classes separated by a space. For example `<div class="container">` assigns the class "container" to a `<div>` element. Multiple classes can be assigned to an element by adding multiple class names within the attribute value separated by spaces**

**Q7. What is the difference between the “id” attribute and the ‘class’ attribute of HTML elements?**

**Ans. The `id` attribute and the `class` attribute are both attributes in HTML that are used to identify and reference elements.**

**The `id` attribute is used to uniquely identify an element on a web page. The value of the `id` attribute must be unique within the entire HTML document. This means that no other element within the same webpage can have the same `id` attribute value. The `id` attribute is used to reference an element from CSS or JavaScript. For example you can use the `id` attribute to style a specific element or to manipulate it using JavaScript.**

**The `class` attribute on the other hand is used to group HTML elements together. The value of the `class` attribute can be shared by multiple elements within the same HTML document. This means that multiple elements can have the same `class` attribute value. The `class` attribute is primarily used to apply styles or target elements using CSS. By assigning the same `class` to multiple elements you can easily apply the same styles to all of those elements.**

**In summary the `id` attribute is used to uniquely identify a specific element while the `class` attribute is used to group elements together and apply styles or target them with CSS.**

**Q8. What are the various formatting tags in HTML?**

**Ans.** **There are several formatting tags in HTML that can be used to apply various styles and formatting to the content within them. Some of the commonly used formatting tags in HTML include:**

**1. <b>: Represents bold text.**

**2. <i>: Represents italicized text.**

**3. <u>: Represents underlined text.**

**4. <strong>: Represents strong emphasis, typically displayed as bold.**

**5. <em>: Represents emphasized text, typically displayed as italicized.**

**6. <sub>: Represents subscript text, displayed below the normal line of text.**

**7. <sup>: Represents superscript text, displayed above the normal line of text.**

**8. <del>: Represents deleted or struck-through text.**

**9. <ins>: Represents inserted or underlined text.**

**10. <mark>: Represents highlighted or marked text.**

**11. <code>: Represents computer code or program code.**

**12. <pre>: Represents preformatted text, preserving whitespace and line breaks.**

**It's important to note that while these tags can be used for styling purposes, it is generally recommended to use CSS for styling elements instead of relying solely on these tags.**

**Q9. How is Cell padding different from Cell spacing?**

**Ans. Cell padding and cell spacing are two attributes used in HTML table elements to control the spacing between cells.**

**1. Cell Padding: Cell padding refers to the space between the content of a cell and its borders. It allows you to specify the amount of space (in pixels) that should be added inside each cell. By default, the cell padding is set to 1 pixel.**

**For example:**

**<table>**

**<tr>**

**<td style="padding: 10px;">Cell 1</td>**

**<td style="padding: 5px;">Cell 2</td>**

**</tr>**

**</table>**

**In this example, the first cell will have a padding of 10 pixels, while the second cell will have a padding of 5 pixels.**

**2. Cell Spacing: Cell spacing refers to the space between adjacent cells in a table. It allows you to specify the amount of space (in pixels) that should be added between cells. By default, the cell spacing is set to 2 pixels.**

**For example:**

**<table cellspacing="10">**

**<tr>**

**<td>Cell 1</td>**

**<td>Cell 2</td>**

**</tr>**

**</table>**

**In this example, there will be a spacing of 10 pixels between the two cells.**

**Q10. How can we club two or more rows or columns into a single row or coloumn in an HTML table?**

**Ans.** **To club two or more rows into a single row in an HTML table, you can use the rowspan attribute. This attribute specifies the number of rows a cell should span.**

**<table>**

**<tr>**

**<td rowspan="2">Cell 1</td>**

**<td>Cell 2</td>**

**</tr>**

**<tr>**

**<td>Cell 3</td>**

**</tr>**

**</table>**

**In this example, the first cell will span two rows, resulting in two rows being clubbed into a single row.**

**To club two or more columns into a single column in an HTML table, you can use the colspan attribute. This attribute specifies the number of columns a cell should span.**

**<table>**

**<tr>**

**<td colspan="2">Cell 1</td>**

**<td>Cell 3</td>**

**</tr>**

**</table> In this example, the first cell will span two columns, resulting in two columns being clubbed into a single column.**

**Q11. What is the difference between bloack-level element and inline element?**

**Ans.** **Block-level elements and inline elements are two types of elements in HTML that are used to structure and format the content of a web page.**

**Block-level elements:**

**- Block-level elements occupy the entire width of the container element by default. They start on a new line and stack vertically on top of each other. Examples of block-level elements include `<div> `<p> `<h elements include `<span> `<a> `<strong> `<em> `<input> and `<img>`. These elements are used for smaller elements within content such as formatting text adding links or inserting images.**

**In summary block-level elements create larger sections and take up the full width of the container while inline elements flow within the text and don't create line breaks.**

**Q12. How to create a Hyperlink in HTML?**

**Ans. To create a hyperlink in HTML, you can use the <a> (anchor) element. Here's the basic syntax:**

**html**

**<a href="URL">Link Text</a>**

**The href attribute specifies the URL or destination that the link will navigate to when clicked. Replace "URL" with the actual web address.**

**The text between the opening and closing <a> tags is the visible link text. Replace "Link Text" with the desired text for your hyperlink.**

**Here's an example:**

**html**

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

**When this link is clicked, it will navigate to "https://www.example.com" in a new browser tab or window.**

**Q13. What is the use of an iframe tag?**

**Ans. The <iframe> (inline frame) tag in HTML is used to embed another HTML document within the current document. It allows you to display content from another source or website within your own webpage.**

**The src attribute of the <iframe> tag specifies the URL of the document to be embedded. You can also set the width and height attributes to define the dimensions of the embedded content.**

**Here's an example of using the <iframe> tag:**

**html**

**<iframe src="https://www.youtube.com/embed/dQw4w9WgXcQ" width="560" height="315"></iframe>**

**In this example, an iframe is used to embed a YouTube video. The src attribute contains the URL of the video, and the width and height attributes define the dimensions of the embedded video player.**

**The <iframe> tag is commonly used for embedding maps, videos, social media feeds, advertisements, and other external content within a webpage.**

**Q14. What is the use of a span tag? Expalin with example?**

**Ans The `<span>` tag in HTML is a generic inline container that is used to group and style text or other inline elements within a larger block of content. It doesn't provide any visual change on its own but it allows you to target specific parts of the content and apply CSS styles or manipulate them with JavaScript.**

**Here's an example to illustrate its use:**

**html**

**<p>This is a <span style="color: blue;">blue</span> paragraph.</p>**

**In the above example the word "blue" is enclosed within a `<span>` tag with an inline style attribute that sets the text color to blue. This allows you to apply a specific style only to that part of the paragraph.**

**Additionally you can also use the `<span>` tag to target and manipulate text or inline elements using JavaScript. For instance you can add event listeners or dynamically change the content of specific parts within a block of text.**

**Q15. How to insert a picture into a background image of webpage?**

**Ans. To insert a picture into a background image of a web page using only HTML you can use the CSS background-image property. Here are the steps:**

**1. First make sure you have the image you want to use saved in a suitable format (such as JPG PNG or SVG) and that it is accessible with a direct URL. You can upload the image to your web server or use a third-party image hosting service.**

**2. In your HTML file locate the element that you want to set the background image for. This could be the <body> element to set it as the background for the entire page or a specific <div> element for a particular section.**

**3. Add a style attribute to the element you want to set the background image for like this:**

**html**

**<div style="background-image: url('image-url');"></div>**

**Replace `'image-url'` with the direct URL of the image you want to use. For example if the image is located at `https://example.com/image.jpg your code would be:**

**html**

**<div style="background-image: url('https://example.com/image.jpg');"></div>**

**4. Save your HTML file and view it in a web browser. The image you specified will be displayed as the background image of the selected element.**

**Remember to adjust the size and position of the element based on your design requirements using CSS properties like width height position padding or margin.**

**Q16. How are active links different from normal links?**

**Ans. Active links and normal links are different in terms of their appearance and behavior.**

**1. Appearance: Active links typically have a different visual style compared to normal links. When a user interacts with an active link, such as clicking or hovering over it, the link may change color, underline, or display some other visual indicator to show that it is being interacted with.**

**2. Behavior: Active links also have a different behavior compared to normal links. When a user clicks on an active link, it may perform a specific action or trigger a certain event. For example, an active link could navigate to a different page, open a new tab, submit a form, or execute some JavaScript code.**

**Normal links, on the other hand, usually just navigate to a different page or location specified by the href attribute without performing any additional actions.**

**In HTML, you can define active links using CSS pseudo-classes such as :hover, :active, and :visited. These pseudo-classes allow you to apply different styles to links based on their state or user interaction.**

**Q17. What are different tags to separate section of text?**

**Ans. HTML provides several tags to separate sections of text including:**

**- `<p>`: Used for paragraphs of text. It adds spacing before and after the text.**

**- `<h1>` to `<h6>`: Heading tags used to denote different levels of headings.**

**`<h1>` is the largest and `<h6>` is the smallest.**

**- `<div>`: Used to group blocks of content together.**

**- `<span>`: Used to apply styling or meaning to smaller sections of text.**

**- `<blockquote>`: Used to quote a section of text.**

**- `<pre>`: Preserves spaces line breaks and other formatting within the text.**

**- `<ul>` and `<ol>`: Used to create unordered and ordered lists respectively.**

**- `<li>`: Used to define list items within `<ul>` or `<ol>`.**

**These are just a few examples and there are many more tags available in HTML for structuring and separating sections of text.**

**Q18. What is SVG?**

**Ans. SVG stands for Scalable Vector Graphics. It is a markup language used to describe two-dimensional vector graphics. Unlike raster images, which are made up of pixels and can lose quality when scaled, SVG images are resolution-independent and can be scaled up or down without losing clarity.**

**SVG files are written in XML format and can be created and edited using various software tools. They can be embedded directly into HTML documents using the <svg> tag or referenced as external files.**

**SVG supports a wide range of graphic elements, such as shapes (lines, rectangles, circles, etc.), text, images, gradients, and filters. It also allows for interactivity and animation through the use of scripting languages like JavaScript.**

**SVG is widely supported by modern web browsers and is often used for creating icons, logos, charts, maps, and other graphical elements on websites. It provides a flexible and accessible way to display high-quality graphics on the web.**

**Q19. What is the difference between HTML and XHTML?**

**Ans. HTML (Hypertext Markup Language) and XHTML (Extensible Hypertext Markup Language) are both markup languages used for creating web pages. The main difference between the two lies in their syntax and rules.**

**1. Syntax: HTML has a more forgiving syntax, allowing for certain errors and inconsistencies. XHTML, on the other hand, follows stricter XML rules and requires well-formed and properly nested tags.**

**2. Tag Casing: In HTML, tag names are case-insensitive, meaning they can be written in uppercase or lowercase. XHTML, however, requires all tag names to be written in lowercase.**

**3. Closing Tags: HTML allows for optional closing tags in certain cases, such as <p> or <li>. XHTML mandates the use of closing tags for all elements, making it more structured and consistent.**

**4. Attribute Quoting: In HTML, attribute values can be quoted or unquoted. XHTML requires attribute values to be quoted with either single or double quotes.**

**5. Document Type Declaration: HTML does not require a document type declaration (DOCTYPE) at the beginning of the document. XHTML requires a DOCTYPE declaration to specify the version and document type being used.**

**6. Error Handling: HTML browsers are designed to handle errors and continue rendering the page even if there are syntax errors. XHTML browsers are more strict and may stop rendering the page if any errors are encountered.**

**7. Compatibility: HTML is widely supported by all modern web browsers, while XHTML has slightly less support due to its stricter rules and requirements.**

**In summary, XHTML is a stricter and more standardized version of HTML that follows XML rules. It enforces stricter syntax, requires closing tags, and mandates the use of quotes for attribute values. However, due to its stricter nature, it may have compatibility issues with older web browsers.**

**Q20. What are logical and physical tags in HTML?**

**Ans. In HTML tags refer to the elements or structures used to define the content and layout of a web page. There are two main categories of tags: logical tags and physical tags.**

**Logical tags also known as semantic tags are used to describe the meaning or purpose of the content within them. These tags provide contextual information to the browser and assistive technologies in understanding the structure and organization of the page. They are primarily used for creating the logical structure of the document.**

**Some examples of logical tags include:**

**1. `<header>`: Represents the introductory content at the top of a page often containing the site logo navigation menus or page title.**

**2. `<nav>`: Defines a section of navigation links.**

**3. `<main>`: Specifies the main content of the document.**

**4. `<article>`: Represents a self-contained composition in a document such as a blog post or news article.**

**5. `<section>`: Defines a standalone section of content within a document.**

**6. `<aside>`: Represents content that is tangentially related to the main content such as sidebars or call-out boxes.**

**On the other hand physical tags also known as presentational or formatting tags are used to control the presentation or appearance of the content. These tags define the visual styling and layout of the page. While they were commonly used in older versions of HTML they are now discouraged in favor of using CSS (Cascading Style Sheets) for styling.**

**Some examples of physical tags include:**

**1. `<b>` or `<strong>`: Renders text as bold.**

**2. `<i>` or `<em>`: Renders text in italic.**

**3. `<u>`: Underlines text.**

**4. `<br>`: Inserts a line break.**

**5. `<center>`: Centers the content horizontally.**

**6. `<font>`: Specifies font styles and colors.**

**It is important to note that using physical tags for styling purposes is generally considered bad practice since it mixes presentation with content making it harder to maintain and update the website. Instead CSS should be used to separate the content from its presentation.**