1)&lt – shows < sign, &gt – shows > signs.

2)**<p></p>** tag for paragraph

3)**<q></q>** tag for quotation

4)**<b></b>, <strong></strong>** stag for bold

5)**<i></i>, <em></em>** s tag for italic

6)paragraph, quotation, bold, italic tags are **inline elements**

7)headings 6 different types **<h1></h1>, <h2></h2>, <h3></h3>, <h4></h4>, <h5></h5>, <h6></h6>**.

8)List of item tags are **<li></li>**. List are total 3 types unordered list, ordered list, discrete list.

**Unordered list**: - tags are <ul></ul>. The browser will display each list of item bullets. The list of items is not inherently ordered or numbered.

**Ordered List:** tags are <ol></ol>. The items in the list are intended to be displayed order or typically numbered.

**Description List:** - tags are <dl></dl>. It is used to associate terms with their definitions and descriptions. The browser will typically display the terms and definitions with appropriate styling, such as bold font for terms and intended block for definitions.

<dl><dt></dt><dd></dd><dt></dt></dl>

9)**<pre></pre>** tag for Element will be displayed in a monoscope font and any spaces, tabs, or line breakers will be rendered exactly, remove padding around as they are in HTML code. This is particularly useful when displaying code snippets, ascii art, any content that requires precise formatting.

10)**<code></code>** tag for indicates that it represents inline code. This is typically used for displaying variable names, function names, or any short snippets of code with a paragraph or other text. It is providing semantic meaning and visual distinction for code related content with in HTML document.

11**)<cite></cite>** tag for used to markup the title of a creative work or a reference to a source. It provides semantic meaning to the citation and can be useful for search engines, assistive technologies, and other applications that process HTML.

12**)INSPECTOR: -** Inspector in a web browser, often referred to as a “web development tools” or “browser developer tools” are a built-in feature that allows developers and designers to inspect and analyze the structure, layout, and behavior of web pages. It provides comprehensive set of tools for debugging, testing and modifying HTML, CSS, and Java script real time.

13)**Document Object Model: -** DOM is a programing interface for web documents. It represents the structures of an HTML or XML document as a tree like structure, where each element, attribute and piece of text in the document is represented a node in the tree. The DOM provides methods and properties to manipulate and infract with these nodes programmatically.

The DOM allows web developers to dynamically access, modify, and manipulate the content, structure, and style of web documents using java script or other programing languages. It provides a consistent and platform independent way to interact with the elements and data with in a web page.

**14)ATTRIBUTES: -** Attributes provide additional information about HTML elements. They are used to modify the behavior, appearance or functionally of elements. Attributes are specified with in the opening tag of an element and consist of name- value pair. All Attributes can not be applied to all elements. The availability and usage of attributes depends on the elements they are associated with.

Attributes paly a crucial role in HTML, enabling developers to control and customize the behavior and appearance of elements, as well as provide additional information for various purposes.

**GLOBAL ATTRIBUTES:** These attributes provide common functionality and behavior across different elements.

1)CLASS ATTRIBUTE: Class attribute in HTML is used to specify one or more CSS class names for an element. It allows you to apply styles or target elements using CSS selectors. CSS selectors can target elements based on their class names using ‘.’ notation. By using class attribute and CSS can apply consistent styles to multiple elements across web page or website.

2)ID ATRIBUTE: The ‘id’ attribute in HTML is used to uniquely identify an element on webpage. It Provide a way to target and reference the element using java script, CSS, other technologies. If using the same ‘id’ value for multiple elements is invalid HTML and can also lead to unexpected behavior or conflicts.

3)LANG ATTRIBUTE: - The ‘lang’ attribute in HTML is used to specify the language of the content. With in an element. It helps assistive technologies such as screen recorders and search engine understand and process the language used in document. The ‘lang’ attribute does not automatically translate or localize the comment. It simply informs the browser and other tools about the language of content. If you need to provide translations or localizations language use separate language versions of page or implementing internationalization feature in web application. It helps in properly processing and interpreting language of content improving the overall user experience.

4)DIR ATTRIBUTE: The ‘dir’ attribute in HTML is used to specify the directionality of the with in an element. It is primarily used for languages that are written from right to left (RTL), such as Arabic, Hebrew, Persian. The ‘dir’ attribute accepts two possible values. “ltr” for left to right and “rtl” for right to left.

15)**ARIA (Accessible Rich Internet Applications)**: - ARIA roles are attributes that can be added to HTML elements to provide additional information about their purpose and behavior for assistive technologies. Those roles help enhance the accessibility of web applications by ensuring that with disabilities can effectively navigate with interact with content. ARIA recommended to use semantic HTML elements.

16)**ACCESSIBILITY TREE: -** It is also known as AOM- Accessibility Object Modal is a representation of the web page’s structure and content, specifically designed to support accessibility features and designed technologies. The Accessibility tree provides a hierarchical view of the document that includes information about accessible elements their properties, roles, states and relationships.

Accessibility Tree is separate from the DOM and is generated based on the DOM Structure but with additional accessibility related information. Web browsers handle the creation and maintenance of the accessibility tree behind the senses, ensuring that it says synchronized with the changes in DOM as the web page dynamically update.

17)**<textarea></textarea> :-** The ‘<textarea></textarea>’ element in html is used to create a multiline text input filed. It allows users to enter and edit multiple lines of text, such a long from of content, comments or user generated input. It is commonly used in various web forms, comment sections, text-based input scenarios. ‘<textarea></textarea>’ supports several attributes.

‘rows’: Specifies number of visible rows for the text area.

‘cols’: Specifies the number of visible columns (characters per row) for the text area.

‘name’: Specifies the name of text area, which is used when submitting form data.

‘disabled’: Disables the text area, preventing user input.

‘readonly’: Specifics that the text area is read only and con not be edited by the user.

‘maxlength’: Specifics the maximum number of characters that can be entered in the text area.

18) Every instance of a greater than or less than symbol is written out as a corresponding character entity.

1)&lt; equal to < (less than), 2) &gt; equal to > (greater than),3) &amp; equal to &,4) &copy; equal to copy right symbol, 5) &star; equals to hologramlike star.

19) By accessing developer tools user gain access to the debugging features of a browser

20) The datetime attribute is only used on the time element, as a way to create a machine-readable date.

21) ARIA is used to clarify to the accessibility tree what is happening with a particular element, set of elements, or interface. If something is broken, ARIA can be a way to fix it.

22) Those involving accessibility issues, those involving accessibility issues and sort of efforts require the use and understanding of ARIA attributes

23) The non-breaking space character entity (&nbsp;)

24)In HTML, use a character entity like characters to appear as simple text instead of being parsed as code.

25) An id attribute name may only be used once in a document. The id refers to one specific part of a document.

26)**DIFFERENECE BETWEEN ID ATTRIBUTES AND CLASS ATTRIBUTES** the id attribute can used to uniquely identify elements, where as the “class attribute” is used to group and style multiple elements together. The “id” attribute provides a more specific and direct way to target elements, while the “class” attribute allows for reusability and targeting multiple elements simultaneously.

27)**DEVLOPER TOOLS USES: -**  Something seems wacky and user not sure what causing it. When user need to figure out how to apply CSS or JavaScript to a certain part of markup. Developer tools will help target the formatting and coding, but they do much more. Developer tools give you a powerful close-up behind- the – senses look at material.

**28)ABSOLUTE URL VS RELATIVE URL: -**Absolute URLs are typically used when linking to external resources or when the exact location needs to be specified. Relative URLs are often used for internal navigation within a website or when the resource's location is relative to the current page.

29) CSS can change the way that a list and other objects are presented.

30) When might we use a relative URL instead of an absolute URL, A website might be moved from a staging server to a production server. Relative URLs give us a way to point to something relative to the current file, without specifying the entire domain name.

30)**<figure>** element is typically used to encapsulate media content, such as images or videos, along with an optional caption.

32) **<figcaption>:** The <figcaption> element is used to provide a caption or description for the content within a <figure> element. It is typically placed immediately after the media content, such as an image or video.

34) **alt attribute:** alt attribute is to provide a meaningful description of the image for those who may not be able to see it, such as users with visual impairments or when the image fails to load. Image is not available alt data will be show.

35) **src attribute**: The src attribute is used in HTML to specify the source (i.e., the path or URL) of a media file, such as an image, video, or audio file, that is to be embedded within a web page. It is most commonly used within the <img>, <video>, and <audio> elements.

36) **<picture>**: The <picture> element is used in HTML to provide multiple sources or versions of an image, allowing the browser to choose the most appropriate one based on factors such as the device's screen size, resolution, or other conditions. It is often used in combination with the <source> element to specify different image sources for different scenarios.

37) **srcset attribute:** The srcset attribute is used in conjunction with the <img> tag in HTML to provide multiple sources or versions of an image. It allows the browser to choose the most appropriate image source based on factors such as the device's screen size, pixel density, or other conditions. srcset attribute is just a suggestion to the browser, and the final decision on which image source to load is made by the browser. The browser takes into account factors such as device capabilities, network conditions, and the user's preferences. The most effective way to use bandwidth efficiently when sending images

38) **Scalable Vector Graphics** can scale to massive sizes and still look neat, like they were built for it. SVG create a compact image that can display in large sizes without pixilation.

39) The w specification in srcset instead of the x specification to consider both display density and window width when choosing the image source. The width is adjustable by default. You can specify the width of the source image in the code. The aspect ratio is fixed by the height and width attributes.

40) It advantageous to utilize the picture element when using these images as sources, It is convenient to use the picture element when aspect ratios and cropping change from one source to another.

41) Provide pixel measurements (w) instead of 1x, 2x, etc. to change to move from a resolution-based srcset to a width-based srcset. setting the width explicitly changes srcset's behavior.

42) Four attributes to include on every img element those src, alt, height, width.

43) The most effective way to use bandwidth efficiently when sending images Create a set of options the browser can choose from using the srcset attribute. The srcset attribute lets the browser choose from options that fit the specific situation, minimizing bandwidth consumption while producing attractive results.

44) To make the page layout more efficient height and width specifications for all images.

45)**<audio>:** The <audio> element is used to embed audio content in a web page. It allows you to play audio files on your webpage without requiring any additional plugins or software.

46) **controls:** The controls attribute in HTML is used with the <audio> or <video> elements to specify that the browser should display the default media controls for the embedded audio or video player.

47)**<video>:** The <video> element is used to embed video content in a web page. It allows you to display and play video files on your webpage without requiring any additional plugins or software.

48)**AUTOPLAY:** The autoplay attribute is used with the <audio> or <video> elements to specify that the media should start playing automatically when the page loads. It's important to note that autoplay behavior can be restricted by certain browser policies, especially when it comes to video with audio. In some cases, the autoplay attribute may be ignored, and user interaction may be required to start media playback.

49)**Muted:** The muted attribute is used with the <audio> or <video> elements to specify that the media should be muted or have no audio output. the muted attribute, the video will play without sound. This can be useful when you want the video to autoplay without disturbing the user or in scenarios where audio is not necessary or desired.

50)**Loop:** the loop attribute is used with the <audio> or <video> elements to specify that the media should loop or repeat playback.

**51)PRELOAD:** The preload attribute is used with the <audio> or <video> elements to specify how the media should be preloaded or loaded by the browser. The preload attribute provides hints to the browser on how to handle the media file when the web page is loaded.

52)**TRACK:** The <track> element is used to specify text tracks for media elements, such as <audio> or <video>. Text tracks are used to provide captions, subtitles, descriptions, or other textual information related to the media content.

53) **<iframe>**: the <iframe> element is used to embed another HTML document or external content within the current document. It allows you to display content from another source, such as a webpage, video, map, or other types of media, within a frame on webpage.the width and height attributes specify the dimensions of the iframe in pixels. The frameborder attribute controls whether a border is displayed around the iframe (set to 0 to remove the border). The allowfullscreen attribute allows the embedded content to be viewed in full screen mode if supported.

54)The main draw back of HTML video player, It does not permit adaptive bitrate streaming.

55) Best uses for HTML's div and span elements, the div and span elements make it easy to create containers or labeled content for styling. <div> is used for blocks, and <span> is used for a part of a line.

56) **<article>:** The <article> element is used to represent a self-contained, independent piece of content within a document. It is typically used for blog posts, news articles, forum threads, or any other content that can stand alone.

57**)HTTP (Hypertext Transfer Protocol):** HTTP is the protocol used for transmitting data between a web server and a web browser. It operates over a standard TCP/IP connection on port 80.

58) **HTTPS (Hypertext Transfer Protocol Secure):** HTTPS is an extension of HTTP that adds a layer of security using SSL/TLS (Secure Sockets Layer/Transport Layer Security) protocols. It operates over a secure connection on port 443.

HTTPS is becoming increasingly important, and many modern browsers display warnings for non-secure (HTTP) websites.

59)**<div>: -** The <div> element is a block-level container used to group and organize other elements. It does not have any inherent meaning or semantics, but it is widely used for layout purposes and to apply styling through CSS.

**60)<target>: -** The target attribute is an HTML attribute used in anchor (<a>) tags to specify where the linked content should be opened when clicked by the user. It determines the behavior of the link, such as opening the linked content in a new tab, the same tab, a named frame, or a new window.

**commonly used values for the target attribute:**

\_blank: Opens the linked content in a new tab or window, depending on the user's browser settings.

\_self: Opens the linked content in the same tab or window.

\_parent: Opens the linked content in the parent frame of a frameset, if applicable.

\_top: Opens the linked content in the full body of the window, breaking out of any frames.

framename: Opens the linked content in a specific named frame. The name of the frame should match the name attribute of the frame element.

**61)What is difference between href and src attributes ?**

Ans : The href and src attributes are commonly used in HTML to specify the location of resources, such as links and media files. While they are similar in purpose, there are key differences between them.

**href attribute**: It is used to specify the URL of a linked resource, typically used with anchor (<a>) tags to create hyperlinks. It is used with anchor (<a>) tags to create clickable links, allowing users to navigate to other web pages, documents, or resources. It is typically used for linking to web pages, documents, stylesheets, or other resources that can be displayed or downloaded by the browser. When a user clicks on a link created with the href attribute, the browser navigates to the specified URL, loading a new page or replacing the current page with the linked resource. When use for local image should be in same folder.

**src attribute:** It is used to specify the URL or path of a resource to be embedded or included. It is used with various elements to define the source of embedded content, such as images (<img>), audio (<audio>), video (<video>), scripts (<script>), iframes (<iframe>), etc. It is primarily used for referencing media files, external scripts, or embedded content that needs to be loaded or rendered within the web page. When a web page is loaded, the browser retrieves the resource specified by the src attribute and embeds it in the designated element. For example, an <img> tag with a src attribute would display the referenced image.

**63) <Section>: -** The <section> element is a semantic element that represents a standalone section of content within a document. It is typically used to group related content together and provide a structural division within a webpage. The <section> element is used to divide content into meaningful sections or thematic groups. It helps organize and structure the page, making it easier for both humans and search engines to understand the document's hierarchy. This helps establish relationships between different sections of content, providing a clearer organization of the webpage. If apply CSS styles to <section> elements using class or ID attributes, allowing to control their appearance and layout. It is often used in conjunction with other semantic elements like <article>, <header>, <footer>, and <nav

>, which further enhance the semantic structure and meaning of the document.

**64)<Input>: -** The <input> element is used to create interactive form controls that allow users to input data. The <input> element can be used for various types of user input, such as text, checkboxes, radio buttons, buttons, and more. The <input> element supports different types of form controls based on the value of its type attribute.

text: Allows users to input single-line text.

password: Hides the entered text and is typically used for password inputs.

checkbox: Represents a checkbox that users can select or deselect.

radio: Represents a set of mutually exclusive options where only one option can be selected.

submit: Displays a button that submits the form data.

file: Enables users to upload files from their local system.

The <input> element can have various attributes to configure its behavior and appearance.

name: Specifies the name of the input element, which is used when submitting form data.

value: Sets the initial value of the input element.

required: Specifies that the input must be filled out before submitting the form.

placeholder: Provides a short hint or example text within the input field.

disabled: Disables the input element, preventing user interaction.

Labeling and grouping: It is good practice to associate a label with each <input> element to provide context and improve accessibility. This is done using the <label> element, which should have a for attribute matching the id attribute of the corresponding <input> element. Grouping related <input> elements together can be achieved using the <fieldset> and <legend> elements.

Form submission: <input> elements are often used within <form> elements to gather user input and submit it to a server for processing. The <form> element acts as a container for the input elements and includes attributes such as action and method to specify where the form data should be submitted and how it should be processed.

**65)<label>:** The <label> element is used to associate text labels with form controls, providing context and improving accessibility. It is used to describe the purpose or meaning of an adjacent form control, such as an <input>, <textarea>, or <select> element. When a <label> element is associated with a form control using the for attribute, clicking on the label activates or focuses the associated form control. It can be used in conjunction with CSS pseudo-classes, like :hover or :focus, to apply specific styles when the associated form control is interacted with.

**66)Action Attribute:** The action attribute is used in conjunction with the <form> element to specify the URL or destination where the form data should be submitted for processing. The action attribute determines the server-side script or program that will handle the submitted data. When a user submits a form, typically by clicking a submit button, the form data is sent to the URL specified in the action attribute. The URL specified in the action attribute usually corresponds to a server-side script or program that processes the submitted form data. If the action attribute is left empty (action=""), the form data is typically submitted to the same URL as the current page, resulting in a page refresh or redirection.

**67) Method Attribute: - T**he method attribute is used in conjunction with the <form> element to specify the HTTP method to be used when submitting form data to the server. The method attribute determines how the form data will be transmitted to the server-side script specified in the action attribute.

->HTTP methods: The method attribute can be set to one of two commonly used HTTP methods:

GET: This method appends the form data to the URL specified in the action attribute and sends it as part of the URL parameters. This method is typically used for retrieving data from the server.

POST: This method sends the form data in the body of the HTTP request, separate from the URL. This method is commonly used for submitting data to be processed or stored on the server.

->Security and data visibility: When sensitive or confidential data is being submitted, it is generally recommended to use the POST method. Unlike the GET method, the POST method does not expose the form data in the URL, which helps maintain data privacy and security.

->Form data size: The GET method has a limitation on the length of the URL, so it is typically used for smaller amounts of data. On the other hand, the POST method allows for larger form data, as it is sent in the body of the request.

->Form data encoding: When using the POST method, the form data can be encoded using different methods, specified by the enctype attribute on the <form> element. The most common encoding types are application/x-www-form-urlencoded (default) and multipart/form-data (used for file uploads).

->It's important to handle and process the form data appropriately on the server-side, as the HTML form and its attributes are just the client-side representation of the data that needs to be processed on the server. The server-side script should validate, sanitize, and process the form data according to your specific requirements and programming language or framework.

**<hr> :** The “hr” tag used to create a horizontal line or rule to separate content on a webpage. It does not have closing tag.

**<! -- syntax -- >:** It belongs to comments in HTML. By using comments HTML code not displayed in the rendered web page.

**68)HTML color codes:** HTML <table>or codes, also known as hexadecimal color codes, are a way to represent colors using a combination of six-digit hexadecimal numbers. Each digit in the hexadecimal code represents the intensity of the red, green, and blue (RGB) components of the color. The values range from 00 to FF (0 to 255 in decimal).

#FF0000 represents pure red.

#00FF00 represents pure green.

#0000FF represents pure blue.

Black: #000000 White: #FFFFFF Red: #FF0000 Green: #00FF00 Blue: #0000FF Yellow: #FFFF00

Cyan: #00FFFF Magenta: #FF00FF Orange: #FFA500 Gray: #808080 Dark Gray: #A9A9A9

Silver: #C0C0C0 Light Gray: #D3D3D3

**69)What is difference between . and # in HTML background color.**

Dot (.) - Class Selector: In CSS, the dot (.) is used to select elements based on their class attribute. When you use a dot followed by a class name in a CSS rule, it targets all HTML elements that have that specific class, and the styles defined in the rule will be applied to those elements.

Hash (#) - ID Selector: In CSS, the hash (#) is used to select elements based on their ID attribute. When you use a hash followed by an ID name in a CSS rule, it targets the HTML element with that specific ID, and the styles defined in the rule will be applied to that element.

classes allow for multiple elements to share the same styling, while IDs are typically used for uniquely identifying specific elements for JavaScript or CSS purposes.

70)**<font> tag:** The <font> tag is used to specify font and color attributes for text with in HTML elements. It is usage involves setting various attributes directly with in the tag.

‘color’: Specifies the text color using a color name and hexadecimal color code.

‘face’: Specifies the font face or family to be used for the text.

‘size’: Specifies the font size. It can take the values from 1 to 7

71)<big></big> tag used to increase the font size. <small></small> tag is used to decrease the font size. <strike></strike> tag used to strike. <sup></sup> tag is for superscript. <sub></sub> tag is used for subscript. <center></center> tag is used for center align the font.<big></big> is used for increase letter size.

72) **<Marqee> Tag:** The <marquee> tag in HTML is used to create scrolling or moving text or content within a web page. It was used to add animated text or images that would move horizontally or vertically across the screen.

The <marquee> tag accepts the following attributes:

behavior: Specifies the scrolling behavior. It can take values like "scroll," "slide," or "alternate."

direction: Specifies the scrolling direction. It can be "up," "down," "left," or "right."

scrollamount: Specifies the speed of scrolling.

scrolldelay: Specifies the delay between each scroll movement.

loop: Specifies the number of times the scrolling will repeat. A value of -1 indicates infinite looping.

73) Attributes for Image tag height, width, title, border, alt, align=” right/left” image send to right/left.

74)3 ways to change color in HTML internal CSS, External CSS by using (link tag and rel and href attributes), buy using class (. notation) and Id (# notation).

75)**Alignment In HTML: -**The alignment of elements using CSS (Cascading Style Sheets). CSS provides various properties that allow you to align elements both horizontally and vertically.

HORIZANTAL Alignment:

Text-align: This property is used to align the text content of block level elements (eg: <p>,<div>,<h1>) with in their containers.

Float: The ‘float’ property is used to move an element to the left or right of its containing element, allowing text and other elements to warp around it.

76)**<Span>:** The <span> tag in HTML is a generic inline container element that is used to apply styling, attributes, or JavaScript effects to a specific portion of text or content within a larger block-level element. The <span> tag is commonly used in conjunction with CSS and JavaScript to apply styles and behaviors to specific parts of a document.

**77) Unicode Transformation Format (UTF): -** Unicode Transformation Format (UTF) is a standardized character encoding scheme that assigns unique numerical values (code points) to characters from virtually all languages and scripts used around the world. UTF allows computers to store, process, and exchange text data in a consistent and interoperable manner, regardless of the language or script.

**78) UTF-8**: This is the most widely used and recommended character encoding for the web. It uses variable-length encoding, where characters are represented using 8, 16, or 24 bits, depending on the character. ASCII characters (0-127) are represented using one byte (8 bits), while characters from other scripts use multiple bytes. UTF-8 is backward-compatible with ASCII, meaning that ASCII text remains unchanged when encoded in UTF-8.

**79) Meta DATA:** - Metadata, often written as "meta data," refers to information that provides context, description, or additional details about other data. In the context of digital content, metadata helps categorize, organize, and understand various types of information. It plays a crucial role in data management, searchability, and content presentation. Metadata can be found in different forms across various domains, including digital media, documents, webpages, and more.

**80)<meta> tag: -** The <meta> tag is an important HTML element used to provide metadata and additional information about a webpage. It is placed within the <head> section of an HTML document and does not have a closing tag.

charset: Specifies the character encoding for the HTML document. For example, <meta charset="UTF-8"> indicates that the document uses UTF-8 encoding.

**Viewport**: the viewport meta tag is used to ensure that the webpage is displayed with the correct dimensions and initial scale on various devices. The width=device-width value makes sure that the width of the viewport is set to the width of the device's screen. The initial-scale=1.0 value sets the initial zoom level to 100%, ensuring that the content is not zoomed in or out when the page is first loaded.

description: Provides a brief description of the webpage's content. This description may be used by search engines or social media platforms. Example: <meta name="description" content="A description of the webpage content.">

author: Indicates the author of the webpage's content. Example: <meta name="author" content="John Doe">

keywords: Specifies keywords related to the webpage's content. However, major search engines don't give significant weight to this attribute for ranking purposes. Example: <meta name="keywords" content="keyword1, keyword2, keyword3">

robots: Informs search engine crawlers about how they should handle the webpage. For example, <meta name="robots" content="index, follow"> indicates that the page should be indexed and followed by search engines.

og:title, og:description, og:image: These Open Graph meta tags are used to control how the webpage is displayed when shared on social media platforms like Facebook. They allow you to define the title, description, and image for social media sharing.

canonical: Specifies the preferred URL when a page has multiple versions with similar or duplicate content. Example: <link rel="canonical" href="https://www.example.com/page">

refresh: Redirects or refreshes the page after a specified time interval. Example: <meta http-equiv="refresh" content="5; URL=https://www.example.com/">

81) The six major sectioning elements that typically go directly in the <body> elements are <aside>, <main>, <article>, <header>, <footer>, <section>

82) The difference between a head element and a header element is the head element contains document metadata, and a header element contains text to be displayed. The head element is a document-wide specification, and headers can occur at several locations within the body.

83) The browser know what information to present when it loads a web page, the browser parses an HTML document, which may also include links to other resources, which the browser then downloads and presents.

84) <title>element should you use inside of the <head> element to identify that page when it's bookmarked. An aside is appropriate for footnotes or diversions from the main topic.

85) **<form></form>: -** The <form> element in HTML. The <form> element is used to create a user input form on a web page. It's used to collect and submit user data to a server for processing.

<label></label>: - The <label> element in HTML is used to associate a text label with a form control (such as an <input> element or a <textarea> element). This improves the accessibility and usability of the form by providing a clear label for the user interface element. the <label> elements are associated with the corresponding form controls using the for attribute. The for attribute value should match the id attribute of the form control element it is associated with.

<input> :- The <input> element is a versatile form control in HTML that allows users to input various types of data. It's commonly used within HTML forms to create fields where users can enter information. The attributes type, id, name, min, max, value used in <input>. It is single tag.

Action attribute: - The action attribute is an important attribute used in HTML forms. It specifies the URL where the form data should be submitted when the user clicks the "Submit" button. The form data is sent to this URL for processing on the server side.

Method attribute: -Specifies the HTTP method to be used when submitting the form. Common methods are "get" and "post". The "get" method appends the form data to the URL, while the "post" method sends the form data in the request body. The method is specified using the method attribute of the <form> element

Type Attribute: - type: Specifies the type of input (e.g., "text", "password", "radio", etc.).

name: Specifies a name for the input field, which is used when sending the data to the server.

value: Specifies the initial value of the input field (can be pre-filled).

for: This creates a label element that is explicitly associated with a form input element using the for attribute. The for attribute’s value should match the id attribute of the corresponding input element. This association tells browsers and assistive technologies that the label is meant to label the input with the specified id. This method is preferred for creating accessible forms as it ensures a clear connection between the label and its corresponding input.

85) The “form” elements instead of custom coding data inputs in JavaScript because the maximum versatility and robustness with minimum effort. Substantial effort has already been spent on form elements and their use with different display types.

86) A <label> element around an <input> element Labels make it much easier for users of many kinds to access your form fields. Clicking on the label activates that form field, and screen readers know that the label goes with the field.

87) The <input> tag, a placeholder attribute different from a value attribute, placeholder is a temporary suggestion of form, while a value is an estimate of the correct response. The user needs to enter a replacement for the placeholder.

88) The difference between the value attribute and the placeholder attribute, the value attribute fills the field with a value that will be submitted with the form. The placeholder shows a suggestion but doesn't really enter it. only use value if you want that value to go to the server unless the user changes it explicitly.

89) The authoritative standard for **HTML can find at the living standard.**

**90)ON CLICK: - The onclick attribute in HTML is used to specify a JavaScript function that should be executed when an element is clicked. This attribute is often used with interactive elements like buttons or links to define the behavior that occurs when a user interacts with the element.**

**91)’#’ in HTML: - In HTML, the "#" symbol is often used as a placeholder or a fragment identifier within URLs. It has a special meaning when used in the context of hyperlinks and is commonly used to create anchor links that navigate to specific sections of a web page.**

**Anchor Links: Anchor links are used to navigate to a specific section within the same web page. The "#" symbol is followed by an identifier (usually an element's id attribute) of the target section.**

**Placeholder Links: Sometimes, developers use "#" as a placeholder in hyperlink attributes when they haven't yet determined the actual URL. This is often seen during development and might be replaced with a proper URL later.**

**JavaScript: The "#" symbol is also commonly used in JavaScript as a way to select elements by their IDs using methods like document.getElementById("#elementId").**

**92) Webpage: Any page that can be accessible via internet is called as webpage. Web application is collection of web pages. Collection web pages is website.**

**93) What is the use of frame work in application development?**

**Ans: A framework in application development refers to a structured and standardized set of tools, libraries, guidelines, and best practices that provide a foundation for building software applications. Frameworks help developers streamline the development process, improve code quality, and create more maintainable and scalable applications. They offer pre-built components, templates, and abstractions that allow developers to focus on implementing specific features rather than dealing with low-level technical details. frameworks play a pivotal role in enhancing the efficiency, maintainability, and quality of software applications by providing a structured foundation and ready-made tools for developers to build upon.**

**94) Markup Language: - A markup language is a system for annotating a document's content to provide information about its structure, formatting, or semantics. Markup languages use special codes or tags that are embedded within the content to define how it should be displayed or interpreted by software applications. These languages are commonly used to create and format documents for various purposes, such as web pages, documents, and data interchange.**

**95)** **Why the HTML only use for the web development among all markup languages?**

**Ans: HTML's primary use is indeed in web development, other markup languages like XML, Markdown, LaTeX, and more serve different purposes in various domains. For example, XML is used for data representation and exchange, Markdown is employed for simple content formatting, and LaTeX is favored for typesetting complex documents. Each markup language has its own strengths and applications, and the choice of which one to use depends on the specific requirements of the project at hand.**

**96) TAG: A tag is keyword this is enclosed with angular brocket.**

**97)<link></link>: - The <link> tag is an HTML (Hypertext Markup Language) element used to define relationships between the current document and external resources. It's commonly used to link stylesheets, icons, and other types of external files to a web page. The <link> tag doesn't have a closing tag since it's a self-contained element.**

**rel: This attribute specifies the relationship between the current document and the linked resource. For linking stylesheets, you would use "stylesheet". Other possible values include "icon" for linking icons and "preload" for indicating that the resource should be preloaded.**

1. **"stylesheet": Indicates that the linked resource is a stylesheet (usually a CSS file).**
2. **"icon": Used for specifying a favicon for the website.**
3. **"preconnect": Establishes early connections to the linked resource's server.**
4. **"preload": Hints to the browser to preload a resource.**
5. **"canonical": Specifies the canonical URL for a document.**

**type: This attribute defines the MIME type of the linked resource. For stylesheets, the value is usually "text/css".**

**href: This attribute specifies the URL or path to the external resource being linked. It can be a relative or absolute URL.**

**98) Element specific attributes: - Element-specific attributes typically refer to properties or characteristics that are unique to a specific element, often in the context of web development and HTML.**

**99)Global Attributes: - Global attributes in HTML are attributes that can be used on most HTML elements, regardless of their specific type or purpose. These attributes provide common functionalities and behaviors that are applicable to a wide range of elements.**

**100)Event Attributes: - Event attributes in HTML allow you to specify JavaScript code that should be executed when a specific event occurs on an HTML element. Events are interactions or occurrences that happen in a web page, such as a button click, mouse movement, or keyboard input. By using event attributes, you can define behavior that responds to user actions or other events.**

**101)TAB INDEX: - The tabindex attribute is used in HTML to specify the order in which elements should receive focus when a user navigates through a web page using the keyboard's "Tab" key. This attribute allows you to control the focus flow and make your web pages more accessible and user-friendly for keyboard users. The value of the tabindex attribute is a numeric value that determines the tabbing order.**

**102)On paste Attribute: - The onpaste attribute is an HTML attribute that allows you to specify JavaScript code to be executed when the user pastes content into an input field or a textarea. It is a part of the event attributes that can be used to attach JavaScript behavior to HTML elements.**

**103)On Copy Attribute: -** **The oncopy attribute is an HTML attribute that allows you to specify JavaScript code to be executed when the user copies content from an element. It's part of the event attributes that can be used to attach JavaScript behavior to HTML elements.**

**104)On Context Menu: - The oncontextmenu event attribute in JavaScript is used to trigger a function when the user right-clicks (opens the context menu) on an HTML element. The context menu is the menu that appears when you right-click on something in a web page or application. You can use the oncontextmenu attribute to customize the behavior of the context menu or perform specific actions when the right mouse button is clicked.**

**105)”http-equiv”:- The http-equiv attribute in HTML is used to provide an HTTP header to the browser that gives information about how the webpage should be rendered or interpreted.** **One common use of the http-equiv attribute is for specifying the document compatibility mode or rendering mode using the value "X-UA-Compatible".**

**106) X-UA-Compatible: - The X-UA-Compatible meta tag is used to control the version of Internet Explorer's rendering engine that should be used to display a webpage. This tag is primarily used to address compatibility issues with older versions of Internet Explorer, especially when designing websites that need to be viewed consistently across different versions of the browser.**

**107)Content Attribute: - The content attribute is set to "IE=edge", which indicates that the latest version of Internet Explorer's rendering engine should be used to display the webpage. This helps ensure that modern HTML, CSS, and JavaScript features are supported, even if the user is using an older version of Internet Explorer.**

**108)HTML headings Font Size: - H1=32px H2=24Px H3=18Px H4=16Px H5=13Px H6=10px. Normal Font Size HTML page 16Px.**

**109)** **What is the purpose of the <DOCTYPE> declaration in HTML?**

**Ans: The <!DOCTYPE> declaration specifies the type of document and version of HTML being used in the web page. It helps browsers render the content correctly by following the appropriate rendering rules.**

**110)What is CSS, and how is it related to HTML?**

**Ans: CSS (Cascading Style Sheets) is a stylesheet language used to describe the presentation and styling of HTML documents. It defines how elements should be displayed, including properties like colors, fonts, spacing, and layout.**

**111)** **How can you apply inline styles to an HTML element?**

**Ans: Inline styles are applied directly to individual HTML elements using the style attribute. For example: <p style="color: blue;">This is a blue paragraph </p>.**

**112) Explain the concept of "cascading" in CSS.?**

**Ans: Cascading refers to the way styles are applied to HTML elements. It follows a hierarchy: inline styles have the highest specificity, followed by internal styles (within <style> tags), and external stylesheets (linked with the <link> tag). If conflicting styles exist, the most specific one takes precedence.**

**113) <select></select>: - The <select> tag in HTML is used to create a dropdown or a list box that allows users to select one or more options from a list.**

**114) <option></option>: - The <option> tag in HTML is used within a <select> element to define individual items or choices within a dropdown list.**

**115)<table></table>: - The <table> tag in HTML is used to create a table on a web page. Tables are used to organize and display data in rows and columns, making it easier for users to understand structured information.**

**<tr>: Represents a table row. It contains one or more <td> (table data) or <th> (table header) elements.**

**<td>: Represents a standard data cell within a table row. This is where you place the actual content of the table, like text, images, links, etc.**

**<th>: Represents a header cell within a table row. It's typically used in the first row or column to provide headers for the data cells. <th> elements are usually bold and centered by default.**

**117)Asynchronous JavaScript and XML (AJAX): - Ajax (Asynchronous JavaScript and XML) is a set of web development techniques that allow you to create interactive and dynamic web applications by making asynchronous requests to a server without needing to refresh the entire web page. It enables you to fetch or send data to the server in the background and update parts of a webpage without requiring a full page reload. Although the term includes "XML," modern Ajax requests often work with other data formats like JSON (JavaScript Object Notation) as well.**

**116) What is difference between 0.0.0.0 and 127.0.0.1?**

**Ans: In the context of interface binding, the address 127.0. 0.1 means that the server only listens to the loopback interface. On the other hand, binding our server to the 0.0. 0.0 interface means we want to accept traffic from all of the available interfaces.**

**117)<nav></nav>: - The <nav> element is an HTML5 semantic element used to define a navigation section on a web page. It is typically used to create a container for navigation menus, links, or other navigation-related content. The <nav> element helps provide structural meaning to the HTML document, making it easier for both developers and assistive technologies to understand the purpose of the contained content.**

**118)Role Attribute: - The role attribute in HTML is used to define the purpose or function of an element, especially when that purpose is not evident from the element's tag name or its content alone. It is an essential part of web accessibility (a11y) and is used to provide additional information to assistive technologies, such as screen readers, about how certain elements should be interpreted and interacted with. The role attribute helps ensure that web content is more inclusive and understandable for people with disabilities.**

**role="button": Indicates that an element functions as a clickable button.**

**role="link": Indicates that an element functions as a hyperlink.**

**role="navigation": Defines a navigation region, such as a navigation menu or a list of links.**

**role="menu" and role="menuitem": Used to create custom menus and menu items.**

**role="list" and role="listitem": Define lists and list items, which can be helpful for custom list structures.**

**role="banner": Identifies the primary banner or header region of a page.**

**role="region": Defines a specific region of content, which can be useful for dividing content into distinct sections.**

**role="img": Used to provide a label or description for an image when the alt attribute may not be sufficient.**

**119)Aria- Label: - The aria-label attribute in HTML is used to provide a text label for elements that do not have visible or meaningful text content. It is an essential part of web accessibility (a11y) and is primarily used to improve the experience for users of assistive technologies like screen readers.**

**120)A11Y: - "A11y" is a common abbreviation for "accessibility." The "a" and "y" represent the first and last letters of the word, while the number "11" stands for the 11 letters in between, indicating a shorthand way of referring to accessibility.**

**121) Class=” breadcrumbs”: - The "breadcrumbs" class is often used to style and identify a specific set of navigation links typically found at the top of a webpage to help users understand their current location within a website's hierarchy.**

**122)What is difference between generic block level elements and sematic block level elements?**

**Generic Block-Level Elements: Generic block-level elements are HTML elements that define block-level containers without conveying any specific meaning or semantic information about the content they contain.** **They are typically used for structural and layout purposes, providing a way to group, structured divisions and style content within a webpage. Ex: <div>, <section>, <article>.**

**Semantic Block-Level Elements: Semantic block-level elements are HTML elements that provide specific meaning and semantic information about the content they contain.** **They are used to convey the type or purpose of the enclosed content, making it easier for both humans and machines to understand the structure and intent of the webpage.** **These elements not only structure the content but also give context to what that content represents within the overall document. Ex: <header>, <nav>, <main>, <footer>, <article>.**

**123)What is difference between generic inline elements and sematic inline elements?**

**Generic Inline Elements: Generic inline elements are HTML elements that define inline-level content without conveying any specific meaning or semantic information about that content. They are typically used for styling and formatting purposes to apply visual effects to specific portions of text or inline content within a block of text. These elements are versatile and can be used to apply various styles or effects to content, but they do not provide any semantic context or meaning to that content.**

**Ex: <span>, <i>, <b>, <u>**

**Semantic Inline Elements: Semantic inline elements are HTML elements that provide specific meaning and semantic information about the inline content they contain. They are used to convey the type or purpose of the enclosed inline content, making it easier for both humans and machines to understand the significance of that content within the context of the document.** **These elements not only style the content but also give context and meaning to the content within the document's structure.**

**Ex: <a>, <em>, <strong>, <abbr>**

**62)Difference between block level elements and inline elements in HTML?**

Inline elements and block level elements important to note that the default behavior of elements can be modified using CSS. Block-level elements can be styled to display as inline elements by setting the CSS property ‘display: inline’, and inline elements can be styled to display as block-level elements using ‘display: block’.

**Block-Level elements:** Block-level elements typically start on a new line and occupy the full available width of their parent container. block-level elements include <div>, <p>, <h1> to <h6>, <ul>, <li>, <ol>,<section>, and <article>. Block-level elements take up the entire available width of their container, extending from the left edge to the right edge. The width and height of block-level elements using CSS properties like width and height. Block-level elements are stacked vertically, with each element appearing on a new line, causing line breaks before and after the element. Block-level elements can contain other block-level elements, inline elements, and text. They can also be nested within other block-level elements.

**IN-LINE Elements:** Inline elements do not start on a new line. They flow alongside adjacent content within the same line. They occupy only the necessary width to contain their content. Inline elements include <span>, <a>, <strong>, <em>, <img>, and <input>. Inline elements do not cause line breaks before or after them. They appear within the flow of text or adjacent content. Inline elements take up only as much width as their content requires. Inline elements cannot contain block-level elements. They are designed to hold small units of content, such as text or images.

**Class Selectors: -** Class Selectors allow you to target specific elements on a web page and apply styling or functionality to them. The class name should be preceded by a dot (.) in CSS and JavaScript for selecting and styling or manipulating these elements. Class selectors are often used to interact with and manipulate elements in the DOM (Document Object Model). You can select elements with a specific class using methods like “document.querySelector()” or “document.querySelectorAll()”.