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HTML

Beginner To Advanced

Day 1: Introduction to HTML

- <!DOCTYPE html>: Declares the document type and version of HTML being used.
- <html>: The root element of an HTML page. Contains all other HTML elements.
- <head>: Contains meta-information about the document, like character encoding, title, etc.
- <meta>: Provides metadata about the HTML document, such as character set, author, etc.
- <title>: Sets the title of the document displayed in the browser.
- <body>: Contains the visible content of the document.

Day 2: Text and Semantic Markup

- <h1> to <h6>: Heading tags for defining headings. <h1> is the highest level and <h6> is the lowest level.
- <p>: Defines a paragraph of text.
- : Emphasizes text, usually rendered in italics.
- : Indicates stronger emphasis, usually rendered in bold.
- <header>: Represents introductory content, typically containing headings, logos, navigation

Day 3: Lists and Links

- : Defines an unordered list.
- : Defines an ordered list.
- : Defines a list item within <ul> or <ol>.
- <a>: Defines a hyperlink, linking to another document or resource.
- href: Attribute of the <a> tag, specifies the URL of the linked document.

Day 4: Images and Multimedia

- <img>: Embeds an image in the document.
- src: Attribute of the <img> tag, specifies the URL of the image.
- alt: Attribute of the <img> tag, provides alternative text for the image.
- <audio>: Embeds audio content in the document.
- <video>: Embeds video content in the document.
- <controls>: Attribute of the <audio> and <video> tags, displays playback controls for the media content.

Day 5: Forms

- <form>: Defines an HTML form for user input.
- action: Attribute of the <form> tag, specifies the URL where the form data should be sent upon submission.
- method: Attribute of the <form> tag, specifies the HTTP method (GET or POST) used to submit the form data.
- <label>: Defines a label for an <input> element.
- for: Attribute of the <label> tag, specifies the id of the form element the label is associated with.
- <input>: Defines an input control within a form.
- type: Attribute of the <input> tag, specifies the type of input control.
- id: Attribute of the <input> tag, provides a unique identifier for the input element.


- name: Attribute of the <input> tag, specifies the name of the input element (used when submitting form data).
- value: Attribute of the <input> tag, specifies the value of the input element.
- <textarea>: Defines a multi-line text input control.
- <select>: Creates a drop-down list.
- <option>: Defines an option in a <select> element.

Day 6: Tables

- <table>: Defines an HTML table.
- <caption>: Specifies a caption for the table.
- <tr>: Defines a table row.
- <th>: Defines a header cell in a table. Typically used for column headings.
- <td>: Defines a standard data cell in a table. Contains data.

Day 7: Advanced Topics

- <canvas>: Used to draw graphics, animations, or other visual images on the fly using JavaScript.
- <time>: Represents a specific period in time or a range of time.
- datetime: Attribute of the <time> tag, specifies the date and time in a machine-readable format.
- <progress>: Represents the completion progress of a task.
- <meter>: Represents a scalar measurement within a known range.

Day 8: Forms (Advanced)

- <fieldset>: Groups related elements in a form.
- <legend>: Defines a caption for a <fieldset> element.
- <checkbox>: Represents a checkbox input control.
- <radio>: Represents a radio button input control.
- <button>: Defines a clickable button.
- <reset>: Resets all form controls to their initial values.
- <readonly>: Attribute of the <input> tag, specifies that an input field is read-only.
- <disabled>: Attribute of the <input> tag, specifies that an input field is disabled.

Day 9: Semantic HTML (Advanced)

- <section>: Represents a section of a document, typically with a heading.
- <aside>: Represents content aside from the content it is placed in.
- <main>: Represents the main content of the document.
- <details>: Represents additional details or disclosure content.
- <summary>: Defines a visible heading for a <details> element.
- <mark>: Highlights text within a document.
- <figure>: Represents self-contained content, such as images or diagrams.
- <figcaption>: Represents a caption or legend for a <figure> element.
- <abbr>: Represents an abbreviation or acronym.
- <cite>: Represents the title of a work cited within the document.

HTML Cheatsheet

In this Cheatsheet, we will cover the basics of HTML tags, elements, and attributes. We will provide examples to help you understand how these elements work and how to use them in your own web development projects. Whether you are a beginner or an experienced developer, this PDF can serve as a useful reference guide.

HTML

HTML (Hypertext Markup Language) is a standard markup language used to create web pages. It is used to structure and format content on the web, including text, images, and other multimedia elements. HTML consists of a series of elements that are represented by tags, which are used to define the structure and content of a webpage.
HTML is an essential part of the web development process and is used to create the structure and content of websites. It is a fundamental skill for web developers and is used to create the majority of websites on the internet.

HTML COMPONENTS

- **<html> tag:** This tag acts as a container for every other element in the document except the <!DOCTYPE html> tag.
- **<head> tag:** Includes all the document's metadata.
- **<title> tag:** Defines the title of the document which is displayed in the browser's title bar.
- **<body> tag:** Acts as a container for the document's content that gets displayed on the browser.

This is how it all comes together:

```
<!DOCTYPE html>
<html lang="en">
    <head>
            <title> Code Help HTML Cheat Sheet </title>
    </head>
    <body> .... </body>
</html>
```

<!DOCTYPE html> specifies that we are working with an HTML5 document.

The following tags contribute extra information to the HTML document:

- **<meta> tag**: This tag can be used to define additional information about the webpage.
- **<link> tag:** Used to link the document to an external resource.
- **<style> tag:** Used for defining styles for the document.
- **<script> tag:** Used to write code snippets (usually JavaScript) or to link the document to an external script.

```
<head>
  <meta charset="UTF-8" />
  <meta http-equiv="X-UA-Compatible" content="IE=edge" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <link rel="stylesheet" href="style.css" />
   <title> HTML Cheat Sheet</title> <style>



     font-size: 40px;

  </style>
  <script>

       alert ('message');
  </script>

</head>
```

STRUCTURE OF A HTML DOCUMENT

While constructing your HTML document, you can use certain tags to establish its structure. The **<h1>** to **<h5>** tags signify different heading levels, with **<h1>** being the highest level and **<h5>** being the lowest level.

```
<h1> Heading 1 </h1>
<h2> Heading 2 </h2>
<h3> Heading 3 </h3>
<h4> Heading 4 </h4>
<h5> Heading 5 </h5>
```

You use the **<p>** tag to create a paragraph.

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

The ** ** tag can be employed to segment and style different areas of the document. It also acts as a parent container for other elements within the document.

This is how it works:

```
<div class="About Us">
      <h1> This is the About Us section </h1>
      <p> Welcome to the About Us section! </p>
</div>
<div class="Contact Us">

      <h1> This is the Contact Us section </h1>
      <p> Contact us on 0031234567 </p>
</div>
```

We also have the **** tag. This is similar to ** ** but you use it as an inline container.

```
<p> Hello <span class="span1"> World! </span></p>
```

There's the **
** tag, which we use to insert line breaks in the document. This tag does not require a closing tag.

```
<p> Welcome to <br/> Code Help </p>
```

The **<hr/>** tag is used to create a horizontal line. It also has no closing tag.

```
<p> Welcome to <hr/> World! </p>
```

IMAGES IN HTML

In HTML, we use the **<img/>** tag to insert images into the document.
Here are some attributes of the **<img/>** tag.

- **src** is used to specify the location of the image on your computer or the internet.
- **alt** specifies alternative text that displays if the image cannot be rendered. This text is also helpful for screen readers.
- **height** determines the height of the image.
- **width** determines the width of the image.

- **border** specifies the thickness of the borders around the image. If no border is added, it is set to 0.

```
<img src="logo.png" alt="Code Help Logo" width="200" height="200">
```

TEXT FORMATING IN HTML

HTML provides multiple methods for formatting text. Let's take a brief look at them now:

- The **<i>** tag formats text in italics.
- The **<b>** tag formats text in bold.
- The **** tag also formats text in bold and is used to emphasize important information.
- The **** tag is another emphasis tag that formats text in italics.
- The **<sub>** tag formats text as subscript, like Carbon Dioxide CO_2.
- The **<sup>** tag formats text as a superscript, like the power of a number, 23^2.
- The **<small>** tag decreases the size of text.
- The **<del>** tag formats text as deleted by striking a line through it.
- The **<address>** tag is used to show the author's contact information.
- The **<abbr>** tag denotes an abbreviation.
- The **<code>** tag formats text as code snippets.
- The **<mark>** tag highlights text.
- The **<ins>** tag formats text as inserted, which is usually underlined.

- The **<blockquote>** tag is used to enclose a section of text quoted from another source.
- The **<q>** tag is used for shorter inline quotes.
- The **<cite>** tag is used to cite the author of a quote.

```
<p><i> Italic </i></p>
<p><b> Bold </b></p>
<p><strong> Strong </strong></p>
<p><em> Strong </em></p>
<p><sub> Subscript </sub></p>
<p><sup> Superscript </sup></p>
<p><small> Small </small></p>
<p><del> Delete </del></p>
<p><address> Address </address></p>
<p><abbr> Inserted Abbreviation </abbr></p>
<p><code> Code Snippet </code></p>
<p><mark> Marked Text </mark></p>
<p><ins> Insert </ins></p>
<p><blockquote> Quoted </blockquote></p>
<p><q> Short Quoted </q></p>
<p><cite> Cited </cite></p>
```

LINKS IN HTML

The **<a>** tag, also referred to as the anchor tag, is used to establish hyperlinks that link to other pages (external web pages included) or to a particular section within the same page.

Here are some attributes of the **<a>** tag:

- The **href** attribute specifies the URL that the link will take the user to when clicked.
- The **download** attribute specifies that the target or resource clicked is a downloadable file.
- The **target** attribute specifies where the linked document or resource should be opened. This could be in the same window or a new window.

```
<a href="https://www.thecodehelp.in/" target="_blank"> Code Help </a>
```

LISTS IN HTML

- The **<ol>** tag defines an ordered list.
- The **<ul>** tag defines an unordered list.
- The **<li>** tag is used to create items in the list.

```
<!-- Unordered List -->
<ul>
    <li> Course 1</li>
    <li> Course 2 </li>
    <li> Course 3</li>
</ul>
<!-- Ordered List -->
<ol>

    <li> Course 1 </li>
    <li> Course 2 </li>
    <li> Course 3 </li>
</ol>
```

Other input elements that can be used in forms include:

- **<textarea>:** allows users to enter multiple lines of text as input.
- **<select>:** provides a list of options for users to choose from.
- **<option>:** creates a single option within a **<select>** element.
- **<input>:** provides an input field for users to enter data. The **type** attribute specifies the type of data that can be entered.
- **<button>:** creates a button that can be clicked to perform an action.

```
<form action="/Submit_URL/" method="post">
  <label for="FirstName">                </label>
    <input type="text"
           name="FirstName"
           placeholder="First Name"
           required >

   <label for="LastName"> Last Name: </label>
    <input type="text"
           name="LastName"
           placeholder="Last Name"
           required >
  <label for="add"> Address: </label>
  <textarea name="add"></textarea>
  <label for="age"> Age: </label>
  <select id="age">
    <option value="11-20">11-20</option>
    <option value="21-30">21-30</option>
    <option value="31-40">31-40</option>
    <option value="41-40">41-50</option>
  </select>

 <input type="submit" value="Submit">
 </form>
```

FORMS IN HTML

The **<form>** element is used to create a form in HTML. Forms are used to gather user input.
Some attributes associated with the **<form>** element include:

- The **action** attribute specifies where the form data should be sent when the form is submitted.
- The **target** attribute specifies where to display the form's response.
- The **autocomplete** attribute can have a value of on or off and determines whether the browser should automatically fill in the form.
- The **novalidate** attribute specifies that the form should not be validated.
- The **method** attribute specifies the HTTP method to use when sending form data.
- The **name** attribute specifies the name of the form.
- The **required** attribute specifies that an input element cannot be left blank.
- The **autofocus** attribute gives focus to the input elements when the page loads.
- The **disabled** attribute disables an input element, preventing the user from interacting with it.
- The **placeholder** attribute is used to provide a hint to the user about what information is required for the input element.

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HTML

INTERVIEW Question with ANSWER

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1. What is HTML?

HTML stands for HyperText Markup Language. It is the standard markup language for creating web pages.

2. What is a markup language?

A markup language is a system for annotating a document in a way that is syntactically distinguishable from the text. It specifies the structure and presentation of text and other elements within a document.

3. What are the basic building blocks of HTML?

The basic building blocks of HTML are elements, which are represented by tags. Tags are enclosed in angle brackets (< >) and usually come in pairs, with an opening tag and a closing tag.

4. What is the structure of an HTML document?

An HTML document typically consists of an <!DOCTYPE> declaration, an <html> element that contains a <head> and a <body> section.

5. What is the purpose of the <!DOCTYPE> declaration?

The <!DOCTYPE> declaration is used to specify the document type and version of HTML being used in the document. It helps the browser to render the web page correctly.

6. What is the difference between HTML and XHTML?

XHTML is a stricter and cleaner version of HTML that follows the rules of XML. It requires all tags to be properly nested, all attribute values to be quoted, and all tags to be closed.

7. What are empty elements in HTML?

Empty elements in HTML are elements that do not have any content between their opening and closing tags. They are self-closing, and the closing tag is optional. Examples include
, <img>, and <input>.

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

The <meta> tag is used to provide metadata about the HTML document. It can include information such as the character encoding, author, description, keywords, and viewport settings.

17. What are the different types of lists in HTML?

HTML supports three types of lists: unordered lists (<ul>), ordered lists (<ol>), and definition lists (<dl>).

18. What is the purpose of the <table> element?

The <table> element is used to create tables, which organize data into rows and columns.

19. What is the purpose of the <form> element?

The <form> element is used to create interactive forms for collecting user input, which can then be submitted to a server for processing.

20. What are form controls in HTML?

Form controls are elements used within a <form> element to collect user input, such as text inputs, checkboxes, radio buttons, select dropdowns, and buttons.

21. What is the difference between GET and POST methods in HTML forms?

The GET method submits form data as part of the URL in the query string, visible in the browser's address bar, while the POST method submits form data in the HTTP request body, keeping it hidden from view.

22. What is the purpose of the <input> element?

The <input> element is used to create various types of form controls, such as text inputs, checkboxes, radio buttons, and buttons.

23. What is the purpose of the <textarea> element?

The <textarea> element is used to create a multi-line text input field within a form.

24. What are semantic elements in HTML5?

Semantic elements in HTML5 are tags that provide meaning to the content they enclose, such as <header>, <footer>, <nav>, <article>, <section>, <aside>, and <main>.

25. What is the purpose of the <header> and <footer> elements?

The <header> element represents introductory content at the beginning of a page or section, while the <footer> element represents concluding content at the end of a page or section.

9. What is the element used for?

The element is a block-level container used to group together other HTML elements and apply styles or scripts to them collectively.

10. What is the element used for?

The element is an inline container used to apply styles or scripts to a specific section of text or inline elements.

11. What is semantic HTML?

Semantic HTML is the use of HTML markup to reinforce the meaning of the information in web pages rather than merely define its presentation or look. It helps improve accessibility, search engine optimization, and the clarity of the code.

12. What is the difference between and <b> tags?

Both and <b> tags are used to make text bold, but is a semantic tag that indicates that the enclosed text is of strong importance, while <b> is a presentational tag that simply applies bold styling.

13. What is the difference between and <i> tags?

Both and <i> tags are used to italicize text, but is a semantic tag that indicates emphasis, while <i> is a presentational tag that simply applies italic styling.

14. What is the purpose of the <a> tag?

The <a> tag is used to create hyperlinks, allowing users to navigate between web pages or to different sections within the same page.

15. What is the difference between absolute and relative URLs?

An absolute URL contains the full address of the linked resource, including the protocol (http:// or https://), domain name, and path, while a relative URL specifies the address of the linked resource relative to the current document.

16. What is the purpose of the <img> tag?

The **<img>** tag is used to embed images into an HTML document.

35. What is the purpose of the <script> element?

The <script> element is used to embed or reference JavaScript code within an HTML document.

36. What is the difference between the <script> tag with and without the async attribute?

When the async attribute is present, the script will be executed asynchronously as soon as it is available, without blocking the rest of the page from loading. Without the async attribute, the script is executed synchronously, blocking the page load until it has finished downloading and executing.

37. What is the difference between the <script> tag with and without the defer attribute?

Scripts with the defer attribute will not execute until the HTML document has been fully parsed, whereas scripts without the defer attribute will execute as soon as they are encountered in the document, potentially blocking rendering of subsequent content.

38. What is the purpose of the alt attribute in the <img> tag?

The alt attribute specifies an alternative text description for an image, which is displayed if the image fails to load or if the user is using a screen reader.

39. What is the purpose of the title attribute in HTML elements?

The title attribute provides additional information about an element, typically displayed as a tooltip when the user hovers over the element.

40. What is the purpose of the href attribute in the <a> tag?

The href attribute specifies the URL of the linked resource.

41. What is the purpose of the target attribute in the <a> tag?

The target attribute specifies where to open the linked resource, such as in a new browser window or tab.

42. What is the purpose of the rel attribute in the <a> tag?

The rel attribute specifies the relationship between the current document and the linked resource, such as stylesheet for linking to a stylesheet or nofollow for indicating that the link should not be followed by search engines.

26. What is the purpose of the <header> and <footer> elements?

The <header> element represents introductory content at the beginning of a page or section, while the <footer> element represents concluding content at the end of a page or section.

27. What is the purpose of the <nav> element?

The <nav> element is used to define a section of navigation links within a document.

28. What is the purpose of the <article> element?

The <article> element is used to define independent, self-contained content that can be distributed and reused independently.

29. What is the purpose of the <section> element?

The <section> element is used to define a thematic grouping of content within a document, such as chapters, headers, footers, or any other grouping of content.

30. What is the purpose of the <aside> element?

The <aside> element is used to define content that is tangentially related to the content around it, such as sidebars, pull quotes, or advertisements.

31. What is the purpose of the <main> element?

The <main> element is used to define the main content area of a document, excluding any content that is repeated across multiple pages, such as headers, footers, or navigation links.

32. What are data attributes in HTML?

Data attributes are custom attributes that can be added to HTML elements to store extra information. They are prefixed with data- and can be accessed using JavaScript.

33. What is the purpose of the <iframe> element?

The <iframe> element is used to embed another HTML document within the current document.

34. What is the purpose of the <audio> and <video> elements?

The <audio> and <video> elements are used to embed audio and video files, respectively, into an HTML document.

43. What is the purpose of the src attribute in the <script> and <img> tags?

The src attribute specifies the URL of the external script file to be loaded by the <script> tag or the URL of the image to be displayed by the <img> tag.

44. What is the purpose of the type attribute in the <script> tag?

The type attribute specifies the MIME type of the script being referenced, such as text/javascript for JavaScript code.

45. What is the purpose of the charset attribute in the <meta> tag?

The charset attribute specifies the character encoding used by the document, such as UTF-8 or ISO-8859-1.

46. What is the purpose of the lang attribute in HTML elements?

The lang attribute specifies the primary language of the content contained within the element, which helps assistive technologies and search engines understand the content.

47. What is the purpose of the role attribute in HTML elements?

The role attribute specifies the role of the element in the document, especially for elements that do not have a semantic meaning or have an ambiguous meaning.

48. What is the purpose of the aria-* attributes in HTML elements?

The aria-* attributes are used to enhance the accessibility of HTML elements by providing additional information to assistive technologies, such as screen readers.

49. What is the purpose of the content editable attribute in HTML elements?

The content editable attribute specifies whether the content of an element is editable by the user.

50. What is the purpose of the hidden attribute in HTML elements?

The hidden attribute specifies that an element is not yet, or is no longer, relevant to the document's current state, and should be hidden from view.