HTML

HTML

HTML **stands for HyperText Markup Language. It is the standard language used to create and structure content on the web.**

- HTML is a markup language**, not a programming language**, meaning it annotates **text to define how it is structured and displayed by web browsers.**
- HyperText **allows a user to click a link and be redirected to a new page referenced by that link**.
- HTML is called a **markup language because it uses markup tags to structure and format web content**. Markup tags indicate **how text, images, and other content should be displayed on a web page.**

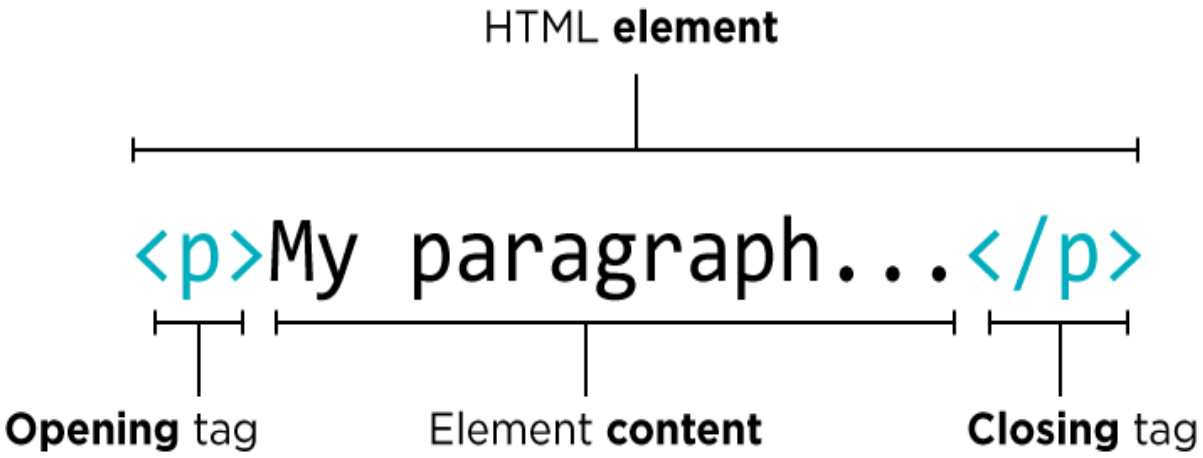
Version => HTML 5

Features of HTML

- It is easy to learn and easy to use.
- It is platform-independent. (OS => operating system , linux ,unix ,windows ,mac, ubundu, android)
- Images, videos, and audio can be added to a web page.
- Hypertext can be added to the text.
- It is a markup language.
- We don't need to use any other extra tools

HTML Tag

A **tag** is **the actual keyword or name enclosed in angle brackets (< >) that tells the browser what kind of content to expect**.



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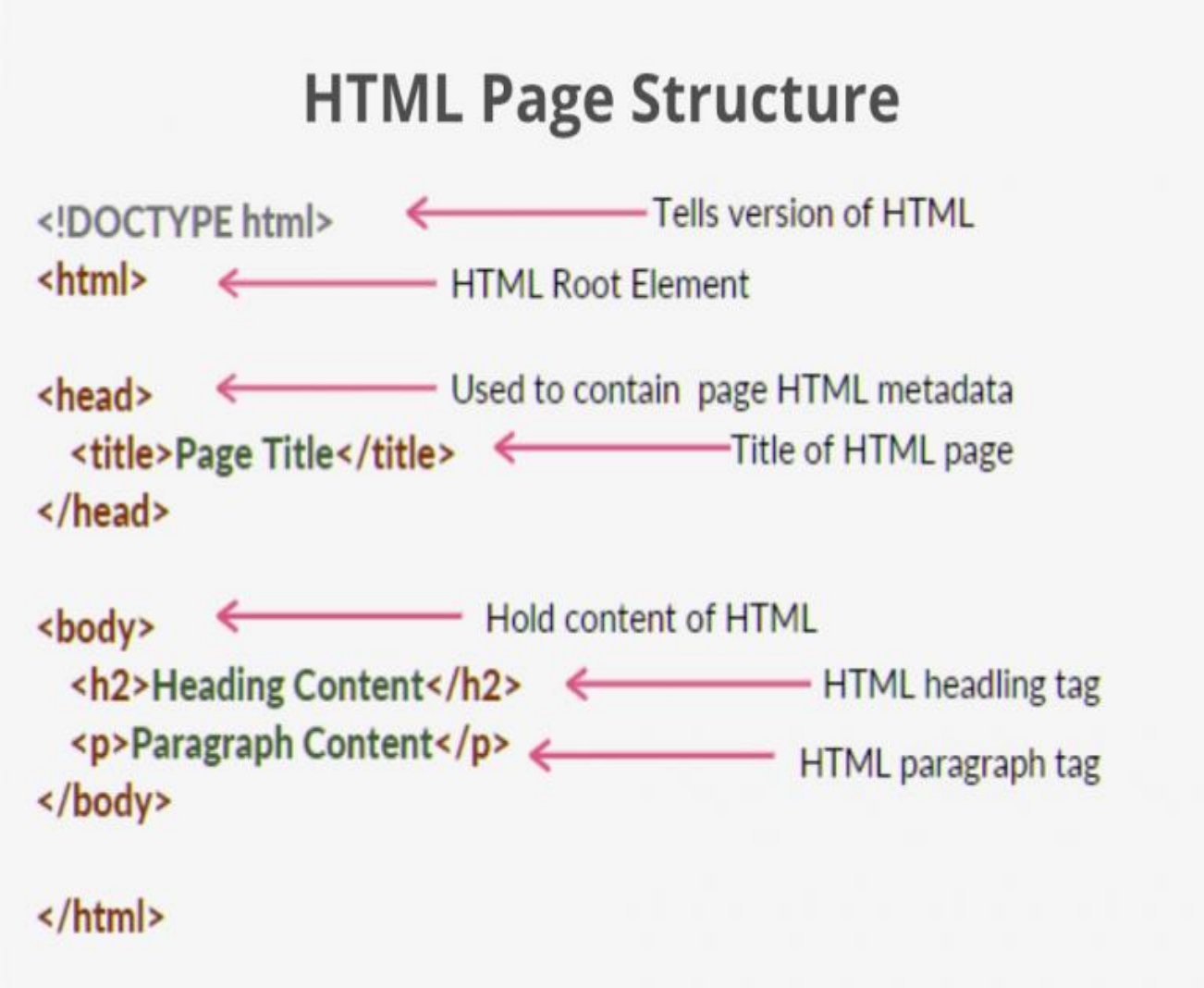
HTML Page Structure



- **<!DOCTYPE html>** – This is the document type declaration**, not a tag.** It declares that the document is an **HTML5 document.**
- **<html>** – This is called the **HTML root element.** All other elements are **contained within it.**
- **<head>** – The head tag contains the "behind the scenes" elements for a webpage. Elements within the head aren't **visible on the front end of a webpage. Typical elements inside the <head> include:**
    - **<title>:** Defines the **title displayed on the browser tab.**
    - **<meta>**: Provides **information like the character set or viewport settings.**
    - **<link>**: **Links external stylesheets or resources.**
    - **<style>**: Embeds internal **CSS styles.**
    - **<script>**: Embeds **JavaScript for functionality.**
- **<title>** – The title is what is **displayed on the top of your browser when you visit a website and contains the title of the webpage** that you are viewing.
- **<h2>** – The <h2> tag is a **second-level heading tag.**
- **<p>**– The <p> tag **represents a paragraph of text.**
- **<body>** – The body tag is used to enclose **all the visible content of a webpage.** In other words, the body content is what the browser will show on the front end.

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Save the text file using the "**.html"**

HTML Comments
HTML comments are used to add notes or explanations in the HTML code that are not displayed by the browser.

- They are useful for documenting the code, making it easier to understand and maintain.
- To add a comment, use the syntax <!– your comment here –>.

```
<!-- This is a comment and will not be displayed on the webpage -->
<p>This is visible text.</p>
```

HTML Elements

An HTML Element **consists of a** start tag**,** content**, and an** end tag**, which together define the element's structure and functionality.**

Syntax:

```
<tagname >Your Contents... </tagname>
```

Example

```
<p>Welcome to SDLC!</p>
```

Case Sensitivity:

- HTML tags are **not** case-sensitive. For example, **<B> and <b>** both represent bold text.
- However, it's a best practice to use lowercase tags for consistency and readability.

HTML Headings

HTML headings **are used to define the titles and subtitles of sections on a webpage. They help organize the content and create a structure that is easy to navigate.**

- Proper use of headings enhances readability by organizing content into clear sections.
- Search engines utilize headings to understand page structure, aiding in SEO.

```
<h1>Boopathiraj</h1>
   <h2> Boopathiraj </h2>
   <h3> Boopathiraj </h3>
   <h4> Boopathiraj </h4>
   <h5> Boopathiraj </h5>
   <h6> Boopathiraj </h6>
```

H1 –most important heading (biggest heading, title, main heading)

H6 – least important heading(smaller heading,subtitle,small heading)

<h1> – Main Heading (Largest)

-

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<h2> – Subheadings

- **<h3> to <h6> – Smaller Headings**

- **HTML Paragraphs**

A paragraph in HTML **is simply a block of text . each and every <p> tag create the new line of web page.**
Every p tag added in new line in browser
Syntax:

```
<p> Content</p>
```

Example:

```
<p>A Computer Science </p>
```

**The
 tag / self closing tag / empty tag**

The HTML
 tag **element creates a line break,** giving you a new line without starting a new paragraph
Syntax:

```
<br>
```

The Horizontal Rules <hr> tag

The HTML <hr> tag is used to **create a horizontal rule or line,** visually separating content on a webpage.
Syntax

```
<hr>
```

The <pre> tag

The HTML <pre> tag is used for **pre-formatted text.** It keeps the **original spaces and line breaks exactly as they are in the code**. When you use <pre>, **the text appears in a fixed-width font**
Syntax:

```
<pre> Content </pre>
```

```
<pre>
  This paragraph has multiple
  lines. But it is displayed
  as it is unlike the paragraph
  tag.
 </pre>
```

HTML Text Formatting Tag

HTML contains *several* **elements** for defining **text with a special meaning.**

HTML Formatting Elements

Formatting elements were designed to display special types of text:

- <b> - Bold text
- - Important text
- <i> - Italic text
- - Emphasized text
- <mark> - Marked text
- <small> - Smaller text
- <big> - big text
- <del> - Deleted text
- <ins> - Inserted text

- <u> - underline
- <sub> - Subscript text
- <sup> - Superscript text

HTML <b> Elements

The HTML <b> element defines bold text, without any extra importance.

Example

```
<b>This text is bold</b>
```

** Elements**

The HTML element defines text **with strong importance**. The content inside is typically displayed in bold.

Example

```
<strong>This text is important!</strong>
```

HTML <i> Elements

The HTML <i> element defines **a part of text in an *alternate* voice or mood. The content inside is typically displayed in italic.**

Example

```
<i>This text is italic</i>
```

HTML ** Elements**

The HTML element **defines emphasized text.** The content inside is typically displayed in italic.

Tip: A screen reader will pronounce the words in with an emphasis, using verbal stress.

Example

```
<em>This text is emphasized</em>
```

HTML <small> Element ,<big> <u>

The HTML <small> element **defines smaller text:**

Example

```
<small>This is some smaller text.</small>
```

HTML <mark> Element

The HTML <mark> element **defines text that should be marked or highlighted:**

Highlighted as yellow color

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Example

```
<p>Do not forget to buy <mark>milk</mark> today.</p>
```

HTML <del> Element

The HTML <del> element defines **text that has been deleted from a document.** Browsers will usually **strike a line through** ~~deleted~~ text:

Example

```
<p>My favorite color is <del>blue</del> red.</p>
```

HTML <ins> Element

The HTML <ins> element defines **a text that has been inserted into a document**. Browsers will **usually underline** inserted text:

Example

```
<p>My favorite color is <del>blue</del> <ins>red</ins>.</p>
```

HTML <sub> Element $_2$

The HTML <sub> element defines **subscript text**. **Subscript text appears half a character below the normal line,** and is sometimes rendered in a smaller font. Subscript text can be used **for chemical formulas, like H_2O:**

Example

```
<p>This is <sub>subscripted</sub> text.</p>
```

HTML <sup> Element

The HTML <sup> element defines **superscript text. Superscript text appears half a character above the normal line**, and is sometimes rendered in a smaller font. Superscript text can be used **for footnotes, like WWW[1]:**

Example

```
<p>This is <sup>superscripted</sup> text.</p>
```

HTML Quotation and Citation Elements

we will go "through" the <blockquote>, <q>, <abbr>, <address>, <cite>, and <bdo> HTML elements.

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HTML <blockquote> for Quotations

The HTML <blockquote> element **defines a section that is quoted from another source.**

Browsers usually indent <blockquote> elements.

Example

```
<p>Here is a quote from WWF's website:</p>
<blockquote cite="http://www.worldwildlife.org/who/index.html">
For 60 years, WWF has worked to help people and nature thrive</blockquote>
```

==========

HTML <q> for Short Quotations

The HTML <q> tag **defines a short quotation.**

Browsers **normally insert quotation marks around the quotation.**

```
<p>WWF's goal is to: <q>Build a future where people live in harmony with
nature.</q></p>
```

HTML <abbr> for Abbreviations

The HTML <abbr> tag defines an abbreviation or an acronym, like "HTML", "CSS", "Mr.", "Dr.", "ASAP", "ATM".

Marking abbreviations can give useful information to browsers, translation systems and search-engines.

Tip: Use the global title attribute to show the description for the abbreviation/acronym when you mouse over the element.

Example

```
<p>The <abbr title="World Health Organization">WHO</abbr> was founded in
1948.</p>
```

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HTML <address> for Contact Information

The HTML <address> tag defines the **contact information for the author/owner of a document or an article.**

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The contact information **can be an email address, URL, physical address, phone number, social media handle, etc.**

The text in the <address> element usually **renders in *italic,* and browsers** will always add a line break before and after the <address> element.

Example

```
<address>
Written by John Doe.<br>
Visit us at:<br>
Example.com<br>
Box 564, Disneyland<br>
USA
</address>
```

==========

HTML <cite> for Work Title

The HTML <cite> tag defines the title of a creative work (e.g. a book, a poem, a song, a movie, a painting, a sculpture, etc.).

Note: A person's name is not the title of a work.

The text in the <cite> element usually renders in *italic*.

Example

```
<p><cite>The Scream</cite> by Edvard Munch. Painted in 1893.</p>
```

==========

HTML <bdo> for Bi-Directional Override

BDO stands **for Bi-Directional Override.**

The HTML <bdo> tag is used to override the current text direction:

Example

```
<bdo dir="rtl">This text will be written from right to left</bdo>
```

==========

HTML Links

HTML

HTML Links – Hyperlinks, Anger tag, a tag

HTML links are hyperlinks.

You can click on a link and **jump to another document**.

When you move the mouse over a link, the mouse arrow will turn into a **little hand.**

HTML Links - Syntax

The HTML <a> tag defines a hyperlink. It has the following syntax:

link text

url – uniform resource locator

The most important attribute of the <a> element is the href attribute, **which indicates the link's destination.**

Visit SDLCSKILLS.com!

By default, links will appear as follows in all browsers:

- **An unvisited link** is underlined and **blue**
- **A visited link** is underlined and **purple**
- **An active link** is underlined and **red**

HTML Links - The target Attribute

The target attribute specifies where to open the linked document.

The target attribute can have one of the following values:

- _self - **Default. Opens** the document in the same window/tab as it was clicked
- **_blank - Opens the document in a new window or tab**
- _parent - Opens the document in the parent frame
- _top - Opens the document in the full body of the window

- Visit SDLCSKILLS.com!

Absolute URLs vs. Relative URLs

1. **Absolute URL** - Links to an **external link that is hosted on another website**. Example: href="https://sdlcskills.com/".
2. **Relative URL** - Links to an **internal link that is hosted within the website**. Example: href="/home.html".

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Create a Bookmark in HTML

Bookmarks can be useful if a web page is very long.

To create a bookmark - first create the bookmark, then add a link to it.

When the link is clicked, the page will scroll down or up to the location with the bookmark.

Jump to Chapter 4

Jump to Chapter 10

<h2>Chapter 1</h2>

This chapter explains ba bla bla

<h2>Chapter 2</h2>

This chapter explains ba bla bla

<h2>Chapter 3</h2>

This chapter explains ba bla bla

<h2 id="**C4**">Chapter 4</h2>

This chapter explains ba bla bla

==========

HTML Attributes

HTML attributes provide **additional information** about HTML elements.

- All HTML elements can have **attributes**
- Attributes provide **additional information** about elements
- Attributes are always specified in **the start / opening tag**
- Attributes usually come in name/value pairs like: **name="value"**
-

Example

```
<a href="https://www.w3schools.com">Visit W3Schools</a>

<p style="color:red;">This is a red paragraph.</p>

<html lang="en">

<p title="I'm a tooltip">This is a paragraph.</p>
```

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Attribute	Description
class	Groups elements and allows styling.
style	Inline CSS styles.
src	Specifies the source of various resources, such as image URLs for the img element, video URLs for the video element, and audio URLs for the audio element.
contenteditable	Determines whether the content within the element is editable.
role	Specifies the element’s accessibility role.
tabindex	Determines the order of focus during keyboard navigation.
id	Assigns a unique identifier to an element, allowing targeting with CSS or JavaScript.
href	Defines the hyperlink destination within the a element, enabling navigation.
alt	Provides alternative text for images, essential for accessibility and SEO.
title	Creates a tooltip that appears when a user hovers over the element.
lang	Specifies the language of the element’s content, aiding with translation and accessibility.

HTML Favicon

HTML

An **HTML favicon** (or favorite icon) is **a small image or icon that represents a website, typically shown in the browser tab, bookmarks, and shortcuts**. It is used for:

- **Brand Recognition**: Favicons are a visual marker for **your brand online, helping to increase and reinforce brand awareness**.
- **Professionalism**: A well-designed favicon **makes your site look professional and credible.**
- **Usability**: It improves the user's navigation **experience by allowing them to easily identify** and switch to your tab when multiple tabs are open.

How to Implement a Favicon in HTML

To add a favicon to your HTML document, you'll need to **reference it in the <head> section of your HTML code**.

Example:

```
<link rel="icon" href="https://sdlcskills.com/build/images/favicons/favicon-32x32.png" type="image/x-icon">
```

In this example:

- **rel="icon"**: Indicates that the linked resource is an icon for the document. **This relationship is essential for browsers to understand that the specified file is meant to be used as the website's favicon.**
-
- **href=" https://sdlcskills.com/build/images/favicons/favicon-32x32.png"**: Specifies the **path to the favicon image**. This can be a URL (as used here) pointing to an image that serves as the icon.
-
- **type="image/x-icon"**: Specifies the MIME type of the favicon file. While **commonly image/x-icon is used** for .ico files, **modern browsers support PNG and other formats as well**.

Note: Major browsers are not supported by the sizing property of the favicon.

List of Favicon Sizes

Different devices and browsers may require favicons of various sizes. Here's a list of common favicon sizes:

Name	Size	Description
favicon-32.png	32×32	Standard for most desktop browsers.
favicon-57.png	57×57	Standard iOS home screen.
favicon-76.png	76×76	iPad home screen icon.
favicon-96.png	96×96	GoogleTV icon.

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Name	Size	Description
favicon-120.png	120×120	iPhone retina touch icon.
favicon-128.png	128×128	Chrome Web Store icon & Small Windows 8 Star Screen Icon*.
favicon-144.png	144×144	Internet Explorer 10 Metro tile for pinned site*
favicon-152.png	152×152	iPad touch icon.
favicon-167.png	167×167	iPad Retina touch icon (change for iOS 10: up from 152×152, not in action. iOS 10 will use 152×152)
favicon-180.png	180×180	iPhone 6 plus
favicon-192.png	192×192	Google Developer Web App Manifest Recommendation
favicon-195.png	195×195	Opera Speed Dial icon (Not working in Opera 15 and later)
favicon-196.png	196×196	Chrome for Android home screen icon
favicon-228.png	228×228	Opera Coast icon

Favicon File Format Support

Here's a table summarizing the common file formats supported for **favicons:**

File Format	Browser Support	Advantages	Disadvantages
ICO	• Edge • Chrome • Firefox • Opera • Safari	Supports multiple sizes in a single file; widely supported	Larger file size compared to others

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File Format	Browser Support	Advantages	Disadvantages
PNG	All Five	High-quality image, supports transparency, smaller file size	Does not support multiple sizes in one file
GIF	All Five	Supports animation	Limited color palette (256 colors), less ideal for favicons
JPEG	All Five	Good for high-quality images	Does not support transparency, larger file size
SVG	All Five	Scalable, small file size, sharp quality at any resolution	Not supported by all browsers (especially older ones)
WebP	All Five	Smaller file size with high quality	Limited browser support, not widely used for favicons

HTML Images

The **HTML <img> tag** is used to **embed an image in web pages by linking them.** It defined by **attributes like src, width, height, and alt,** and **does not require a closing tag.**

Alt = alternative Text

Src = source

There are **two ways** to insert the images into a webpage:

- By providing **a full path or address (URL) to access an internet file. (absolute)**
- By providing **the file path relative to the location of the current web page file**. **(Relative)**

Example:

HTML

 => Relative

In this example:

- The **<img> tag** is used to **embed an image into the webpage**.
- **src attribute:** Specifies the **source URL of the image**, which in this example is https://sdlcskills.com/build/images/welcome.png. The image is **loaded from this URL when the webpage is accessed**.
- **alt attribute:** Provides **alternative text for the image**, "SDLC Welcome Image," **which describes the image content. If, for any reason, the image cannot be displayed, the text "SDLC Welcome Image" will be shown instead.**

HTML Image tag – alt Attribute

The **alt attribute** in <img> tag **provides a text alternative if the image fails to load.** It used to accessibility for **users unable to view images due to slow internet, src errors, or screen reader usage**.

Example:

Set Image Size – Width and Height Attribute

The width and height attributes are used to specify the **width and height of an image**. The attribute values are specified **in pixels by default.**

Example:

```
<img src="url"  alt="SDLC " width="300" height="300" />
```

Adding Titles to an Image

The title attribute is displayed as **a tooltip when a user hovers over the image.** To add **a title to an image,** include the **title attribute** in the <img> tag, providing **descriptive text for enhanced user interaction.**

Example:

```
<img src="url"  alt="SDLC " title="SDLC WELCOME PAGE" />
```

Setting Style of an Image

In this example, we are using the **border property to decorate the image.** By default, every picture has a border around it. By using the border attribute, **the thickness of the border can be changed. A thickness of "0" means that there will be no border around the picture.**

Example:

```
<img src="url"  alt="SDLC Welcome Image" border="5" />
<img src="images/parrent.webp" alt="parrent" width="350" height="350" title="parret images"
  style="border: 10px solid green;">
```

Video audio , iframe

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Abbreviation	File Format	File Extension
APNG	Animated Portable Network Graphics	.apng
GIF	Graphics Interchange Format	.gif
ICO	Microsoft Icon	.ico, .cur
JPEG	Joint Photographic Expert Group image	.jpg, .jpeg, .jfif, .pjpeg, .pjp
PNG	Portable Network Graphics	.png
SVG	Scalable Vector Graphics	.svg

HTML

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Video, audio, iframe, YouTube link, google map

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HTML Lists

An **HTML List** allows you **to organize data on web pages into an ordered or unordered format to make the information easier to read and visually appealing**.

HTML Lists are very helpful for creating structured, accessible content in web development.

Types of HTML Lists

There are three main types of lists in HTML:

1. **Unordered Lists (<ul>):** These lists are **used for items that do not need to be in any specific order**. The list items **are typically marked with bullets.**
2. **Ordered Lists (<ol>):** These lists **are used when the order of the items is important**. **Each item in an ordered list is typically marked with numbers or letters.**
3. **Description Lists (<dl>):** These lists are **used to contain terms and their corresponding descriptions.**

HTML List Tags

Tag	Description
	Defines an unordered list.
	Defines an ordered list.
	Defines a list item.
<dl>	Defines a description list.
<dt>	Defines a term in a description list.
<dd>	Details the term in a description list.

HTML

1. Using HTML Unordered List or Bulleted List

Unordered lists are ideal for scenarios where the sequence of the items is not important.

The unordered list **items are marked with bullets, also known as bulleted lists.** An unordered list starts **with the <ul> tag**, and each list item begins with **the <li> tag.**

Syntax:

```
<ul>
   <li>Item 1</li>
   <li>Item 2</li>
   <li>Item 3</li>
</ul>
```

Attribute: This tag contains two attributes which are listed below:

- **type: It specifies which kind of marker is used in the list.**

The <ul> tag specifies **the type of marker used in an unordered list**. **Values include disc (default filled circle), circle (hollow circle), square, and none.** It controls the appearance of list items.
Note: The ul type attributes are not supported by HTML 5. Instead of using this attribute, we can use the CSS list-style-type Property.

Syntax:

```
<ul type="disc | circle | square">
```

Attribute Values:

- **disc:** Default. A filled circle.
- **circle:** An unfilled circle
- **square** A filled square.

Nested UL

2. Using HTML Ordered List

In an ordered list, all **list items are marked with numbers by default**. An ordered list starts **with the <ol> tag,** and **each list item begins with the <li> tag**.

```
<ol>
  <li>Item1</li>
  <li>Item2</li>
  <li>Item3</li>
</ol>
```

Attributes:

- **reversed:** It defines **that the order will be descending.**
- **start:** It defines from **which number or alphabet the order will start.**
- **type:** It defines which **type(1, A, a, I, and i) of the order you want in your list of numeric, alphabetic, or roman numbers.**

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```
<!DOCTYPE html>
<html>

<head>
   <title>HTML ol tag</title>
</head>

<body>
   <h1 style="color: green">GeeksforGeeks</h1>
   <h3>HTML ol tag</h3>

<p>reversed attribute</p>



   <ol reversed>
      <li>HTML</li>
      <li>CSS</li>
      <li>JS</li>
   </ol>

<p>start attribute</p>


   <ol start="5">
      <li>HTML</li>
      <li>CSS</li>
      <li>JS</li>
   </ol>

<p>type attribute</p>


   <ol type="i">
      <li>HTML</li>
      <li>CSS</li>
      <li>JS</li>
   </ol>
</body>

</html>
```

Nested OL

3. Using HTML Description List

A description list is a list of **terms, with a description of each term.** Description lists are less common **but very useful for definitions, glossaries, or any other key-value pairs of items.**

The <dl> tag defines the description list, the <dt> tag defines the term name, and the <dd> tag describes each term.

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- **<dl> (Description List):** This tag defines **the description list itself and acts as a container for the list items.**
- **<dt> (Description Term):** Represents **a term or a name within the list.**
- **<dd> (Description Details):** Provides **the description or definition of the term.**

Syntax:

```
<dl>
   <dt>Item 1</dt>
   <dd>Description of Item 1 </dd>
   <dt>Item 2</dt>
   <dd>Description of Item 2</dd>
</dl>
```

Here**, <dt>** (description term) is used for the term being defined, and **<dd>** (description details) is used for the description.

```
<!DOCTYPE html>
<html>

<body>
   <h2>A Description List</h2>
   <dl>
      <dt>Coffee</dt>
      <dd>- 500 gms</dd>
      <dt>Milk</dt>
      <dd>- 1 ltr Tetra Pack</dd>
   </dl>
</body>

</html>
```

Task menu card design

HTML Tables

HTML Tables allow you to **arrange data into rows and columns on a web page**, making it easy to display information like **schedules, statistics, or other structured data in a clear format.**

What is an HTML Table?

An HTML table is created using the <table> tag. Inside this tag, you use

- ***<tr>*** *to define table rows,*
- ***<th>*** *for table headers, and*
- ***<td>*** *for table data cells*

Each <tr> represents a row, and within each row, <th> or <td> tags represent the cells in that row, which can contain text, images, lists, or even another table.

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Example:

```
<!DOCTYPE html>
<html>

<body>
  <table>
    <tr>
      <th>Firstname</th>
      <th>Lastname</th>
      <th>Age</th>
    </tr>
    <tr>
      <td>Priya</td>
      <td>Sharma</td>
      <td>24</td>
    </tr>
    <tr>
      <td>Arun</td>
      <td>Singh</td>
      <td>32</td>
    </tr>
    <tr>
      <td>Sam</td>
      <td>Watson</td>
      <td>41</td>
    </tr>
  </table>
</body>

</html>
```

HTML Tags	Descriptions
<table>	Defines the structure for organizing data in rows and columns within a web page.
<tr>	Represents a **row** within an HTML table, containing individual cells.
<th>	Shows a table **header** cell that typically holds titles or headings.
<td>	Represents a standard **data** cell, holding content or data.

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HTML Tags	Descriptions
<caption>	Provides a title or description for the entire table.
<thead>	Defines the header section of a table, often containing column labels.
<tbody>	Represents the main content area of a table, separating it from the header or footer.
<tfoot>	Specifies the footer section of a table, typically holding summaries or totals.
<col>	Defines attributes for table **columns** that can be applied to multiple columns at once.
<colgroup>	Groups together a **set of columns** in a table to which you can apply formatting or properties collectively.

Example

Set the background color of the three columns with the <colgroup> and <col> tags:

```
<table>
  <colgroup>
    <col span="2" style="background-color:red">
    <col style="background-color:yellow">
  </colgroup>
  <tr>
    <th>ISBN</th>
    <th>Title</th>
    <th>Price</th>
  </tr>
  <tr>
    <td>3476896</td>
    <td>My first HTML</td>
    <td>$53</td>
  </tr>
</table>
```

HTML

Definition and Usage

The <colgroup> tag specifies a **group of one or more columns in a** table for formatting.

The <colgroup> tag is useful for applying **styles to entire columns, instead of repeating the styles for each cell, for each row.**

Note: The <colgroup> tag must be a child of a <**table> element, after any <caption> elements and before any <thead>, <tbody>, <tfoot>, and <tr> elements.**

Tip: To define different properties to a column within a <colgroup>, use the <col> tag within the <colgroup> tag.

The <col> tag specifies column properties for each column within a <colgroup> element.

The <col> tag is useful for applying styles to entire columns, instead of repeating the styles for each cell, for each row.

The span attribute defines the number of columns a <col> element should span.

HTML Table - Colspan

To make a cell span over multiple columns, use the colspan attribute:

Example

```
<table>
  <tr>
    <th colspan="2">Name</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>Jill</td>
    <td>Smith</td>
    <td>43</td>
  </tr>
  <tr>
    <td>Eve</td>
    <td>Jackson</td>
    <td>57</td>
  </tr>
</table>
```

The value of the colspan attribute represents the number of columns to span.

HTML Table - Rowspan

To make a cell span over multiple rows, use the rowspan attribute:

HTML

Example

```
<table>
  <tr>
    <th>Name</th>
    <td>Jill</td>
  </tr>
  <tr>
    <th rowspan="2">Phone</th>
    <td>555-1234</td>
  </tr>
  <tr>
    <td>555-8745</td>
</tr>
</table>
```

The value of the rowspan attribute represents the number of rows to span.

Task in table design

HTML Block and Inline Elements

Block-level Elements

A block-level element **always starts on a new line**, and the browsers **automatically add some space (a margin) before and after the element.**

A block-level element **always takes up the full width available** (stretches out to the left and right as far as it can).

Two commonly used block elements are: <p> and .

The <p> element defines a paragraph in an HTML document.

The element defines a division or a section in an HTML document.

<address>	<article>	<aside>	<blockquote>	<canvas>	<dd>		<dl>
<dt>	<fieldset>	<figcaption>	<figure>	<footer>	<form>	<h1>-<h6>	<header>
<hr>		<main>	<nav>	<noscript>		<p>	<pre>
<section>	<table>	<tfoot>		<video>			

Inline Elements

An inline element **does not start on a new line.**

An inline element only takes up as much width as necessary.

HTML

<a>	<abbr>	<acronym>	<b>	<bdo>	<big>	 	<button>
<cite>	<code>	<dfn>		<i>	<img>	<input>	<kbd>
<label>	<map>	<object>	<output>	<q>	<samp>	<script>	<select>
<small>			<sub>	<sup>	<textarea>	<time>	<tt>
<var>							

HTML Semantic Elements

Semantic **elements = elements with a meaning.**

What are Semantic Elements?

A semantic element **clearly describes its meaning to both the browser and the developer**.

Examples of **non-semantic** elements: and - Tells nothing about its content.

Examples of **semantic** elements: <img>, <table>, and <article> - Clearly defines its content.

Semantic Elements in HTML

Many web sites contain HTML code like:

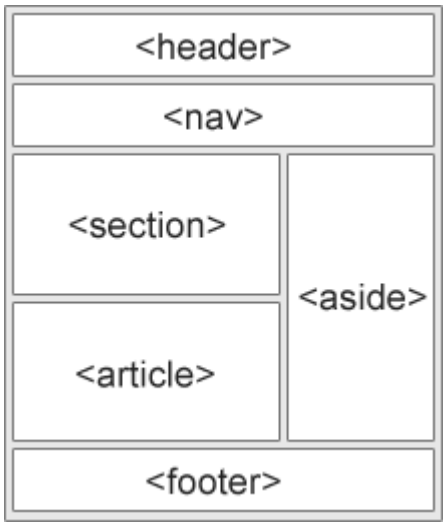
to indicate navigation, header, and footer.

In HTML there are several semantic elements that can be used to define different parts of a web page:

- <article>
- <aside>
- <details>
- <figcaption>
- <figure>
- <footer>
- <header>
- <main>
- <mark>
- <nav>
- <section>

HTML

- <summary>
- <time>



HTML Forms

An HTML form is used to collect user input. The user input is most often sent to a server for processing.

```
<form action="/action_page.php" method=”POST” accept-charset="utf-8">
  <label for="fname">First name:</label><br>
  <input type="text" id="fname" name="fname" value="John"><br>
  <label for="lname">Last name:</label><br>
  <input type="text" id="lname" name="lname" value="Doe"><br><br>
  <input type="submit" value="Submit">
</form>
```

The action **attribute defines the action to be performed when the form is submitted.**

The method attribute specifies the **HTTP method to be used when submitting the form data.**

The form-data can be sent as URL variables (with method="get") or as HTTP post transaction (with method="post").

The default HTTP method when submitting form data is GET.

HTML Form Elements

- <input>
- <label>
- <select>
- <textarea>
- <button>

HTML

- <fieldset>
- <legend>
- <datalist>
- <output>
- <option>
- <optgroup>

<select>

</select>

This is used for Dropdown of html element

<Option></option>

Fieldset

This element is used to group related data in a form

Legend => elements defines a caption for the Fieldset element

```
<form action="" >

<label for="username">Username:</label><br>

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

<label for="password">Password:</label><br>

<input type="password" id="password" name="password" required><br><br>

<label for="email">Email:</label><br>

<input type="email" id="email" name="email"><br><br>

<label for="number">Number</label><br>

<input type="number" id="number" name="number"><br><br>

<label for="gender">Gender:</label><br>

<input type="radio" id="male" name="gender" value="male">

<label for="male">Male</label><br>

<input type="radio" id="female" name="gender" value="female">


<label for="female">Female</label><br>
```

HTML

```
<input type="radio" id="other" name="gender" value="other">

<label for="other">Other</label><br><br>

<label for="birthdate">Birthdate:</label><br>

<input type="date" id="birthdate" name="birthdate"><br><br>

<label for="country">Country:</label><br>

<select id="country" name="country">

<option value="usa">USA</option>

<option value="canada">Canada</option>

<option value="uk">UK</option>

<option value="australia">Australia</option>

</select><br><br>

<label for="message">Message:</label><br>

<textarea id="message" name="message" rows="4" cols="50"></textarea><br><br>

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

<input type="reset" value="Reset">

</form>
```

Action - The action attribute defines the action to be performed when the form is submitted. Usually, the form data is sent to a file on the server when the user clicks on the submit button

name - The name attribute specifies the name of an <input> element. The name attribute is used to reference elements in a JavaScript, or to reference form data after a form is submitted.

Note: Only form elements with a name attribute will have their values passed when submitting a form

value - In the context of the <input> tag in HTML, the value attribute specifies the initial value of the input field. Depending on the type of <input> element, the value attribute behaves differently

For text inputs (type="text", type="password", type="email", etc.):

The value attribute sets the initial value displayed in the input field when the page loads. Users can overwrite this value by typing into the field

For radio buttons (type="radio") and checkboxes (type="checkbox"):

HTML

The value attribute specifies the value that gets submitted to the server when the radio button or checkbox is checked and the form is submitted. It helps identify which option the user has chosen.

ID - The id attribute in <input> tags uniquely identifies elements within HTML, crucial for linking with <label> tags and targeting with JavaScript for interactive functionality. Unique id values prevent conflicts and ensure proper document structure and scripting

size, maxlength, readonly, disabled, placeholder & required , multiple , selected attribute in input tag

min & max