BUILDING BLOCKS OF WEBSITE

HTML

Provides the structure and content of a webpage.

CSS

Styles and designs the appearance of the webpage

JS

Adds interactivity and dynamic behavior to the webpage.

HTML

HyperText MarkupLangauge

```
<p> Hypertext is text which contains links to other texts.</p>

<p> Markup Lang. it's a way to give instructions to a computer
about how content should be organized and displayed.</p>

<p> This is a <strong>bold</strong> text.</p>
```

HISTORY OF HTML

Early Beginnings (1980s): The concept of hypertext was proposed by computer scientist Ted Nelson in the 1960s. In the 1980s, Tim Berners-Lee, a British computer scientist, introduced the World Wide Web (WWW) and developed the first HTML

HTML 2.0 (1995), HTML 3.2 (1997, & HTML 4.0 (1997-1999 HTML 4 introduced significant improvements, including better support for forms, scripts, and style sheets. It was a crucial step toward modern web development.

HTML5 (2014): HTML5 was a major milestone, with a focus on multimedia, improved semantics, and better support for web applications. It introduced new elements like <video>, <audio>, and <picture>. HTML5 made web development more versatile and capable.

01

HTML SYNTAX

01 HTML TIPS

 The File extension must be .html or .htm

 MS-DOS and Windows 3.1, had limitations on the number of characters in a filename.

```
.EXE .TXT .DOC .BAT .COM .ZIP
```

02

HTML TIPS

 The file name must be the index.html because it's a default path of our homepage or the root of our website.

HTML DOCUMENTS / STRUCTURE

```
<!DOCTYPE html>
<html>
    <head>
        <title> Home page </title>
    </head>
    <body>
        <h1> Best HTML Course </h1>
    </body>
</html>
```

Let the browser know it's an HTML5. Appear once, at the top of the page

Root of an HTML Document

Contains the information about the HTML document

Title for the HTML page

Contains everything you want to display on the Web Page.

Defines a large heading

The lang attribute specifies the language of the element's content.

<html lang="en">

Specifies the language code for the element's content

```
<html lang="hi">   <html lang="ko">   <html lang="fr">
```

The lang attribute

```
<html lang="en">
```

Specifies the language code
for the element's content

Attributes are used along with the HTML tags to define
the characteristics of the element.

Attributes provide additional information about elements

HTML Heading & Text

Headings (<h1> to <h6>)

Paragraphs (<p>)

Line breaks (
)

Horizontal rule (<hr>)

01

HTML HEADING

DID YOU KNOW?

h1: Typically, larger and bold, around 24px to 36px or even larger.

h2: Slightly smaller, around 18px to 30px.

h3: Smaller than h2, around 16px to 24px.

h4: Generally, around 14px to 20px.

h5: Smaller, often around 12px to 18px.

h6: The smallest, often around 10px to 16px.

02

HTML PARAGRAPH TAG

Content

Opening Tag

Closing Tag

 Best HTML Course

HTML Elements

DID YOU KNOW?

No matter how much whitespace you use inside HTML element content (which can include one or more space characters, but also line breaks), the HTML parser reduces each sequence of whitespace to a single space when rendering the code.

HTML Comment Tag

<!-- Comment Here -->

To comment out in HTML, insert information between <!-- and --> tags (browsers won't show these notes).

Commenting in HTML allows developers to leave notes about their code, its functionality or to indicate necessary changes for the future.

HTML Text Formatting

01

Bold and Italic:

,

02

Underline and Strikethrough:

<u>, <s>

Subscript and Superscript:

<sub>, <sup>

04

Preformatted Text:

<pre>, <kbd>, <abbr>

05

Text Highlighting

<mark>, <small>, <del>

06

Inline Styles:

03 HTML TIPS

While using nested tag in one elements never mismatched the tags

❌
```
<p>My cat is <strong>very
    grumpy.</p> </strong>
```

☑
```
<p>My cat is <strong>very</strong>
    grumpy.</p>
```

HTML Anchor Tag

The <a> tag defines a hyperlink, which is used to link from one page to another.

Hypertext REFerence

```
<a href="https://tt.com"> visit </a>
```

URL

HTML Entities

<: Less than sign (<)

>: Greater than sign (>)

&: Ampersand (&)

": Double quotation mark (")

': Single quotation mark or apostrophe (')

 : Non-breaking space ( )

$: Dollar Sign ($)

©: Copyright symbol (©)

®: Registered trademark symbol (®)

™: Trademark symbol (™)

♥: Heart symbol (♥)

DID YOU KNOW?

We can represent the dollar sign symbol using 3 different HTML entity methods

Using Named Entity: $

Using Hexadecimal Numeric Reference: #x00024;

Using Decimal Numeric Reference: $

HTML Image Tag

The <img> tag is used to embed(ADD) an image in an HTML page.

HTML Image Tag

Specifies the path to the image

Specifies an alternate text for the image, if the image for some reason cannot be displayed

```
<img src="/image.png" alt="altText">
```

Relative URL

DID YOU KNOW?

Void Elements / Empty Elements

Not all parts of a web page use the usual pattern of having an opening tag, some content, and then a closing tag. Some parts only need a single tag to work. These are called "void elements" or "Empty Elements".

HTML Empty Elements

<area>: Defines a clickable area within an image map.

 : Represents a line break.

<col> : Specifies column properties for a table column group.

<embed> : Embeds external content or plugin content.

<hr> : Represents a thematic break or horizontal rule.

<img> : Embeds an image.

<input> : Represents an input field.

<link> : Specifies relationships between a current document and external resources.

<meta> : Provides metadata about the HTML document.

<param> : Defines parameters for plugins.

<source> : Specifies multiple media resources for media elements like <audio> and <video>.

<track> : Specifies text tracks for media elements.

<wbr> : Represents a word break opportunity in text.

HTML Picture Tag

The <picture> HTML element contains zero or more <source> elements and one <img> element to offer alternative versions of an image for different display/device scenarios.

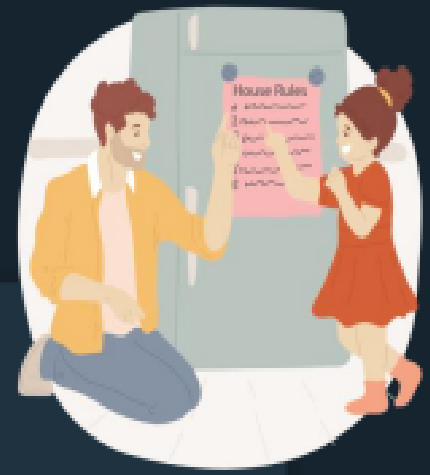
```
<picture>
        <source srcset="/thapa.webp">
        <source srcset="/thapa.png">
        <img src="/thapa.jpg" alt=""/>
</picture>
```

HTML Figure Tag

The <figure> HTML element represents self-contained content,potentially with an optional caption, which is specified using the <figcaption> element.

```
<figure>
        <img src="/thapa.png" alt=""/>
      <figcaption> Best HTML Course </figcaption>
</figure>
```

HTML Lists



Ordered Lists

An ordered list is used to create a list of items in a specific order, typically indicated by numbers.

```
<ol>
  <li> First item </li>
  <li> Second item </li>
  <li> Third item </li>
</ol>
```

Unordered Lists

An unordered list is used to create a list of items that are not in any particular order. Each list item is marked with a bullet point.

```
<ul>
  <li> Apple </li>
  <li> Orange </li>
  <li> Banana </li>
</ul>
```

DID YOU KNOW?

Unordered List (<ul>) Styles:

Disc (list-style-type: disc;): Default style - filled circles.
Circle (list-style-type: circle;): Hollow circles.
Square (list-style-type: square;): Squares.
None (list-style-type: none;): No bullet points.

DID YOU KNOW?

Ordered List (<ol>) Styles:

Decimal (list-style-type: decimal;): Default style - decimal numbers.
Lowercase Letters (list-style-type: lower-alpha;): Lowercase letters (a, b, c).
Uppercase Letters (list-style-type: upper-alpha;): Uppercase letters (A, B, C).
Lowercase Roman Numerals (list-style-type: lower-roman;): (i, ii, iii).
Uppercase Roman Numerals (list-style-type: upper-roman;): (I, II, III).

HTML Table Tag

HTML tables allow web developers to arrange data into rows and columns. We must write everything inside the table tag.

<table> Element: Defines an HTML table, which is used to organize data into rows and columns.

<tbody> Element: Groups the main content (data rows) of an HTML table.

<thead> Element: Groups the header content (table headings) of an HTML table.

<th> Element: Defines a header cell (table heading) within a table.

<td> Element: Represents a data cell within an HTML table.

<tr> Element: Defines a row within an HTML table.

HTML iFrame Tag

The <iframe> HTML element represents a nested browsing context, embedding another HTML page into the current one.

The src attribute defines the URL of the page to embed

```
<iframe src="url" title="abc"></iframe>
```

For screen readers

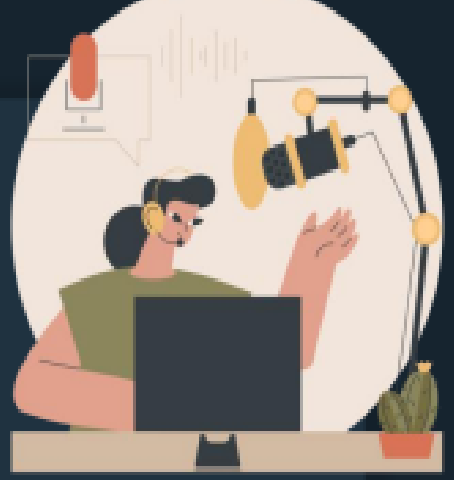
01

HTML IFRAME INTERVIEW

1: How to create a nested webpage in HTML?

The HTML iframe tag is used to display a nested webpage. In simple, It represent a webpage within a webpage.

HTML Audio Tag



Audio (<audio>): The <audio> element is used to embed audio content in a webpage. It supports various audio formats and provides controls for playback.

attribute

```
<audio controls>
  <source src="./audio/audio_thapa.mp3" type="audio/mpeg" />
  <source src="./audio/audio_thapa.wav" type="audio/wav" />
  Your browser does not support the audio element.
</audio>
```

DID YOU KNOW?

List of Attributes:

controls: Adds playback controls (play, pause, volume, etc.).

autoplay: Starts playback automatically.

loop: Repeats the media indefinitely.

preload: Specifies if the media should be loaded when the page loads.

poster: Displays an image before the media loads.

01 HTML AUDIO TAG INTERVIEW

1: Which are the attributes supported in audio tag?

controls: Adds playback controls (play, pause, volume, etc.).

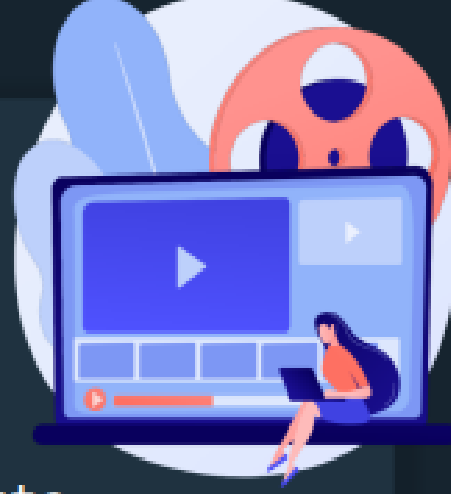
autoplay: Starts playback automatically. loop: Repeats the media indefinitely.

poster: Displays an image before the media loads.

muted: Specifies that the audio output should be muted

loop: Specifies that the audio will start over again, every time it is finished

HTML Video Tag



The <video> HTML element embeds a media player which supports video playback into the document.

```
<video controls autoplay loop muted poster="./images/html.png">
  <source src="./video/thapatech.mp4" type="video/mp4" />
  <source src="./video/thapatech1.webm" type="video/webm" />
  Your browser does not support the video element.
</video>
```

HTML Form Tag

The <form> tag is used to create an HTML form for user input.

The <input> HTML element is used to create interactive controls for web-based forms to accept data from the user. We must write inside the tag.

HTML Form Tag


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

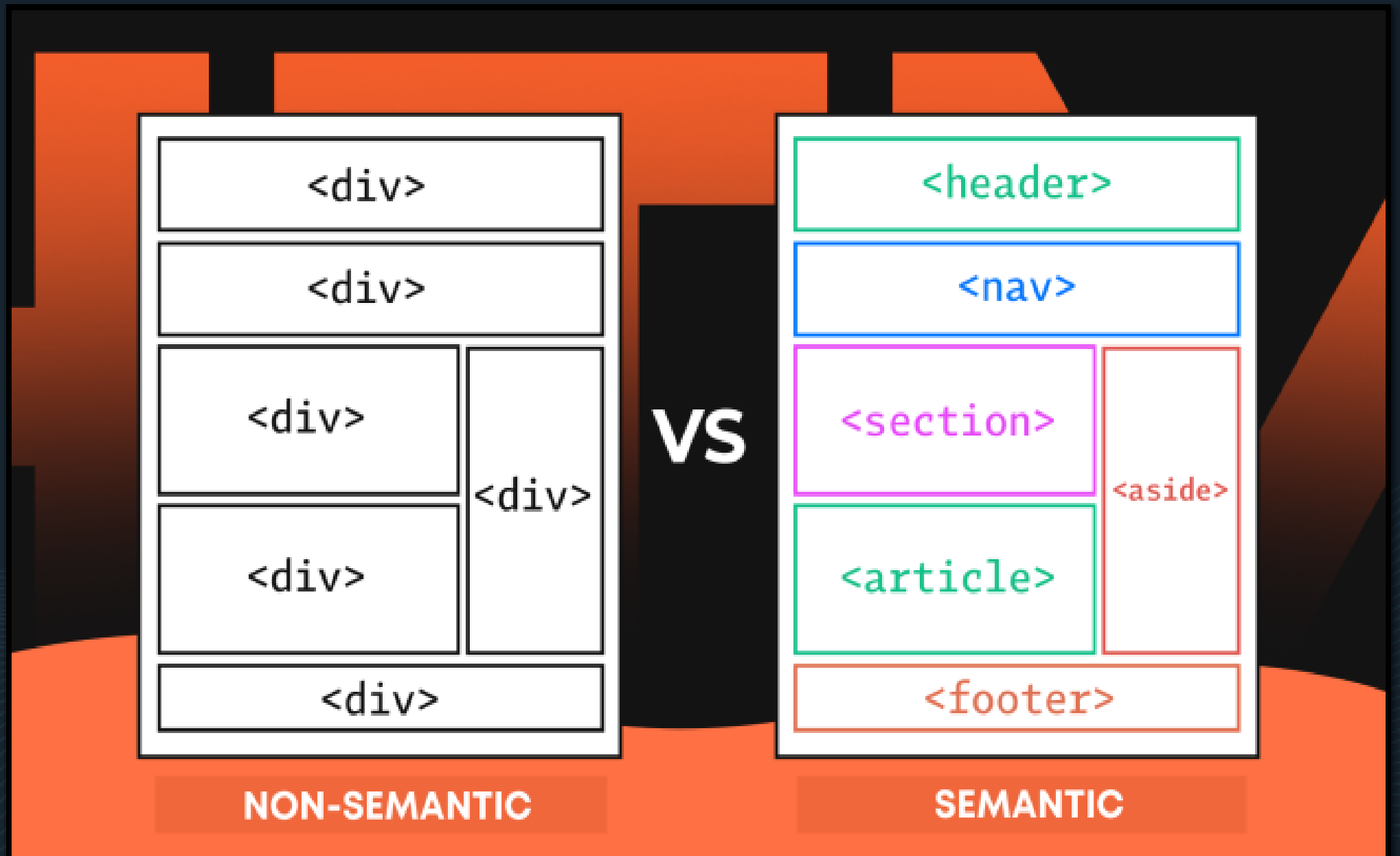
We have multiple values for the Type attribute.

HTML Semantic Elements

Semantic elements = elements with a meaning.

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

HTML Semantic Elements



HTML Semantic Elements

<header> – Represents the introductory content for a section, article, or entire web page. Ex. Contains Logo, site title etc.

<nav> – Navigation menu links would all be placed in a <nav> tag.

<main> – The body of a page should go in the <main> tag. There should be only one per page.

<article> – Represents an independent article on a web page. For example, a blog post.

<section> – Represent a way of grouping together nearby content of a similar theme.

<aside> – Represents the content that's less important. It's mostly used for sidebars (ads).

<footer> – Represent the base of a page or section. It might include contact information and some site navigation.

DID YOU KNOW?

Single <main> Tag: As a best practice, use only one <main> tag per HTML page. The <main> tag should encapsulate the primary content of your webpage, excluding headers, footers, and sidebars.

Use Headers Wisely: While you can use multiple <header> tags, make sure they're appropriately placed within semantic elements like <article>, <section>, or as introductory content for the whole page. Each <header> should provide relevant context.

Avoid Overuse: Use semantic elements purposefully and avoid overusing them. Choose elements that accurately represent your content's structure and hierarchy. Overusing them may lead to confusion and diluted semantics.

DID YOU KNOW?

Understand Nesting: Understand the hierarchy and nesting rules of semantic elements. For instance, <article> and <section> can contain <header>, <footer>, and other content, but nesting them should reflect logical relationships.

Enhance Accessibility: Semantic elements greatly improve web accessibility. Use them to create a clear structure for assistive technologies. Ensure that your content remains meaningful even if CSS or other styling is disabled.

HTML Meta Tags

Meta Tags for Metadata:

Meta tags are HTML elements that provide metadata about a webpage. They are placed within the <head> section of an HTML document and are not visible to users but are used by browsers, search engines, and other web services to gather information about the page

HTML Meta Tags

`<meta name="viewport" content="width=device-width, initial-scale=1.0">`:

Sets the viewport properties for responsive design.

HTML Meta Tags

`<meta charset="UTF-8">`: Specifies the character encoding for the webpage, ensuring proper rendering of characters.

`<meta name="description" content="A brief description of the webpage">`: Provides a concise description of the page's content.

`<meta name="keywords" content="keyword1, keyword2, keyword3">`: Specifies relevant keywords for search engines (not as impactful as it used to be).

`<meta name="author" content="Author's Name">`: Indicates the author of the webpage.

HTML Meta Tags

`<meta name="robots" content="index, follow">`: Instructs search engine robots whether to index and follow links on the page.

HTML SEO

High-Quality Content: Create valuable and relevant content that addresses users' needs.

Keyword Research: Use relevant keywords naturally within your content.

Descriptive Titles: Use descriptive and relevant titles for your pages (<title> tag).

Heading Tags: Use appropriate heading tags (<h1>, <h2>, etc.) to structure content.

HTML SEO

Image Alt Text: Provide descriptive alt text for images.

Internal Links: Use internal links to connect related content within your site.

External Links: Link to reputable external sources when relevant.

Mobile-Friendly Design: Ensure your website is responsive and mobile-friendly.

Site Speed: Optimize your website's loading speed for better user experience.