

Hyper Text Markup Language

References:

https://www.w3schools.com/tags/ref_byfunc.asp

<https://developer.mozilla.org/en-US/docs/Web/HTML/Element>

Basic Structure:

- html tag
- head tag : inside head tag there will be -> meta tags, title and links
- body tag : the whole page code will be inside of this

```
<!DOCTYPE html>

<html lang="en">

  <head>

    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>Document</title>

  </head>

  <body>

  </body>

</html>
```

```
<!DOCTYPE html>

<html>

  <head>
    <title>Basic Structure</title>
  </head>

  <body>
```

```

<h1>🏠 Basic Structure :</h1>
<br />

<h1>-----➡html element starts</h1>
<br />

<h2>-----➡head element starts</h2>
<h3>-----➡title element starts</h3>
<h4>-----✍ 'write title'</h4>
<h3>-----➡title element ends</h3>
<h2>-----➡head element ends</h2>
<br />

<h2>-----➡body element starts</h2>
<h3>-----there can be div element</h3>
<h3>
  -----there can be p element (also called tag)
</h3>
<h3>
  -----there can be also other different elements
  (different tags)
</h3>
<h2>-----➡body element ends</h2>
<br />

<h1>-----➡html element ends</h1>

</body>

</html>

```

HTML Attributes:

- Attributes are those things, which are defined to add some additional features to the html element.
- For example, ' style="" ' attribute is used to add some color to the text, ' src="" ' attribute is used to add the source of the image, and ' alt="" ' attribute is used to add the alternative text to the image.
- So, that means attributes are defined or used only in html elements.

```

<!DOCTYPE html>

<html>

```

```

<head>
  <title>HTML Attributes</title>
</head>

<body>

  <!-- here style="" is an attribute -->
  <p style="color: red">Hello World!</p>

  <!-- here src="" and alt="" are two attributes -->
  <img src="" alt="" />

  <p>
    <b>That means attributes are those things, which are defined to add some
      additional features to the html element. For example, ' style="" '
      attribute is used to add some color to the text, ' src="" ' attribute
is
      used to add the source of the image, and ' alt="" ' attribute is used
to
      add the alternative text to the image. So, that means attributes are
      only defined or used only in html elements.
    </b>
  </p>

</body>

</html>

```

Text Formatting (Use of different elements or tags like - p, b, i, strong, em, mark, code, small, del, ins, u, sub, sup, br etc.):

```

<!DOCTYPE html>

<html lang="en">

  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>My Web Page</title>
  </head>

  <body>

```

```
<!-- paragraph -->
```

```
<p>
```

Lorem, ipsum dolor sit amet consectetur adipisicing elit. Quia facilis repellendus ab adipisci at, deleniti rem? Voluptatem accusantium officia magnam, hic aliquid perspiciatis est enim repudiandae quia architecto voluptatum in qui quidem ipsam voluptates dignissimos optio. Reiciendis nisi culpa molestias distinctio recusandae est aut, magnam quasi, hic officiis obcaecati sit!

```
</p>
```

```
<!-- bold text -->
```

```
<b>Hello</b>
```

```
<!-- important text : same as bold -->
```

```
<strong>John Doe</strong>
```

```
<!-- italic text -->
```

```
<i>John Doe</i>
```

```
<!-- emphasized text : italic -->
```

```
<em>John Doe</em>
```

```
<!-- marked text : will be highlighted -->
```

```
<mark>John Doe</mark>
```

```
<!-- small font -->
```

```
<small>John Doe</small>
```

```
<!-- deleted text/eliminated text -->
```

```
<del>John Doe</del>
```

```
<!-- inserted text/added text : works like underlined text -->
```

```
<ins>John Doe</ins>
```

```
<!-- underlined text -->
```

```
<u>John Doe</u>
```

```
<!-- subscript is a character (such as a number or letter) that is set slightly below of the normal line of type -->
```

```
<sub>John Doe</sub>
```

```
<p>H<sub>2</sub></sub>0</p>
```

```
<!-- superscript is a character (such as a number or letter) that is set slightly above of the normal line of type -->
```

```
<sup>John Doe</sup>
```

```
<p>(a+b)<sup>2</sup> = a<sup>2</sup> + 2ab + b<sup>2</sup></p>
```

```
<p>
  a
  <sup>
    >b <sup>c <sup>d </sup> </sup>
  </sup>
</p>
```

```
<!-- line break tag -->
<br />
```

<!-- when we use 'p' tag, whatever formatting or line breaks we give, it will be shown always in one line, but when we use 'pre' tag, it will be shown as it is. Just like we wrote, whatever we write, it will be shown as it is -->

```
<pre>
```

```
        Lorem ipsum dolor sit,
    amet consectetur adipisicing elit.
    Harum recusandae quod quia,
    cupiditate dolore numquam reiciendis,
    expedita sit optio ut aspernatur cumque,
        ducimus vitae autem est porro! Voluptatibus, laborum iste?
```

Numquam ducimus inventore perspiciatis odio at itaque pariatur distinctio quis nemo explicabo!

Reiciendis sapiente repudiandae, modi saepe, ipsam neque quo assumenda aperiam corporis voluptatum,

fuga nemo eaque est atque natus dolorum exercitationem pariatur minus harum dolores corrupti eveniet nobis consequatur?

Tempore quam voluptate velit hic dolor ex optio consequatur laborum perspiciatis odit quidem dolorum dolorem unde quod magni omnis,

quo expedita eum accusantium error facilis labore saepe, magnam accusamus!

Porro.

```
</pre>
```

```
<!-- horizontal rule element/hr tag -->
```

```
<h1>Below this is a horizontal rule element (hr tag)</h1>
```

```
<hr />
```

```
<!-- we will see a horizontal line here -->
```

<!-- blockquote tag -> to show the quote in the webpage, with the author's name, and the source of the quote with cite="" attribute -->

```
<blockquote cite="https://www.goodreads.com/quotes">
```

“If you want to know what a man's like, take a good look at how he

treats

his inferiors, not his equals.” – J.K. Rowling, Harry Potter and the Goblet of Fire

</blockquote>

<!-- quote tag -> to show the quote in the webpage. It will automatically show the quote in double quotes -->

<q

>If you want to know what a man's like, take a good look at how he

treats

his inferiors, not his equals.

</q>

<!-- abbr tag -> to show the abbreviation in the webpage, with the title attribute to show the full name of the abbreviation. On mouse cursor hovering on the abbreviation, it will show the full name -->

<p>I live in <abbr title="Bangladesh">BD.</abbr></p>

<!-- address tag -> to show the address in the webpage. It will be seen that, the text is in italic form -->

<address>Dhaka, Bangladesh</address>

<!-- bdo tag with dir="rtl"/right-to-left attribute. It will reverse the text -->

<bdo dir="rtl">John Doe</bdo>

<!-- code element will show like code font -->

<pre>

<code>

cout << ("Hello World!");

return 0;

</code>

</pre>

<!-- samp element will show exactly like code element's font -->

<p>Output: <samp>Hello World!</samp></p>

<!-- kbd element -> keyboard key command can be written like this -->

<p>

Type '<kbd>CTRL + S</kbd>' to save your code file in Visual Studio Code

</p>

</body>

</html>

Headings / Headlines:

```
<!DOCTYPE html>

<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>Headlines</title>
  </head>

  <body>

    <!-- There are 6 heading tags in HTML. We can use them to create headings.
    h1 to h6. Larger to Smaller -->
    <h1>Heading1</h1>

    <h2>Heading2</h2>

    <h3>Heading3</h3>

    <h4>Heading4</h4>

    <h5>Heading5</h5>

    <h6>Heading6</h6>

  </body>

</html>
```

HTML Styling with CSS:

```
<!DOCTYPE html>

<html>

  <head>
    <title>HTML Styling</title>
  </head>

  <body>

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

```
<p style="color: red; font-family: 'Courier New', Courier, monospace">  
  This is a paragraph with red color and Courier New font.  
</p>
```

```
<p  
  style="  
    color: red;  
    font-family: 'Courier New', Courier, monospace;  
    font-size: 20px;  
  "  
>  
  This is a paragraph with red color, Courier New font, and 20px font  
size.
```

```
</p>  
  
<p  
  style="  
    color: red;  
    font-family: 'Courier New', Courier, monospace;  
    font-size: 20px;  
    text-align: center;  
  "  
>  
  This is a paragraph with red color, Courier New font, 20px font size,  
and  
  center alignment.
```

```
</p>  
  
<p  
  style="  
    color: red;  
    font-family: 'Courier New', Courier, monospace;  
    font-size: 20px;  
    text-align: center;  
    background-color: lightblue;  
  "  
>  
  This is a paragraph with red color, Courier New font, 20px font size,  
and  
  center alignment, and lightblue background color.
```

```
</p>  
  
<!-- here, style is an attribute and color, font-family, font-size, and  
text-align, background-color are css styling properties. As we can see, we can  
use multiple properties in one style attribute -->
```



```
</body>

</html>
```

HTML (Inline CSS):

```
<!DOCTYPE html>

<html>

  <head>
    <title>Inline CSS</title>
  </head>

  <body>

    <!-- This is an example of inline CSS. It only works as an attribute
    inside an HTML tag using the 'style' attribute -->
    <p style="color: brown">This is a paragraph</p>

  </body>

</html>
```

HTML (Internal CSS):

```
<!DOCTYPE html>

<html>

  <head>
    <title>Internal CSS</title>
    <!-- This is an example of internal CSS. It is written inside a <style>
    tag within the <head> section and applies styles to the entire HTML document -
    ->
    <style>
      p {
        color: brown;
      }
    </style>
  </head>

  <body>
```

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

</html>
```

HTML (External CSS):

```
p {
  color: brown;
}
```

```
<!DOCTYPE html>

<html>

  <head>
    <title>External CSS</title>
    <!-- This is an example of external CSS. It links a separate CSS file
    (style.css) from the 'css' folder to style this HTML page -->
    <link rel="stylesheet" href="./css/style.css" />
  </head>

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

</html>
```

HTML Anchor Tag:

Absolute URL:

HTML Anchor Tag (with absolute URL):

```
<!DOCTYPE html>

<html>

  <head>
    <title>Anchor Tag</title>
  </head>

  <body>
```

```
<!--
```

These are anchor (<a>) tags that demonstrate different values of the 'target' attribute:

- `_blank` → Opens the link in a new tab or window.
- `_self` → Opens the link in the same tab (default behavior).
- `_parent` → Opens the link in the parent frame (used when inside iframes).
- `_top` → Opens the link in the full window, breaking out of all frames.

All links point to Faizul Bitto's GitHub profile.

Since these links include the full URL (with `https://`), they are considered **absolute URLs**, meaning they point to a resource on a different website or domain.

```
-->
```

```
<a
  href="https://github.com/Faizul-Bitto"
  target="_blank"
  title="GitHub Profile"
>Faizul Bitto's Github Profile (opens in new tab)
</a>
```

```
<br />
```

```
<a
  href="https://github.com/Faizul-Bitto"
  target="_self"
  title="GitHub Profile"
>Faizul Bitto's Github Profile (opens in same tab)
</a>
```

```
<br />
```

```
<a
  href="https://github.com/Faizul-Bitto"
  target="_parent"
  title="GitHub Profile"
>Faizul Bitto's Github Profile (opens in parent frame)
</a>
```

```
<br />
```

```
<a
  href="https://github.com/Faizul-Bitto"
  target="_top"
  title="GitHub Profile"
>Faizul Bitto's Github Profile (opens in top frame)
</a>

</body>

</html>
```

HTML Anchor Tag -> for mail (absolute URL):

```
<!DOCTYPE html>

<html>

  <head>
    <title>Anchor Tag</title>
  </head>

  <body>

    <a
      href="mailto:fibhuiyanbitto06@gmail.com"
      target="_blank"
      title="Mail Address"
    >Faizul Bitto's Mail Address
    </a>

  </body>

</html>
```

HTML Anchor Tag -> for mobile (absolute URL):

```
<!DOCTYPE html>

<html>

  <head>
    <title>Anchor Tag</title>
  </head>
```

```
<body>
```

```
    <!-- This anchor tag uses the 'tel:' scheme to create a clickable phone
    number. When clicked, it will prompt the user to call the number – works best
    on mobile devices -->
```

```
    <a href="tel:0123456789" target="_blank" title="Phone Number"
      >Phone Number (works best on mobile devices)
    </a>
```

```
</body>
```

```
</html>
```

Relative URL:

```
<!DOCTYPE html>
```

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

```
<head>
```

```
  <meta charset="UTF-8" />
```

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

```
  <title>Relative URL</title>
```

```
</head>
```

```
<body>
```

```
  <p
```

```
    style="
```

```
      color: aqua;
```

```
      font-size: 50px;
```

```
      text-align: center;
```

```
      font-family: 'Courier New', Courier, monospace;
```

```
      background-color: black;
```

```
      padding: 20px;
```

```
      border-radius: 20px;
```

```
      text-transform: uppercase;
```

```
      letter-spacing: 2px;
```

```
      text-shadow: 2px 2px 5px red;
```

```
      box-shadow: 2px 2px 5px red;
```

```
    "
```

```
  >
```

```
    Demo
```

```
</p>
```

```
</body>
```

```
</html>
```

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>Anchor Tag</title>
```

```
</head>
```

```
<body>
```

```
<!--
```

This anchor tag uses a **relative URL** (./demo.html) to link to another page within the same project or directory.

- './' refers to the current folder.

- Clicking the link will open demo.html in a new tab (because of target="_blank").

This is different from an absolute URL, which includes the full website link (like https://...)

```
-->
```

```
<a href="./demo.html" target="_blank" title="Demo">Demo</a>
```

```
</body>
```

```
</html>
```

table element:

```
<!DOCTYPE html>
```

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

```
<head>
```

```
<meta charset="UTF-8" />
```

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

```
<title>Table</title>
```

```
</head>
```

```

<body>

  <!-- x axis: rows ; y axis: columns -->

  <table border="1">

    <tr>
      <th>A1</th>
      <th>B1</th>
      <th>C1</th>
    </tr>

    <tr>
      <td>A2</td>
      <td>B2</td>
      <td>C2</td>
    </tr>

    <tr>
      <td>A3</td>
      <td>B3</td>
      <td>C3</td>
    </tr>

  </table>

</body>

</html>

```

Row and Column Span:

```

<!DOCTYPE html>

<html lang="en">

  <head>

    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />

    <title>Table</title>

  </head>

```

```
<body>
```

```
<!--
```

This table displays average height, width, and red eye percentages for males and females.

- <caption> adds a title to the table.
- <th colspan="2"> merges two columns for the "Average" heading.
- <th rowspan="2"> merges two rows vertically for "Red Eyes".
- <td> contains the actual data cells.

The structure helps create a multi-level header with properly aligned data.

```
-->
```

```
<table border="1">
```

```
<caption>
```

```
<b>A Test Table</b>
```

```
</caption>
```

```
<!-- now we have to work with rows -->
```

```
<tr>
```

```
<th rowspan="2"></th>
```

```
<th colspan="2">Average</th>
```

```
<th rowspan="2">Red Eyes</th>
```

```
</tr>
```

```
<tr>
```

```
<td>Height</td>
```

```
<td>Width</td>
```

```
</tr>
```

```
<tr>
```

```
<td>Male</td>
```

```
<td>1.9</td>
```

```
<td>0.33</td>
```

```
<td>40%</td>
```

```
</tr>
```

```
<tr>
```

```
<td>Female</td>
```

```
<td>1.7</td>
```

```
<td>0.3</td>
```

```
<td>43%</td>
```

```
</tr>
```



```
</table>

</body>

</html>
```

List:

Ordered List (ol element):

```
<!DOCTYPE html>

<html lang="en">

  <head>

    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>Ordered List</title>

  </head>

  <body>
    <!--
      This is an ordered list (<ol>) where items are automatically numbered
      using lowercase letters (a, b, c...). We can also capital letters (A, B,
      C...), even roman numbers (i, ii, iii...).

      - 'type="a"' sets the list style to lowercase alphabet.
      - 'type="A"' sets the list style to uppercase alphabet.
      - 'type="i"' sets the list style to lowercase roman numbers.
      - <li> tags define each list item.
    -->
    <ol type="a">
      <li>Item 1</li>
      <li>Item 2</li>
      <li>Item 3</li>
      <li>Item 4</li>
    </ol>

    <ol type="A">
      <li>Item 1</li>
      <li>Item 2</li>
      <li>Item 3</li>
```

```

    <li>Item 4</li>
</ol>

<ol type="i">
  <li>Item 1</li>
  <li>Item 2</li>
  <li>Item 3</li>
  <li>Item 4</li>
</ol>

<ol type="i">
  <li>Rice</li>
  <li>Dal</li>
  <li>Meat</li>
  <ol type="a">
    <li>Chicken</li>
    <li>Beef</li>
  </ol>
  <li>Oil</li>
</ol>

</body>

</html>

```

Unordered List (ul element):

```

<!DOCTYPE html>

<html lang="en">

  <head>

    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>Unordered List</title>

  </head>

  <body>
    <!--
      This is an unordered list (<ul>) where each item is marked with a square
      bullet.

      - 'type="square"' sets the bullet style to square.
    -->

```

- 'type="circle"' sets the bullet style to circle.
- tags define each list item.

Other possible types are: 'disc' (default), 'circle', and 'square'.

-->

```
<ul type="circle">
  <li>Item 1</li>
  <li>Item 2</li>
  <li>Item 3</li>
  <li>Item 4</li>
</ul>
```

```
<ul type="square">
  <li>Item 1</li>
  <li>Item 2</li>
  <li>Item 3</li>
  <li>Item 4</li>
</ul>
```

```
<ul type="square">
  <li>Rice</li>
  <li>Dal</li>
  <li>Meat</li>
  <ul type="circle">
    <li>Chicken</li>
    <li>Beef</li>
  </ul>
  <li>Oil</li>
</ul>
```

```
</body>
```

```
</html>
```

form element:

```
<!DOCTYPE html>
```

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

```
<head>
```

```
<meta charset="UTF-8" />
```

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

```

<title>Form</title>
</head>

<body>

  <!-- fieldset: groups related form elements together with a visible border
-->
  <fieldset>

    <!-- legend: provides a caption or title for the fieldset -->
    <legend>Registration Form</legend>

    <br />

    <!--
      form: defines a form.
      - 'action' specifies the URL where form data will be submitted
      - 'method' defines the HTTP method (e.g., 'post' sends data in body)
    -->
    <form action="/submit" method="post">

      <!--
        label: provides a descriptive text for input.
        - 'for' must match the 'id' of the input field
        - Improves accessibility (screen readers) and UX (clicking label
focuses input)
      -->
      <label for="username">User name:</label>
      <input
        type="text"
        id="username"
        name="username"
        required
        autofocus
        placeholder="Enter your username"
      />
      <br /><br />

      <!-- Password input with placeholder -->
      <label for="password">Password:</label>
      <input
        type="password"
        id="password"
        name="password"
        required
        placeholder="Enter your password"

```

```
/>
<br /><br />

<!-- Numeric age input -->
<label for="age">Age:</label>
<input
  type="number"
  id="age"
  name="age"
  required
  placeholder="Enter your age"
/>
<br /><br />

<!-- Email field with placeholder -->
<label for="email">Email:</label>
<input
  type="email"
  id="email"
  name="email"
  required
  placeholder="Enter your email address"
/>
<br /><br />

<!-- Gender radio options -->
<label for="gender-male">Male</label>
<input
  type="radio"
  id="gender-male"
  name="gender"
  value="male"
  required
/>

<label for="gender-female">Female</label>
<input
  type="radio"
  id="gender-female"
  name="gender"
  value="female"
  required
/>
<br /><br /><br />

<!-- Interests checkboxes -->
```

```
<label for="interest-readingBooks">Interested in Reading Books</label>
<input
  type="checkbox"
  id="interest-readingBooks"
  name="interest"
  value="readingBooks"
/><br />
```

```
<label for="interest-playingVideoGames"
  >Interested in Playing Video Games>
</label>
<input
  type="checkbox"
  id="interest-playingVideoGames"
  name="interest"
  value="playingVideoGames"/>
<br />
```

```
<label for="interest-traveling">Interested in Traveling</label>
<input
  type="checkbox"
  id="interest-traveling"
  name="interest"
  value="traveling"
/>
<br /><br /><br />
```

```
<!-- Range input (optional placeholder alternative: label) -->
<label for="range">Select your age (range):</label><br />
<input type="range" id="range" name="ageRange" min="10" max="100" />
<br /><br />
```

```
<!-- Color picker -->
<label for="color">Choose your favorite color:</label><br />
<input type="color" id="color" name="favColor" />
<br /><br /><br />
```

```
<!-- Date picker -->
<label for="dob">Date of Birth:</label><br />
<input type="date" id="dob" name="dob" required />
<br /><br /><br />
```

```
<!-- Time picker -->
<label for="apptTime">Preferred Appointment Time:</label><br />
<input type="time" id="apptTime" name="apptTime" />
<br /><br /><br />
```

```
<!-- Search input -->
<label for="search">Search:</label><br />
<input
  type="search"
  id="search"
  name="searchQuery"
  placeholder="Search something..."
/>
<br /><br /><br />

<!-- URL input -->
<label for="url">Portfolio Website URL:</label><br />
<input
  type="url"
  id="url"
  name="portfolio"
  placeholder="https://yourportfolio.com"
/>
<br /><br /><br />

<!-- File upload -->
<label for="resume">Upload your resume (PDF/DOC):</label><br />
<input type="file" id="resume" name="resumeFile" />
<br /><br /><br />

<!-- City dropdown -->
<label for="city">Choose your city:</label><br />
<select name="city" id="city" required>
  <option value="">-- Select City --</option>
  <option value="dhaka">Dhaka</option>
  <option value="rangpur">Rangpur</option>
  <option value="sylhet">Sylhet</option>
</select>
<br /><br /><br />

<!-- Textarea with placeholder -->
<label for="question">Do you have any questions for us?</label><br />
<textarea
  name="question"
  id="question"
  cols="30"
  rows="10"
  placeholder="Type your question here...">
</textarea>
<br /><br />
```

```

        <!-- Submit and Reset buttons -->
        <button type="submit">Submit</button>
        <button type="reset">Reset</button>

    </form>

</fieldset>

</body>

</html>

```

image element:

```

<!DOCTYPE html>

<html lang="en">

    <head>

        <meta charset="UTF-8" />
        <meta name="viewport" content="width=device-width, initial-scale=1.0" />
        <title>Image Tag</title>

    </head>

    <body>

        <!--
            This is an <img> tag that displays an image from an external URL using the
            'src' attribute.

            - 'alt' provides alternative text if the image fails to load (also
            helps with accessibility).
            - 'title' shows a tooltip when hovering over the image.

        -->
        

```



```
</body>
```

```
</html>
```

FavIcon Linking:

```
<!DOCTYPE html>
```

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

```
<head>
```

```
<meta charset="UTF-8" />
```

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

```
<!--
```

This <link> tag sets a favicon (favorite icon) for the webpage.

- 'rel="shortcut icon"' specifies it's a favicon.
- 'href' provides the image URL to be used as the icon.
- 'type' defines the file type of the icon (image/x-icon).

This icon appears in the browser tab beside the page title.

```
-->
```

```
<link
```

```
    rel="shortcut icon"
```

```
    href="https://img.icons8.com/?
```

```
size=100&id=BdjA3Y8bTxW8&format=png&color=000000"
```

```
    type="image/x-icon"
```

```
<title>fav icon</title>
```

```
</head>
```

```
<body>
```

```
</body>
```

```
</html>
```

video element:

```

<!DOCTYPE html>

<html lang="en">

  <head>
    <meta charset="UTF-8" />
    <!-- Ensures proper rendering on different devices -->
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>Video</title>
  </head>

  <body>

    <!--
      <video>: HTML5 element to embed video files directly into the page.

      Attributes used here:
      - controls: displays default video controls like play, pause, volume,
etc.
      - autoplay: starts playing the video automatically when the page loads.
      - muted: required with autoplay on most browsers; video must be muted to
autoplay.
      - src: the source of the video file; can be a local file or an online
video URL.
      - width & height: controls the size of the video player (in pixels).
    -->
    <video
      controls
      autoplay
      muted
      src="https://videos.pexels.com/video-files/17554657/17554657-
uhd_2560_1440_24fps.mp4"
      width="500px"
      height="500px">
    </video>

  </body>

</html>

```

audio element:

```

<!DOCTYPE html>

<html lang="en">

```

```

<head>
  <meta charset="UTF-8" />
  <!-- Ensures the website is responsive across all device widths -->
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <title>Audio</title>
</head>

<body>

  <!-- Extra line breaks to push audio player down the page -->
  <!-- (Optional: This is not a recommended method in production) -->
  <br /><br /><br /><br /><br /><br /><br /><br /><br /><br /><br />
<br /><br /><br /><br />

  <!--
    <audio>: HTML5 element used to embed and play audio files.

    Attributes used:
    - controls: displays audio controls like play, pause, volume, etc.
    - autoplay: starts playing the audio automatically when the page loads.
    - muted: ensures the audio is muted on load (required for autoplay to
work in modern browsers).
    - src: the source path of the audio file to play (can be local or
external).

    Note: For better browser support, using <source> tag inside <audio> is
recommended.
  -->
  <audio controls autoplay muted src="./music/audio.mp3"></audio>

</body>

</html>

```

iframe element:

```

<!DOCTYPE html>

<html lang="en">

  <head>

    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>iframe element</title>

```

```
</head>

<body>

    <!-- iframe element is used to embed another webpage inside the current
webpage -->
    <iframe
        src="https://en.wikipedia.org/wiki/Main_Page"
        frameborder="2"
    ></iframe>

    <br />

    <p>
        We can use 'width' and 'height' attributes to define the size of iframe
    </p>

    <iframe
        src="https://en.wikipedia.org/wiki/Main_Page"
        frameborder="2"
        width="100%"
        height="500px"
    ></iframe>

</body>

</html>
```

Absolute URL embed and working with 'name' attribute in iframe element:

```
<!DOCTYPE html>

<html lang="en">

    <head>
        <meta charset="UTF-8" />
        <meta name="viewport" content="width=device-width, initial-scale=1.0" />
        <title>iframe element</title>
    </head>

    <body>

        <p>
            <b>
```

We can use an attribute called 'name' to give a name to the iframe

```
</b>
</p>

<br />
<br />

<p>
  <b>
    Let's say we want to embed another html file (relative URL) inside the
    current webpage
  </b>
</p>

<iframe
  src="../../../10. iframe element/demo.html"
  frameborder="2"
  width="100%"
  height="500px"
  name="wikipedia"
></iframe>

<br />

<a
  href="https://www.mongodb.com/resources/languages/mern-stack"
  target="wikipedia"
  >MERN Stack Explained
</a>

</body>

</html>
```

YouTube video embed in iframe element:

```
<!DOCTYPE html>

<html lang="en">

  <head>
    <meta charset="UTF-8" />
    <!-- Ensures proper rendering and touch zooming on all devices -->
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>Youtube Video Embed</title>
```

`</head>`

`<body>`

`<!--`

`<iframe>`: Inline frame used to embed another HTML page or content (like a YouTube video) inside the current page.

Attributes explanation:

- `src`: The URL of the page/content to embed.

In this case, it's a YouTube embed link of the video (not the regular `watch?v=...` URL).

Example format: `https://www.youtube.com/embed/[videoID]`

- `frameborder`: Controls the presence of a border around the `iframe`.

A value of `"0"` means no border. Deprecated in HTML5 but still works in many browsers.

- `width`: Defines the width of the `iframe`. Can be in `px` (pixels) or `%` (percentage).

Here, `"100%"` means the `iframe` will take full width of its parent container.

- `height`: Defines the height of the `iframe`.

Here, `"925px"` sets a fixed height in pixels.

- `title`: Improves accessibility by describing the content inside the `iframe`.

Screen readers will read this out to visually impaired users.

- `allow`: A list of features that the `iframe` is permitted to use.

- `accelerometer`: Allows use of device motion sensor.

- `autoplay`: Allows video to start automatically (if allowed by browser policy).

- `clipboard-write`: Allows the `iframe` content to copy to clipboard.

- `encrypted-media`: Allows usage of DRM-protected media.

- `gyroscope`: Allows motion sensing using the gyroscope.

- `picture-in-picture`: Allows the video to pop out in a floating window.

- `web-share`: Enables access to the Web Share API.

- `allowfullscreen`: Boolean attribute that allows the embedded video to be viewed in fullscreen.

`-->`

`<iframe`

```

src="https://www.youtube.com/embed/CVFFcgvdLts"
frameborder="0"
width="100%"
height="925px"
title="YouTube video player"
allow="accelerometer; autoplay; clipboard-write; encrypted-media;
gyroscope; picture-in-picture; web-share"
allowfullscreen>
</iframe>

</body>

</html>

```

Meta Tags:

```

<!DOCTYPE html>

<html lang="en">

  <head>
    <!-- we always use meta tags in the head section. Not visible for users,
    but these are instructions for the system, for Search Engine Optimization meta
    tags are important -->

    <!-- FOR GOOGLE - to catch properly google site -->
    <!-- character set="UTF-8" -->
    <meta charset="UTF-8" />
    <!-- viewport -> initially how the web application will be viewed.
    "width=device-width" - says view the webpage with the width of the device
    width (device wise width) and "initial-scale=1.0" means 100% zoom, the lesser
    than 1 means the lesser than 100% -->
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <!-- description -> description of the webpage -->
    <meta name="description" content="anything" />
    <!-- keyword -> keywords of the webpage, which keywords going to be used,
    as a web developer it's not our work to define the content of the keyword,
    it's for those who works with SEO, we developer just need to keep this meta
    tag properties so that those who works with SEO can define as they want -->
    <meta name="keyword" content="" />
    <!-- author -> define the name of the owner of the webpage -->
    <meta name="author" content="John Doe" />

    <!-- FOR FACEBOOK - to catch properly facebook -->

```

<!-- only these meta tags defined up - these are for google, are not sufficient. as the web pages are shared in the facebook, social medias or youtube, so we need some needed meta tags, so that we can maintain the rule of these. EX - facebook has some rules -->

<!-- for targeting facebook, we don't use 'name' in meta tags, rather we use 'property', for facebook properties, we use 'og'--> open graph, defined by facebook, and we use 'site_name' so that facebook can recognize our website -->

```
<meta property="og:site_name" content="John Doe" />
<!-- same goes for 'og:url' to confirm facebook the website's url -->
<meta property="og:url" content="johndoe.com" />
<!-- same goes for 'og:title' to confirm facebook the website's title -->
<meta property="og:title" content="Meta Tags Tutorial" />
<!-- same goes for 'og:image' to confirm facebook the image, in 'content'
- define the location -->
<meta property="og:image" content="." />
```

```
<title>Meta Tags Tutorial</title>
```

```
</head>
```

```
<body>
```

```
</body>
```

```
</html>
```

No Cache Meta:

```
<!DOCTYPE html>
```

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

```
<head>
```

```
<meta charset="UTF-8" />
```

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

<!-- in our web application, when we don't want to keep any cache, or to define the keeping time, we can define these by meta tags. for that we use 'http-equiv=', why we need this, sometimes it happens that, after updating the webpage, users don't get the updates, but the previous cache control solves the problem, so to get rid off this, we use No Cache Meta Tags -->

<!-- normally we don't want caching in our web application, it's so common that, after update users not getting the update, so we use 'no-cache' header -


```

for no cache saving in cache memory -->
<meta http-equiv="cache-control" content="no-cache" />
<!-- another same thing - -->
<meta http-equiv="pragma" content="no-cache" />
<!-- for these two, web page header won't do any caching -->

<!-- for expiration control -->
<meta http-equiv="expires" content="0" />
<meta http-equiv="expires" content="Tue, 01 Jan 1980 1:00:00 GMT" />

<!-- and of course keep that in mind, for every browser these cache-
control work like same, that's not true, for some browsers, cache control may
not work -->

<title>No Cache Meta Tags (Caching Header)</title>

</head>

<body>

</body>

</html>

```

Time:

```

<!DOCTYPE html>

<html lang="en">

  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>Time and Mark</title>
  </head>

  <body>
    <p>Birth Date <time datetime="2002-01-06">21st November 1980</time></p>
  </body>

</html>

```

datalist element and Auto Complete Suggestions:

```

<!DOCTYPE html>

<html lang="en">

  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>Auto Complete Suggestions or DataList Tags</title>
  </head>

  <body>

    <!-- whenever user try to write the name of his/her country, after writing
    first letter or just writing something, the related suggestions would pop-up,
    user can simply select, and that will be selected automatically -->

    <label>My Country : </label><br />
    <input name="country" list="country_name" />

    <datalist id="country_name">
      <option value="Bangladesh"></option>
      <option value="USA"></option>
      <option value="Germany"></option>
      <option value="England"></option>
    </datalist>

  </body>

</html>

```

Semantic web elements:

```

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

```

```
<summary>
<time>
```

HTML entities list:

https://www.w3schools.com/html/html_entities.asp

Emojis:

```
<!DOCTYPE html>

<html lang="en">

  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>emojis</title>
  </head>

  <body>

    <!-- search html emojis codes, just grab and use -->
    <p>
      &#128507;
      &#128508;
      &#128509;
      &#128510;
      &#128511;
      &#128512;
      &#128513;
      &#128514;
      &#128515;
      &#128516;
      &#128517;
    </p>

  </body>

</html>
```

https://www.w3schools.com/html/html_emojis.asp