

# FRONTEND-HTML-5

## Theory Assignment :-

- Question 1: Difference b/w HTML & HTML5?

Ans :- **1. Doctype Declaration:**

- **HTML:** The doctype declaration in HTML is long and complex. It was written as `<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/html4/strict.dtd">`.
- **HTML5:** The doctype declaration is simplified and written as `<!DOCTYPE html>`.

### **2. New Elements:**

HTML5 introduced several new semantic elements that help structure web pages better. Some examples include:

- `<article>`, `<section>`, `<nav>`, `<header>`, `<footer>`, `<aside>`, and `<figure>`. These help with better organization, readability, and accessibility of web content.

### **3. Multimedia Support:**

- **HTML:** It did not support embedding audio or video content natively, so web developers had to rely on third-party plugins like Flash.
- **HTML5:** HTML5 introduced the `<audio>` and `<video>` tags for embedding multimedia content directly into the web pages without needing any third-party plugins.

### **4. Form Elements:**

HTML5 introduced several new input types and attributes for better form control:

- New input types like email, date, tel, url, range, search, etc.
- New attributes like placeholder, autofocus, required, and pattern for better form validation and user experience.

### **5. Deprecated and Removed Elements:**

- HTML5 deprecated many older, non-semantic elements that were commonly used in previous versions of HTML, such as `<font>`, `<center>`, and `<big>`.
- It also removed the use of attributes like align, bgcolor, and border for styling, encouraging the use of CSS instead.

### **6. CSS 3 Integration:**

While not directly part of HTML, HTML 5 is designed to work seamlessly with CSS 3 which provides advanced styling capabilities like animations , gradients , and transitions.

In summary , HTML 5 is a major upgrade over HTML with improved support for multimedia , better structure with new element , and APIs for modern web development , offering a richer experience and greater compatibility with new web technologies .

- Question 2: What are the additional tags used in HTML5?

Ans :- <article>

Represent a self-contained piece of content that could be distributed or reused independently . Commonly used for blog posts , news articles , or forum posts .

EXAMPLE :-

```
<article>
  <h2>HTML5 Features</h2>
  <p>HTML5 is the latest version of the HTML standard...</p>
</article>
```

## 2. <section>

Represent a section of content in a document . It is used to group related content , such as chapters , headers , or topics .

EXAMPLE :-

```
<section>
  <h2>Introduction</h2>
  <p>This section introduces the concept of HTML5...</p>
</section>
```

## 3. <nav>

Represent a navigation section that contain links to other pages or sections within the website . It's used for navigation menus .

EXAMPLE :-

```
<nav>

<ul>

  <li><a href="#home">Home</a></li>

  <li><a href="#services">Services</a></li>

</ul>

</nav>
```

#### 4. <header>

Represent a group of introductory content or navigational links . It is usually placed at the top of a page or section and contains things like logos , titles , and navigations .

**EXAMPLE :-**

```
<header>

<h1>Welcome to My Website</h1>

<nav>

  <!-- navigation links -->

</nav>

</header>
```

#### 5. <footer>

- Represents the footer of a document or section. It typically contains copyright information, links to privacy policies, contact details, or related documents.

**EXAMPLE :-**

```
<footer>

  <p>&copy; 2025 My Website. All rights reserved.</p>

</footer>
```

#### 6. <aside>

Represents content that is tangentially related to the content around it, like sidebars, callout boxes, or related links. It's often used for supplementary information.

**EXAMPLE :-**

```
<aside>
```

```
<h3>Related Articles</h3>
```

```
<ul>
```

```
<li><a href="#">HTML5 Overview</a></li>
```

```
<li><a href="#">Web Development Trends</a></li>
```

```
</ul>
```

```
</aside>
```

## 7. <figure>

- Represents content like images, illustrations, diagrams, or other media that is referenced from the main content. It is often used with the <figcaption> element to provide a caption.

EXAMPLE :-

```
<figure>
```

```

```

```
<figcaption>HTML5 Logo</figcaption>
```

```
</figure>
```

## 8. <figcaption>

- Provides a caption or description for a <figure> element, such as an image, chart, or diagram.

EXAMPLE :-

```
<figure>
```

```

```

```
<figcaption>This is a sample image.</figcaption>
```

```
</figure>
```

## 9. <mark>

- Represents text that is highlighted or marked for reference, usually with a background color. It's often used to highlight search results or important text.

EXAMPLE :-

```
<p>HTML5 includes <mark>new features</mark> for web development.</p>
```

## 10. <progress>

- Represents the progress of a task, like a progress bar. It's used to display the completion status of a process (e.g., file upload, video loading).

EXAMPLE :-

```
<progress value="70" max="100">70%</progress>
```

## 11. <output>

- Represents the result of a calculation or user action, typically used for displaying dynamic results.

EXAMPLE :-

```
<form>

  <input type="number" id="num1">

  <input type="number" id="num2">

  <button onclick="calculate()">Add</button>

  <output id="result"></output>

</form>
```

## 12. <details>

- Represents a disclosure widget from which the user can obtain additional information. The <summary> tag is used as a clickable label to show/hide the content.

EXAMPLE :-

```
<details>

  <summary>More Info</summary>

  <p>Here are some additional details...</p>

</details>
```

## 13. <summary>

- Represents a summary or heading for a <details> element. It is used to provide a clickable label that reveals more information.

EXAMPLE :-

```
<details>
```

`<summary>Click here for more details</summary>`

`<p>Additional information goes here.</p>`

`</details>`

#### 14. `<time>`

- Represents a specific time or a time range (such as a date, hour, or minute) in a machine-readable format.

EXAMPLE :-

`<time datetime="2025-03-28">March 28, 2025</time>`

#### 15. `<wbr>`

- Represents a word break opportunity, which indicates where the browser can break a word when wrapping text. It helps improve text display in narrow spaces.

EXAMPLE :-

`<p>HTML5 is amazing for web development.<wbr>It's the future!</p>`

#### 16. `<video>`

- Used for embedding video content directly into a webpage. It supports multiple formats (like MP4, WebM, and Ogg) and includes built-in controls for play, pause, and volume.

EXAMPLE :-

`<video controls>`

`<source src="movie.mp4" type="video/mp4">`

Your browser does not support the video tag.

`</video>`

#### 17. `<audio>`

- Used for embedding audio content directly into a webpage. Like `<video>`, it includes built-in controls for play, pause, and volume.

EXAMPLE :-

`<audio controls>`

`<source src="audio.mp3" type="audio/mp3">`

Your browser does not support the audio tag.

</audio>

## 18. <source>

- Specifies multiple media resources for the <video> and <audio> elements. It allows the browser to choose the most appropriate file based on the user's capabilities.

EXAMPLE :-

<video controls>

<source src="movie.mp4" type="video/mp4">

<source src="movie.ogv" type="video/ogg">

Your browser does not support the video tag.

</video>