

# MODERN HTML

## ASSIGNMENT

### 1. List out the features of HTML5.

HTML5 is the latest version of Hypertext Markup Language. HTML5 introduced several new features. Some of the features are mentioned below-

- **Included Semantics** : HTML5 introduced some HTML elements like <nav>, <header>,<footer>,etc for better accessibility.
- **Introduced more APIs** : For more better functionality
- **Introduced ‘canvas’** : For multimedia support
- **HTML5 supports SVGs** : Scalable types of image formats
- **Introduced Geolocation, Web Socket APIs** : Adds more functionality to a website
- **Improved Forms** : Introduces more HTML elements like <datalist> for better accessibility.

### 2. What are HTML entities ? List out 5 commonly used HTML entities.

HTML entities are special character codes used to represent characters. They are primarily used to display reserved characters, characters with special meaning in HTML, or characters that are not easily typed on a keyboard.

Here are 5 commonly used HTML entities:

1. `&lt;` : represents the less-than symbol (<)
- 2.`&gt;` : represents the greater-than symbol (>)
- 3.`&amp;` : represents the ampersand symbol (&)
- 4.`&quot;` : represents the double quotes (“”)
- 5.`&apos;` : represents the apostrophe or single quotation mark (‘’)

These entities are often used when you need to display these characters as text within an HTML document.

### 3. What is web accessibility? List some of the assistive devices which play a major role in providing accessibility.

Web accessibility refers to the process of designing and developing websites and web applications that can be accessed and used by people with disabilities.

Such websites help people with disabilities to easily access the content of website.

Here are some commonly used assistive devices that play a major role in providing accessibility to disabled peoples:

**1. screen Readers :** These software applications convert on-screen text into synthesized speech, that allows blink or visually impaired individuals to access web content.

**2. Assistive Listening Devices :** These devices amplify sound or provide clarity for individuals with hearing impairments, facilitating access to audio content on websites.

**3. Text-to-Speech Tools :** Text-to-speech software allows users to listen to the written text on web pages, benefiting individuals with reading difficulties or cognitive disabilities.

**4. Voice Recognition Software:** People with limited mobility or dexterity can use voice recognition software to control and navigate web interfaces using spoken commands.

**5. Keyboard Accessibility :** Standard keyboards or modified keyboards with larger keys can assist individuals with mobility impairments in accessing web content.

These are just a few examples of assistive devices and technologies that play a major role in enhancing web accessibility.

#### **4. List any 3 ways which help us in improving the accessibility of HTML.**

Improving the accessibility of HTML involves implementing some processes that make web content more accessible and usable for people suffering from disabilities.

Here are three ways to improve the accessibility of HTML

**1. Use Semantic HTML:** HTML5 introduces semantic HTML that involves using appropriate HTML elements to provide meaning and structure to the content.

By using elements like <header>, <nav>, <main>, <article>, <section>, and <footer>, we can make a website more accessible as well as proper browser rendering.

**2. Provide Alternative Text for Images :** Images are an essential part of web content, but they may not be accessible to individuals who are blind or visually impaired.

By adding descriptive alternate text (alt text) to images using the `alt` attribute, you provide a textual description of the image's content or function.

Screen readers can then read the alt text aloud, ensuring that users with visual impairments understand the context and purpose of the image.

**3. Using `data-` and `aria-` :** Proper keyboard focus styling and the use of appropriate HTML attributes like 'tabindex' and 'aria-\*' attributes can help make your HTML elements keyboard accessible.

By implementing these practices, you can significantly improve the accessibility of your HTML content and ensure that it is usable by a broader range of users, including those with disabilities.

## 5. Write a short note on the tabindex.

The 'tabindex' attribute is an HTML attribute that determines the order in which elements can receive focus when navigating through a web page using the keyboard.

It allows developers to define a priority order for interactive elements, such as links, buttons, other focusable elements.

The 'tabindex' attribute accepts a numeric value that represents that element's position in the tab order.

**A value of 0** means the element is included in the natural tab order, following the order of elements as they appear in the HTML source code.

**Positive values** define a specific tab order for elements, with lower values being given higher priority.

**Negative values** exclude the element from the tab order.

By default, focusable elements are ordered based on their position in the HTML structure.

Here's an example of how the 'tabindex' attribute can be used:

```
<input type="text" tabindex = "1">  
<button tabindex = "2">Submit</button>  
<a href="#" tabindex = "3">Link </a>
```

## **6. List any 5 semantic tags in HTML along with their descriptions.**

Following are five commonly used semantic tags in HTML along with their descriptions:

1. **<header>** : The **<header>** tag represents the introducing content or a container for a set of introductory content at the beginning of a section or document. It typically contains the site or section title, logo, navigation menus, and other header-related content.

2. **<nav>** : The **<nav>** tag is used to define a section of navigation bar, typically for site navigation menus. It signifies a block of navigation functionality , such as a primary or secondary navigation menu, a table of contents, or a related links list.

3. **<main>** : The **<main>** tag represents the main content area or the body of the document. It should contain the primary content that is unique to the document and excludes content like headers, footers, or sidebars. There should typically be only one **<main>** element per document.

4. **<article>** : The **<article>** tag is used to define a self-contained composition in a document, such as a blog post, news article, or forum post. It represents a complete, standalone piece of content that can be distributed or syndicated independently from the rest of the page.

5. **<footer>** : The **<footer>** tag represents the footer section of a document or a section. It typically contains information about the document, such as copyright information, links to related documents, author information or contact details. It is usually placed at the bottom of the page or the end of a section.

These semantic tags provide a clearer structure to the HTML markup, making it more meaningful and accessible for both humans and search engines.

## **7. What are benefits of using semantic tags in our webpage.**

Using semantic tags in webpages provides several benefits:

1. **Better Accessibility** : Semantic tags provide a clearer structure and meaning to the content, making it easier for assistive technologies like screen readers to navigate and interpret the page

2. correctly. This enhances accessibility for users with disabilities, allowing them to access and understand the content more effectively.

**3. Better Search Engine Optimization (SEO) :** Using semantic tags can improve the SEO of a webpage by providing search engines with better information about the content, potentially resulting in higher rankings.

**4. Readable Code :** Semantic tag enhance the code's readability and maintainability by conveying the purpose and structure of elements without relying heavily on CSS classes or JavaScript . This makes it easier for developers to understand and modify the code, as well as for other developers who may work on the project in the future.

**5. Easy Rendering :** Using semantic tags in our HTML document tags also play an important role in easier browser rendering.

Overall , utilizing semantic tags in your webpages not only improves accessibility and SEO but also enhances code maintainability, consistency, and compatibility with evolving web standards. It helps create a well-structured, user-friendly website.