

Assignment

1. List out the features of HTML5.

Ans :

- 1.) New Semantic Elements: HTML5 introduced semantic elements like `<header>`, `<nav>`, `<footer>`, `<section>`, and `<article>` to provide better structure and meaning to web content.
- 2.) Audio and Video Support: HTML5 introduced `<audio>` and `<video>` elements, making it easier to embed multimedia content without relying on third-party plugins like Flash.
- 3.) Canvas: The `<canvas>` element allows dynamic, scriptable rendering of 2D shapes and bitmap images, enabling the creation of interactive graphics and games.
- 4.) Improved Forms: HTML5 introduced new input types such as `<input type="date">`, `<input type="email">`, and `<input type="number">` to enhance form input options.
- 5.) Local Storage: The `localStorage` and `sessionStorage` APIs enable web applications to store data locally on a user's device, improving offline capabilities.
- 6.) Geolocation: HTML5 introduced the Geolocation API, which allows web applications to access a user's location, enabling location-based services.
- 7.) Web Workers: Web Workers provide a way to run JavaScript in the background, improving performance and responsiveness in web applications.

2. What are HTML Entities. List out 5 commonly used HTML entities.

Ans :

HTML entities are special codes or sequences used to represent characters that have a specific meaning or function in HTML markup. These entities are used to display characters that might otherwise be interpreted as HTML tags or have special meanings. Here are five commonly used HTML entities:

<; Represents the less-than symbol `<`.

>; Represents the greater-than symbol `>`.

&; Represents the ampersand symbol `&`.

"; Represents a double quotation mark `"` for displaying text within double quotes.

' (or '); Represents a single quotation mark `'` for displaying text within single quotes.

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

Ans: Web accessibility refers to the practice of ensuring that websites and web applications are designed and developed in a way that allows people with disabilities to access and use them effectively. It aims to remove barriers and provide equal access to information and functionality for all users, regardless of their physical or cognitive abilities

1.) Screen Readers: Screen reading software converts digital text into synthesized speech. Blind or visually impaired users rely on screen readers to read aloud web content and navigate web pages.

2.) Braille Displays: These devices have small, physical pins that move up and down to create Braille characters. They allow blind users to read web content in Braille.

3.) Keyboard Navigation: Many users with mobility impairments rely on keyboards or alternative input devices to navigate websites. Ensuring that websites are fully navigable and usable through keyboard commands is essential.

4. List any 3 ways which helps us in improving accessibility of HTML.

Ans : Here are three ways to enhance accessibility:

1.) Semantic HTML: Use semantic HTML elements appropriately to provide structure and meaning to web content. This helps assistive technologies and users understand the purpose and hierarchy of content. For example, use `<h1>` to `<h6>` tags for headings, `` and `` for lists, and `<nav>` for navigation menus.

2.) Alternative Text (Alt Text): Provide descriptive alt text for images and other non-text content, such as multimedia elements. Alt text should convey the content and context of the image. For decorative images, use empty alt attributes (`alt=""`) to indicate that the image is purely decorative and doesn't convey meaningful content.

3.) Keyboard Accessibility: Ensure that all interactive elements, including forms, buttons, and links, are fully functional and navigable using only a keyboard. Keyboard accessibility is critical for users who cannot use a mouse or other pointing devices. Test your website's keyboard navigation and ensure that focus is visible and logical.

5. Write a short note on tab index.

Ans : The `tabindex` attribute is used to control the order in which elements receive focus when a user navigates a web page using the keyboard's "Tab" key. It allows web developers to define a custom order for keyboard navigation, making web content more accessible to users who rely on keyboard input, especially those with disabilities.

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

Ans : Here are five semantic HTML5 tags along with their descriptions:

1. <header>: Description: Represents the introductory or top section of a web page or a section within a page. It often contains headings, logos, navigation menus, and other introductory content.

2. Description: Defines a section of a web page that contains navigation links or menus. It is used to mark up navigation menus, lists of links, or any element containing navigation-related content.

3. <main> - Identifies the main content of a web page. It should only be used once per page and should not contain any content that is repeated across multiple pages.

4. <article> - Defines a self-contained section of content on a web page, such as a blog post, news article, or product review.

5. <footer> - Represents the footer or bottom section of a web page, typically containing copyright information, contact details, and links to relevant pages or resources.

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

Ans :

1.) Improved Accessibility: Semantic tags provide clear and meaningful labels for different parts of web content. This is crucial for accessibility because it helps screen readers and assistive technologies understand and convey the content more accurately to users with disabilities.

2.) Better SEO: Search engines use semantic HTML to understand the structure and hierarchy of a web page. Properly structured content can lead to improved search engine rankings and visibility.

3.) Enhanced User Experience: Semantic HTML makes web pages more readable and understandable for human users as well. It clarifies the purpose and meaning of various sections, making it easier for users to navigate and interact with the content.

4.) Consistency and Maintainability: Semantic tags promote a consistent structure and organization of content across a website. This can make it easier for web developers and designers to maintain and update the site in the long run.

5.) Future Compatibility: Semantic tags are designed to be forward-compatible, meaning they are less likely to become obsolete in future versions of HTML. Using semantic tags can ensure that your web content remains compatible with evolving web standards.