TASK : 1 List out the features of HTML5

SOLUTION :

HTML5, the fifth and latest version of the Hypertext Markup Language, introduces several new features and enhancements for web development. Here's a list of some key features of HTML5:

* 1)Semantics: HTML5 introduces new semantic elements like <header>, <nav>, <article>, <section>, <footer>, etc., providing a clearer structure for web documents.
* 2)Multimedia Support: HTML5 includes native support for audio and video playback without the need for plugins. The <audio> and <video> elements allow developers to embed media directly into web pages.
* 3)Canvas: The <canvas> element enables drawing graphics and animations directly within the browser using JavaScript. It's particularly useful for creating interactive games and other dynamic content.
* New Form Input Types and Attributes: HTML5 introduces new input types such as <input type="date">, <input type="email">, <input type="url">, <input type="number">, etc., making it easier to capture specific data types and reducing the need for custom JavaScript validation.
* 4)Local Storage: The localStorage and sessionStorage APIs provide a way for web applications to store data locally on the user's device, allowing for persistent client-side data storage.
* 5)Web Workers: Web Workers allow developers to run scripts in the background, separate from the main thread, enabling parallel processing and improved performance.
* 6)Geolocation: HTML5 includes the Geolocation API, which allows websites to request the user's geographic location information. This feature is particularly useful for location-aware web applications.

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

SOLUTION :

HTML entities are special codes used to represent characters that have a specific meaning in HTML or characters that are difficult to include directly in an HTML document. HTML uses a set of reserved characters for its own purposes, such as <, >, &, and others. If you want to display these characters on a web page without them being interpreted as HTML code, you use entities.

FIVE HTML ENTITIES ARE AS FOLLOWS

* 1)&lt;: Represents the less-than sign’ <’.
* 2)&gt;: Represents the greater-than sign ‘>’.
* 3)&amp;: Represents the ampersand’ &’.
* 4)&quot;: Represents the double quotation mark’ "’
* 5)&apos;: Represents the apostrophe (single quotation mark)’ '’

TASK 3 : Define accessibility in the context of web development? Discuss why it's essential to create accessible websites and how it benefits different user groups.

SOLUTION :

Accessibility in the context of web development refers to the inclusive practice of designing and building websites and web applications that can be accessed and used by people of all abilities and disabilities. The goal of web accessibility is to ensure that everyone, regardless of their physical or cognitive capabilities, can perceive, navigate, understand, and interact with online content effectively.

1. Inclusivity: Accessible websites ensure that people with disabilities can access and use online content. This inclusivity promotes equal opportunities and participation for individuals with various abilities, including those with visual, auditory, motor, and cognitive impairments.
2. Legal and Regulatory Compliance: Many countries and regions have established laws and regulations that require websites to be accessible. Compliance with these standards not only helps avoid legal issues but also demonstrates a commitment to social responsibility and ethical business practices.
3. Improved User Experience for All: Web accessibility features often enhance the overall user experience for everyone, regardless of their abilities. For example, clear navigation, readable text, and consistent design benefit users on mobile devices, those with slow internet connections, or individuals facing temporary challenges.
4. Expanded Audience Reach: By designing websites with accessibility in mind, businesses and organizations can reach a broader audience. This includes people with disabilities, older individuals, and those who use assistive technologies, such as screen readers or voice commands.
5. Enhanced SEO (Search Engine Optimization): Search engines favor websites that are well-structured and provide a positive user experience. Many aspects of web accessibility, such as clear and descriptive text content, contribute to improved SEO, potentially increasing the visibility of the website in search engine results.

BENEFITS OF USER GROUP:

* Visual Impairments: Accessibility provides screen reader support and text alternatives, aiding blind and
* visually impaired users.
* Hearing Impairments: Captions and transcripts benefit those with hearing impairments by making audio
* content understandable.
* Motor Disabilities: Keyboard navigation and easy-to-click elements assist users with motor limitations.
* Cognitive Disabilities: Accessible design simplifies content and layout, aiding individuals with cognitive

TASK 4: List any 3 ways which help us in improving the accessibility of HTML

SOLUTION :

1. USE SEMANTIC HTML TAG

* Semantic HTML elements provide meaning and structure to web content. Choose appropriate HTML elements to represent the meaning of the content, making it more understandable for both users and assistive technologies.
* Examples of semantic elements include <header>, <nav>, <main>, <article>, <section>, and <footer>. These elements help define the structure of a page, making it easier for screen readers and other assistive technologies to interpret the content.

2) Provide Text Alternatives for Non-Text Content:

* Include descriptive text alternatives for images and other non-text content using the alt attribute. Screen readers use this information to convey the content to users with visual impairments.
* Ensure that the alternative text conveys the purpose and context of the image. If an image is decorative and doesn't convey meaningful information, use an empty alt attribute (alt="") to indicate it's decorative.

3) Create Accessible Forms:

* Design accessible and user-friendly forms by using appropriate form elements and labels. Associate labels with form controls using the for attribute or by wrapping the input element within the <label> element.
* Provide additional information or instructions using the aria-describedby attribute for complex form controls.
* Use input types that are suitable for the type of data being collected, such as <input type="text">, <input type="email">, <input type="checkbox">, etc.

TASK 5) Create a web page that highlights the features of HTML5. Use appropriate semantic tag to structure the content and showcase at least three key features of HTML 5 with explanations

SOLUTION :

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>HTML5</title>

</head>

<body>

<header>

<h1>HTML5 features</h1>

<p>welcome to our webpage showing you the features of HTML5</p>

</header>

<section>

<h2>feature 1 : video playback</h2>

<p>

HTML5 introduced the <code>&lt;video&gt;</code> element for embedding

videos directly in web pages.

</p>

<video src="video sample.mp4"></video>

</section>

<section>

<h2>form validation</h2>

<form>

<label for="email">email</label>

<input type="email">

<br>

<input type="button" value="submit">

</form>

</section>

<section>

<h2>semantic tags</h2>

<p>

Semantic tags in HTML are elements that carry meaning about the structure and content of a web page.

These tags provide information about the role and purpose of the content they enclose, making the

HTML document more meaningful, accessible, and understandable for both developers and browsers</p>

1) header:

Represents the header of a section or a page. It typically contains headings, navigation links,

logos, and other introductory content.

<br>

2) nav:

Defines a navigation menu, providing links to other pages or sections within the website.

</section>

</body>

</html>

TASK 6 : Create a simple web page which has a table. The table must have 2 columns HTML and HTML5. The table should include a minimum of three rows describing the differences between HTML and HTML5.

SOLUTION :

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>HTML v/s HTML5</title>

</head>

<body>

<h1>HTML v/s HTML5</h1>

<table border="1">

<thead>

<tr>

<th>HTML</th>

<th>HTML5</th>

</tr>

</thead>

<tbody>

<tr>

<td>It primarily used non-semantic elements like div and span for layout and styling.</td>

<td>HTML5 introduces new semantic elements like header, nav, article, section, footer,

etc., providing a more structured and meaningful document outline.</td>

</tr>

<tr>

<td>There was no native support for embedding audio and video directly in the HTML document.</td>

<td>HTML5 includes native support for audio and video elements (audio and video),

allowing developers to embed media directly into web pages without the need for plugins.</td>

</tr>

<tr>

<td>Scripting was mainly handled using JavaScript, but HTML 4.01 did not have certain JavaScript

APIs that HTML5 introduced.</td>

<td>HTML5 includes the canvas element for drawing graphics and animations directly in the browser using JavaScript.</td>

</tr>

</tbody>

</body>

</html>