

Assignment 5

Modern HTML

1. List out the features of HTML5.

Ans - Features of HTML5:-

1. New Semantic Elements

- Tags that give meaning to the structure of a webpage:
 - <header>, <footer>, <nav>, <article>, <section>, <aside>

2. Multimedia Support

- Native support for:
 - <audio> – for playing audio files
 - <video> – for embedding videos
(No need for plugins like Flash)

3. New Form Input Types

- Enhances user input with types like:
 - email, date, time, range, color, url, tel, search

4. Canvas Element

- **<canvas> lets you draw graphics, charts, and animations using JavaScript.**

5. Scalable Vector Graphics (SVG)

- **Allows embedding of vector graphics directly in HTML.**

6. Geolocation API

- **Lets the browser detect a user's location with permission.**

7. Offline Web Applications

- **applicationCache (deprecated, but originally part of HTML5) allowed websites to work offline.**

8. Local Storage and Session Storage

- **Store data in the browser:**
 - **localStorage: persists after browser closes**
 - **sessionStorage: persists only during the session**

9. Web Workers

- **Run scripts in background threads to improve performance.**

10. Drag and Drop Support

- **Native drag-and-drop functionality using draggable attributes and events.**

11. Better Error Handling

- **Browsers can handle invalid or incorrect HTML better than older versions.**

12. Improved Accessibility

- **Semantic elements help screen readers and assistive tech understand page structure.**

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

Ans- HTML entities are special codes used in HTML to display reserved characters or special symbols that can't be typed directly or would otherwise be interpreted as part of the HTML code.

They start with & and end with ;.

Five commonly used HTML entities are: < (less than), > (greater than), & (ampersand), " (double quote), and ' (single quote).

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

Ans- Web accessibility ensures websites and technologies are designed so that all users—including those with visual, auditory, physical, speech, cognitive, and neurological disabilities—can perceive, understand, navigate, interact with,

and contribute to the Web, guided by standards like the Web Content Accessibility Guidelines (WCAG) from the Web Accessibility Initiative (WAI) of the W3C. Creating accessible websites is essential not only to comply with legal standards such as Section 508 and the Americans with Disabilities Act (ADA) but also to fulfill ethical obligations, improve overall usability, enhance SEO performance, and reach broader audiences such as older adults, people with situational limitations, and users with temporary impairments .

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

Ans-Three Ways to Improve HTML Accessibility:-

1. Use Semantic HTML Elements

Using the correct HTML elements for their intended purposes (e.g., `<article>`, `<section>`, `<nav>`, `<aside>`) communicates content structure directly to assistive technologies and reduces reliance on additional ARIA roles. Semantic markup also enhances machine readability for search engines and future-proofs your site against evolving assistive tools.

2. Provide Text Alternatives for Non-Text Content

Every image, icon, or multimedia object should include a concise, descriptive text equivalent—typically via the `alt` attribute, captions, or transcripts—so that screen readers and text-only browsers can convey the same information to users with visual or auditory impairments. Decorative images that do not add informational value should use empty `alt=""` to be ignored by assistive technologies, reducing clutter for users who rely on screen readers.

3. Ensure Complete Keyboard Accessibility

All interactive elements (links, buttons, form controls, custom widgets) must be operable via keyboard alone, with logical tab order, clear focus indicators, and use of native HTML controls whenever possible. Testing with only a keyboard (tab, shift-tab, enter/space, arrow keys) helps identify and fix any navigation barriers for users who cannot use a pointing device.

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

Ans-

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>HTML5 Key Features</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      line-height: 1.6;
      margin: 0;
      padding: 0;
    }
    header, nav, main, section, footer { padding: 20px; }
    header {
      background: #333;
      color: #fff;
    }
    nav {
      background: #f4f4f4;
    }
    nav ul {
      list-style: none;
      padding: 0;
    }
  </style>
</head>
<body>
  <h1>HTML5 Key Features</h1>
  <h2>Key Features of HTML5</h2>
  <ol>
    <li>1. Local Storage</li>
    <li>2. Canvas</li>
    <li>3. Geolocation</li>
  </ol>
  <h2>Conclusion</h2>
  <p>HTML5 is a powerful markup language that provides a wide range of features for creating modern web applications. It is designed to be simple, easy to learn, and easy to use. HTML5 is the future of web development, and it is essential for every web developer to learn it. HTML5 is a powerful markup language that provides a wide range of features for creating modern web applications. It is designed to be simple, easy to learn, and easy to use. HTML5 is the future of web development, and it is essential for every web developer to learn it.</p>
</body>
</html>
```

```

nav li {
    display: inline;
    margin-right: 15px;
}
nav a {
    text-decoration: none;
    color: #333;
}
section {
    margin-bottom: 40px;
}
h2 {
    border-bottom: 2px solid #bb2121;
    padding-bottom: 5px;
}
form input, form button {
    display: block;
    width: 100%;
    max-width: 300px;
    margin: 10px 0;
    padding: 8px;
    font-size: 1em;
}
form button {
    background: #bb2121;
    color: #fff;
    border: none;
    cursor: pointer;
}
footer {
    background: #bb2121;
    color: #fff;
    text-align: center;
}
</style>
</head>
<body>
<header>
    <h1>Exploring HTML5</h1>
    <p>An overview of the most impactful features introduced in
HTML5.</p>
</header>

```

```

<nav>
  <ul>
    <li><a href="#semantic">Semantic Elements</a></li>
    <li><a href="#multimedia">Multimedia Support</a></li>
    <li><a href="#forms">Form Enhancements</a></li>
  </ul>
</nav>

<main>
  <section id="semantic">
    <h2>1. Semantic Elements</h2>
    <p>HTML5 introduced new semantic tags like
<code>&lt;header&gt;</code>, <code>&lt;nav&gt;</code>,
<code>&lt;section&gt;</code>, <code>&lt;article&gt;</code>, and
<code>&lt;footer&gt;</code>. These tags provide meaningful structure to
web documents, improving readability for both developers and assistive
technologies.</p>
    </section>

    <section id="multimedia">
      <h2>2. Native Multimedia Support</h2>
      <p>HTML5 provides built-in <code>&lt;audio&gt;</code> and
<code>&lt;video&gt;</code> elements, allowing developers to embed media
without relying on plugins like Flash. These elements support multiple
formats, native controls, and accessibility features such as
captions.</p>
      <audio controls>
        <source src="sample-audio.mp3" type="audio/mpeg">
        Your browser does not support the audio element.
      </audio>
      <br>
      <video width="320" height="240" controls>
        <source src="sample-video.webm" type="video/webm">
        Your browser does not support the video tag.
      </video>
    </section>

    <section id="forms">
      <h2>3. Form Enhancements</h2>
      <p>HTML5 adds new input types (<code>email</code>,
<code>date</code>, <code>number</code>, etc.) and attributes
(<code>required</code>, <code>placeholder</code>) to improve form
usability and validation without JavaScript.</p>

```

```

    <form>
      <label for="email">Email:</label>
      <input type="email" id="email" name="email"
placeholder="you@example.com" required>
      <label for="dob">Date of Birth:</label>
      <input type="date" id="dob" name="dob" required>
      <label for="quantity">Quantity (1-10):</label>
      <input type="number" id="quantity" name="quantity" min="1"
max="10" value="1">
      <button type="submit">Submit</button>
    </form>
  </section>
</main>

<footer>
  <p>&copy; PW web dev.</p>
</footer>
</body>
</html>

```

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.

Ans-

```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width,
initial-scale=1.0">
  <title>Document</title>
  <style>
    th {
      background-color: black;
      color: aliceblue;
    }

    tr:nth-child(even) {

```



```

        background-color: beige;

    }
</style>
</head>
<body>
    <h1 style="background-color: aquamarine; display: flex;
justify-content: center;">HTML Vs HTML5</h1>
    <br>
    <table border="1px" cellpadding="10" style="border-collapse:
collapse;">
        <tr>
            <th>HTML</th>
            <th>HTML5</th>

        </tr>
        <tr>
            <td>Required DOCTYPE declaration for HTML4 was verbose and
version-specific.</td>
            <td>Introduced a simple, standardized <!DOCTYPE html>
declaration for all documents.</td>

        </tr>
        <tr>
            <td>Limited semantic structure using generic <div> and
<span> elements.</td>
            <td>Introduced semantic tags like
<code>&lt;header&gt;</code>, <code>&lt;nav&gt;</code>,
<code>&lt;section&gt;</code>, and <code>&lt;footer&gt;</code> for
clearer document outlines.</td>

        </tr>
        <tr>
            <td>Relied on plugins (e.g., Flash) to embed multimedia
content.</td>
            <td>Provides native <code>&lt;audio&gt;</code> and
<code>&lt;video&gt;</code> elements, eliminating plugin
dependencies.</td>

        </tr>
    </table>
</body>
</html>

```

