Name = Om Kumar
Email ID = omk5938@gmail.com
Assignment Name = Modern HTML
GitHub = Link

1. Features of HTML6

As of now, HTML6 is not officially released, and many features proposed for HTML6 are still in development or being discussed in the web development community. However, some expected features and improvements include:

1. **Improved Forms** – Native form controls and validation options for better form handling.
2. **Custom Elements** – Better support for creating custom HTML tags.
3. **More Powerful API Integration** – Including enhanced API capabilities for a more dynamic and interactive user experience.
4. **Improved Accessibility Features** – Native support for advanced accessibility options.
5. **Multimedia Support** – Enhanced multimedia elements, such as improved video/audio handling and streaming features.
6. **Declarative Shadow DOM** – Allowing easier shadow DOM creation with new HTML syntax.
7. **Modularization of HTML** – Dividing HTML into modular sections that can be used and reused more easily.

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

HTML entities are special characters or symbols that are reserved in HTML. They are used to represent characters that might otherwise conflict with HTML syntax, such as symbols like `<`, `>`, or `&`, which are reserved in HTML.

5 Commonly Used HTML Entities:

1. `<` – Represents the less-than symbol (<).
2. `>` – Represents the greater-than symbol (>).
3. `&` – Represents the ampersand symbol (&).
4. `&quot;` – Represents the double-quote symbol (").
5. `&apos;` – Represents the single-quote symbol (').

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

Accessibility in Web Development refers to the practice of designing and developing websites and applications in a way that they can be accessed and used by people with various disabilities. This includes individuals with visual, auditory, motor, or cognitive impairments.

Why It's Essential:

- **Inclusivity**: Accessible websites ensure that all people, regardless of their abilities or disabilities, can access and benefit from digital content.
- **Legal Requirements**: Many countries have laws and regulations (e.g., ADA in the U.S.) that require websites to be accessible.
- **Improved Usability**: Accessibility features often improve the overall usability of a website for everyone, not just those with disabilities.
- **SEO Benefits**: Search engines favor well-structured websites with good accessibility, which can improve the site's search engine ranking.

How It Benefits Different User Groups:

- **Visually Impaired Users**: Accessibility allows them to navigate websites using screen readers or braille displays.
- **Hearing Impaired Users**: Websites with captions for videos and transcripts for audio content make it easier for them to consume content.
- **Motor Impaired Users**: Websites designed with keyboard navigation, voice commands, or adaptive technologies make it easier for them to interact with content.
- **Cognitive Impairments**: Simple layouts and easy navigation can help people with cognitive disabilities to navigate content without confusion.

4. List 3 Ways to Improve the Accessibility of HTML

Here are three ways to improve the accessibility of HTML:

1. **Use Semantic HTML**: Properly use HTML tags like `<header>`, `<footer>`, `<main>`, `<article>`, and `<section>` to ensure content is properly structured and understood by screen readers.
2. **Add Alt Text to Images**: Use the `alt` attribute for all `<img>` elements to provide descriptions for images, helping visually impaired users understand the content.
3. **Keyboard Navigation**: Ensure all interactive elements (buttons, links, forms) are accessible via keyboard, and use the `tabindex` attribute to define the tab order.

5. Create a Web Page that Highlights the Features of HTML5

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <meta http-equiv="X-UA-Compatible" content="ie=edge">
  <title>HTML5 Features</title>
</head>
<body>

  <header>
    <h1>HTML5 Features</h1>
    <p>Explore some of the key features that make HTML5 a powerful and modern web
standard.</p>
  </header>

  <main>
    <section>
      <h2>1. New Semantic Elements</h2>
      <p>HTML5 introduces new semantic elements that help structure web pages in a more
meaningful way. These elements make it easier for search engines and screen readers to
understand the content of the page.</p>
      <p><strong>Examples:</strong> &lt;header&gt;, &lt;footer&gt;, &lt;article&gt;,
&lt;section&gt;, &lt;nav&gt;</p>
    </section>

    <section>
      <h2>2. Audio and Video Support</h2>
      <p>HTML5 provides native support for embedding audio and video content directly into a
web page. The <code>&lt;audio&gt;</code> and <code>&lt;video&gt;</code> tags eliminate the
need for third-party plugins like Flash, making it easier to add multimedia content to a
webpage.</p>
      <p><strong>Example:</strong> The &lt;audio&gt; and &lt;video&gt; tags can be used to
include multimedia on your web pages.</p>
    </section>

    <section>
      <h2>3. Local Storage</h2>
      <p>HTML5 introduced <strong>localStorage</strong> and
<strong>sessionStorage</strong>, which allow web applications to store data on the user's
browser. This means that users can access web apps offline and that data is saved between
sessions.</p>
      <p><strong>Example:</strong> Using JavaScript to store data in local storage:</p>
```

```
    <pre><code>localStorage.setItem('username', 'JaneDoe');</code></pre>
    <pre><code>var username = localStorage.getItem('username');</code></pre>
   </section>
  </main>
</body>
</html>
```

OUTPUT:-

HTML5 Features

Explore some of the key features that make HTML5 a powerful and modern web standard.

1. New Semantic Elements

HTML5 introduces new semantic elements that help structure web pages in a more meaningful way. These elements make it easier for search engines and screen readers to understand the content of the page.

Examples: <header>, <footer>, <article>, <section>, <nav>

2. Audio and Video Support

HTML5 provides native support for embedding audio and video content directly into a web page. The `<audio>` and `<video>` tags eliminate the need for third-party plugins like Flash, making it easier to add multimedia content to a webpage.

Example: The <audio> and <video> tags can be used to include multimedia on your web pages.

3. Local Storage

HTML5 introduced **localStorage** and **sessionStorage**, which allow web applications to store data on the user's browser. This means that users can access web apps offline and that data is saved between sessions.

Example: Using JavaScript to store data in local storage:

```
localStorage.setItem('username', 'JaneDoe');

var username = localStorage.getItem('username');
```

6. Create a Simple Web Page with a Table Describing the Differences Between HTML and HTML5

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

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

  <meta http-equiv="X-UA-Compatible" content="ie=edge">

  <title>HTML vs HTML5</title>

</head>

<body>


  <h1>HTML vs HTML5</h1>

  <p>Comparison between HTML and HTML5</p>


  <table border="1">

    <tr>

      <th>HTML</th>

      <th>HTML5</th>

    </tr>

    <tr>

      <td>Requires plugins like Flash for multimedia content.</td>

      <td>Supports native multimedia elements such as &lt;video&gt; and &lt;audio&gt;.</td>

    </tr>

    <tr>
```

```
    <td>Does not have native support for local storage.</td>

    <td>Introduces localStorage and sessionStorage for storing data in the browser.</td>

   </tr>

   <tr>

    <td>Uses non-semantic tags like &lt;div&gt; and &lt;span&gt; for structuring content.</td>

    <td>Introduces new semantic tags like &lt;header&gt;, &lt;footer&gt;, &lt;article&gt;, and
&lt;section&gt;.</td>

   </tr>

  </table>


</body>

</html>
```

OUTPUT:-