1. List out the feature of HTML5.

Some important feature of HTML5 below.

Semantic Elements: HTML5 introduced a set of new semantic elements, such as <header>, <nav>, <article>, <section>, <aside>, and <footer>, which make it easier to structure web documents, improve accessibility, and enhance search engine optimization (SEO).

Multimedia Support: HTML5 includes native support for audio and video playback through the <audio> and <video> elements, reducing the need for third-party plugins like Flash. It also supports various codecs, making it more versatile.

Canvas: The <canvas> element allows developers to create dynamic and interactive graphics and animations directly within the web page using JavaScript. This feature is particularly useful for games and data visualization.

Geolocation: HTML5 includes a Geolocation API that allows web applications to access the user's geographical location, enabling location-based services and features.

Drag and Drop: HTML5 includes support for native drag-and-drop functionality, making it easier for users to interact with web applications through intuitive drag-and-drop actions.

Improved Accessibility: HTML5 includes built-in accessibility features and attributes, making it easier for developers to create web content that is more inclusive and user-friendly for people with disabilities.

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

HTML entities are special codes used to represent characters and symbols that have special meanings or reserved roles in HTML and XML documents. They are often used to display characters that are not easily typed on a keyboard or to prevent browsers from interpreting certain characters as part of HTML code. Here are five commonly used HTML entities:

1. < - Less Than Sign (<):
Entity: <
Character: <
Use: Used to display the less than symbol without interpreting it as the beginning of an HTML tag.

2. > - Greater Than Sign (>):
Entity: >
Character: >
Use: Used to display the greater than symbol without interpreting it as the end of an HTML tag.

3. & - Ampersand (&):
Entity: &
Character: &
Use: Used to display the ampersand symbol without it being treated as the start of an entity reference

4. " - Double Quotation Mark (") :
Entity: "
Character: "
Use: Used to display double quotation marks within HTML attributes and text content

5. ' - Single Quotation Mark (Apostrophe) (') :
Entity: '
Character: '
Use: Used to display single quotation marks (apostrophes) within HTML attributes and text content. Note that this entity is not supported in HTML 4, but it is available in HTML5 and XML.

3. Define accessibilities in the context of web development. Discuss why it is essential to create accessible websites and how it benefits different users groups.

Accessibility in the context of web development refers to the practice of designing and developing websites and web applications in a way that ensures they are usable and understandable by as many people as possible, including those with disabilities or limitations. The goal of web accessibility is to remove barriers that may prevent people with disabilities from accessing and interacting with online content effectively. Accessibility is essential for several reasons:

Inclusivity: Creating accessible websites ensures that everyone, regardless of their abilities or disabilities, can access and use the information and services provided online. It promotes equal opportunities for all users.

Legal Requirements: Many countries have established laws and regulations that require websites to be accessible. Failure to comply with these laws can lead to legal consequences and fines.

Ethical Responsibility: Web developers have an ethical responsibility to make the web a more inclusive and equitable place. Prioritizing accessibility is a way to demonstrate a commitment to social responsibility and inclusivity.

Expanded Audience: Accessible websites reach a broader audience, including people with disabilities, the elderly, and those using a wide range of devices and assistive technologies. This can lead to increased website traffic and improved user engagement.

Improved SEO: Many accessibility best practices align with search engine optimization (SEO) principles. Search engines reward websites that provide a better user experience, which can lead to higher search rankings and increased organic traffic.

Enhanced Usability: Accessibility features often benefit all users, not just those with disabilities. For example, text alternatives for images can help users on slow internet connections, and well-structured content is easier for everyone to navigate

Different User Groups Benefiting from Web Accessibility:

Visually Impaired Users: Accessible websites benefit users who are blind or have low vision by providing text alternatives for images, structured headings, and clear navigation.

Hearing Impaired Users: Subtitles and captions for multimedia content benefit users who are deaf or hard of hearing.

Motor Impaired Users: Keyboard navigation options and features that allow users to bypass repetitive content benefit those with motor disabilities.

Cognitive and Learning Disabilities: Clear and concise content, simple navigation, and the option to change text size and spacing benefit users with cognitive and learning disabilities.

Elderly Users: Larger text, well-organized content, and easy navigation benefit older users who may have age-related impairments.

Mobile Users: Many accessibility features, such as responsive design and clear text, benefit users accessing websites on mobile devices.

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

Use Semantic HTML Elements: Utilize semantic HTML elements to provide meaningful structure to your web content. Semantic elements like <header>, <nav>, <main>, <section>, <article>, and <footer> help screen readers and assistive technologies understand the document's organization. Properly structuring your content ensures that users can navigate it more easily and comprehend its hierarchy.

Provide Alternative Text for Images: Always include descriptive alternative text (alt text) for images using the alt attribute within the <img> element. Alt text should convey the purpose and content of the image to users who cannot see it, such as those using screen readers. This practice enhances accessibility and also improves SEO.

Implement Keyboard Navigation: Ensure that all interactive elements, including links, buttons, and form fields, can be accessed and operated using a keyboard alone. This is crucial for users who rely on keyboard navigation due to mobility impairments or other disabilities. Test your website's keyboard accessibility to make sure that focus indicators are visible and that the navigation order is logical and intuitive.

5. Crate a web page the highlighted the features of HTML5. Use appropriates semantic tag to structure the content and showcase at least three key feature of HTML5 with explanation.

```
<!DOCTYPE html>
<html lang="en">
```

```
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Document</title>
</head>
<body>
   <header>
      <h1>Key Features of HTML5</h1>
      <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Culpa, nisi?</p>
   </header>
   <Section>
      <h3>Feature : Video Play</h3>
      <p>HTML5 introduce video play feature </p>
      <video src="/Media Assignment/COKA COKA Song.mp4" controls width="300px"
height="200px" autoplay muted></video>
   </Section>
   <section>
      <h3>Feature 2: Login Page</h3>
      <form action="">
         <h2>Login</h2>
      <label for="usename">Username</label>
      <input type="text" name="username" placeholder="username" id="username">
      <br>
      <label for="password">Password</label>
      <input type="text" name="password" placeholder="password" id="password">
      <br>
      <button>Submit</button>
   </form>
   <section>
      <h3>Feature 3: Semantic Tags</h3>
      <p>HTMl5 has some semantic tag like <nav>, <header>, <main>, <footer>,
which improve web page structure.</p>
   </section>
      <Article>
         <h2>Articles</h2>
         <p>Represents a self-contained composition, such as a news article or blog
post.</p>
      </Article>
      <footer>
         <p>Mukesh</p>
      </footer>
</body>
</html>
```

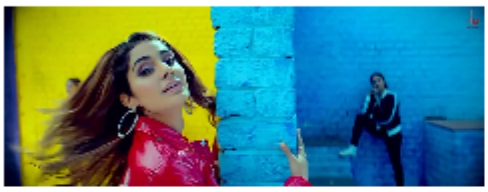
Output:

Key Features of HTML5

Lorem ipsum dolor sit amet consectetur adipisicing elit. Culpa, nisi?

Feature : Video Play

HTML5 introduce video play feature



Feature 2: Login Page

Login

Username username
Password password
Submit

Feature 3: Semantic Tags

HTML5 has some sementic tag like nav>, header>, main>, footer>, which improve web page structure.

Articals

Represents a self-contained composition, such as a news article or blog post.

6. **Create a simple web age which has a table. The table must have 2 column HTML and HTML5. The table should include a minimum of three rows describing the difference 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">
   <title>HTML5/HTML</title>
   <style>
      table, td, tr{
         border: 2px solid #000 ;
      }
   </style>
```

```
</head>
<body>
  <table>
  <h1>Differance between HTML and HTML5</h1>
  <tr>
    <th>HTML</th>
    <th>HTML5</th>
  </tr>
  <tr>
    <td>It didn't support audio and video without the use of flash player support.</td>
    <td>It supports audio and video controls with the use of <audio> and <video> tags.</td>
  </tr>
  <tr>
    <td>Does not allow JavaScript to run in browser.</td>
    <td>Allows JavaScript to run in background. This is possible due to JS Web worker API in HTML5.</td>
  </tr>
  <tr>
    <td>It does not allow drag and drop effects.</td>
    <td>It allows drag and drop effects.</td>
  </tr>
  <tr>
    <td>It is almost impossible to get true GeoLocation of user with the help of browser.</td>
    <td>One can track the GeoLocation of a user easily by using JS GeoLocation API.</td>
  </tr>
  <tr>
    <td>It can not handle inaccurate syntax.</td>
    <td>It is capable of handling inaccurate syntax.</td>
  </tr>
</table>
</body>
</html>
```

Output:

Differance between HTML and HTML5

HTML	HTML5
It didn't support audio and video without the use of flash player support.	It supports audio and video controls with the use of
Does not allow JavaScript to run in browser.	Allows JavaScript to run in background. This is possible due to JS Web worker API in HTML5.
It does not allow drag and drop effects.	It allows drag and drop effects.
It is almost impossible to get true GeoLocation of user with the help of browser.	One can track the GeoLocation of a user easily by using JS GeoLocation API.
It can not handle inaccurate syntax.	It is capable of handling inaccurate syntax.