Web Devlopment Assignment – 1

Q.1 <!DOCTYPE html> is it a tag of HTML? If not, what is it and why do we use it?

Ans: No, **<!DOCTYPE html>** is not a tag in HTML. It is called a Document Type Declaration (DTD) and is used to specify the version of HTML or XHTML being used in a web page.

The **<!DOCTYPE html>** declaration specifically represents the HTML5 document type. It informs the web browser about the version of HTML being used in the document. This declaration must be placed at the very beginning of an HTML document, before the **<html>** tag, to ensure proper rendering and interpretation of the HTML code by the browser.

Q.2 Explain Semantic tags in html? And why do we need it?

Ans: Semantic tags in HTML are elements that provide meaning and structure to the content of a web page. These tags describe the purpose and importance of the content they enclose, allowing web browsers, search engines, and assistive technologies to understand and interpret the page more effectively. Semantic tags are introduced in HTML5 and are designed to enhance the accessibility, search engine optimization (SEO), and overall structure of web documents.

Here are some commonly used semantic tags:

1. **<header>**: Represents the introductory or navigational content at the top of a webpage.
2. **<nav>**: Defines a block of navigation links.
3. **<main>**: Specifies the main content area of a document, excluding header, footer, and navigation.
4. **<article>**: Represents a self-contained composition, such as a blog post or news article.
5. **<section>**: Defines a thematic grouping of content within an article.
6. **<aside>**: Represents content that is tangentially related to the main content, like sidebars or pull quotes.
7. **<footer>**: Represents the footer or closing section of a document or a specific section.
8. **<figure>** and **<figcaption>**: Used to encapsulate and provide a caption for illustrations, diagrams, photos, etc.

There are several reasons why semantic tags are important:

**Accessibility:** Semantic tags provide a clearer structure and meaning to assistive technologies like screen readers. This helps individuals with disabilities to navigate and understand web content more effectively.

**SEO:** Search engines can better understand the content and context of a webpage when semantic tags are used. This can improve the page's visibility and ranking in search engine results.

**Maintainability**: Semantic tags make the HTML code more readable and maintainable. By using tags that accurately describe the content, it becomes easier for developers to understand and modify the structure of a web page.

Q.3 Differentiate between HTML Tags and Elements?

Ans**: HTML Tags:**

HTML tags are the building blocks of HTML markup. They define the structure and appearance of web content. Tags are represented by angle brackets ("<" and ">") and are used to enclose elements. Tags are typically used in pairs: an opening tag and a closing tag.

For example:

<p>This is a paragraph.</p>

In this example, the **<p>** tag is an HTML tag that defines a paragraph element. The opening tag **<p>** denotes the start of the paragraph, and the closing tag **</p>** denotes the end of the paragraph. The actual content, "This is a paragraph," is the element contained within the tags.

**HTML Elements:**

HTML elements are created by using HTML tags. An HTML element consists of an opening tag, the content, and a closing tag (if applicable).

For example:

<h1>This is a heading</h1>

In this example, the **<h1>** element is an HTML element. It consists of an opening tag **<h1>**, the content "This is a heading," and a closing tag **</h1>**

Q.4 Build Your Resume using HTML only.

Ans: <!DOCTYPE html>

<html>

<head>

  <title>My Resume</title>

  <style>

    body {

*font-family*: Arial, sans-serif;

*margin*: 20px;

    }

    h1, h2 {

*margin-bottom*: 5px;

    }

    p {

*margin-bottom*: 10px;

    }

    .section {

*margin-bottom*: 20px;

    }

    .section h2 {

*font-size*: 18px;

    }

    .section p {

*font-size*: 16px;

    }

    .section ul {

*margin-top*: 0;

    }

    .section li {

*margin-bottom*: 5px;

    }

  </style>

</head>

<body>

  <h1>Shubham Singh</h1>

  <p>Full Stack Web Developer</p>

  <div class="section">

    <h2>Contact Information</h2>

    <p>Email: shubhamsingh7167424@gmail.com</p>

    <p>Phone: 7509035096</p>

    <p>Address: M/3 , Amlori, District-Singrauli, MP</p>

  </div>

  <div class="section">

    <h2>Education</h2>

    <p>Bachelor of Electronics and Communication</p>

    <p>IES College of Technology</p>

    <p>Graduation: 6 July 2019</p>

  </div>

  <div class="section">

    <h2>Skills</h2>

    <ul>

      <li>HTML5</li>

      <li>CSS3</li>

      <li>JavaScript</li>

      <li>MongoDB</li>

      <li>MySQL</li>

      <li>Version Control (Git)</li>

    </ul>

  </div>

  <div class="section">

    <h2>Experience</h2>

    <h3>Web Developer, Reliance Jio</h3>

    <p>2 June to 4 Feb</p>

    <ul>

      <li>Developed and maintained Iot related code using C and C++</li>

      <li>Collaborated with team members to implement new features</li>

      <li>Fixing bugs to Optimize the performance </li>

    </ul>

  </div>

  <div class="section">

    <h2>Projects</h2>

    <h3>Personal Portfolio Website</h3>

    <p>Created a responsive portfolio website to showcase my projects and skills.</p>

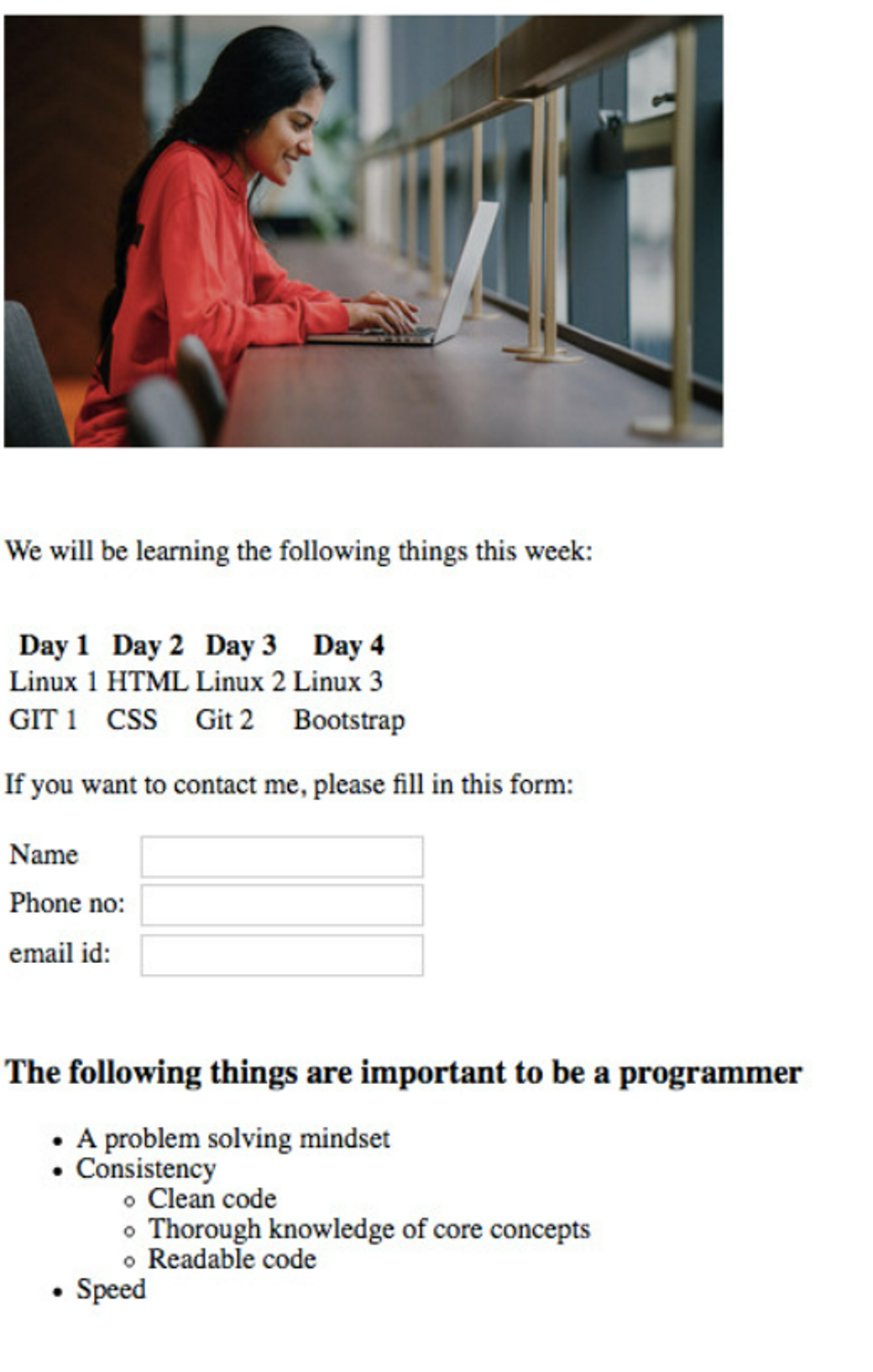
    <h3>Online Store Website</h3>

    <p>Developed an e-commerce website using HTML, CSS, and JavaScript.</p>

  </div>

</body>

</html>

**Q.5** Write HTML code so that it looks like the below image. 

Ans:

<!DOCTYPE html>

<html lang="en">

<head>

  <title>Document</title>

</head>

<body>

  <div class="header">

    <img src="./pexels-anna-shvets-12662899.jpg" alt="a girl using laptop" height="400" width="500">

  </div>

  <main>

    <h3>We will be learning following things this week:</h3>

    <div class="submain">

      <table>

        <tr>

          <th>Day 1</th>

          <th>Day 2</th>

          <th>Day 3</th>

          <th>Day 4</th>

        </tr>

        <tr>

          <td>Linux 1</td>

          <td>HTML</td>

          <td>Linux 2</td>

          <td>Linux 3</td>

        </tr>

        <tr>

          <td>GIT 1</td>

          <td>CSS</td>

          <td>GIT 2</td>

          <td>Bootstrap</td>

        </tr>

      </table>

    </div>

  </main>

  <article>

    <h3>if you want to contact me please fill this form:</h3>

    <label for="name">Name</label>

    <input type="text" class="name">

    <br><br>

    <label for="phone">Phone No:</label>

    <input type="text" class="phone">

    <br><br>

    <label for="email">Email id:</label>

    <input type="text" class="email">

  </article>

  <footer>

    <h2>The Following things are important to be a programmer</h2>

    <ul>

      <li>A problem solving mindset</li>

      <li>Consistency

        <ul>

          <li>Clean code</li>

          <li>Through Knowledge of Core Concepts</li>

          <li>Readable Code</li>

        </ul>

      </li>

      <li>Speed</li>

    </ul>

  </footer>

</body>

</html>

Q.6 What are some of the advantages of HTML5 over its previous versions?

Ans: HTML5 introduced several significant advancements and improvements over its previous versions. Here are some of the key advantages of HTML5:

1. **Enhanced Multimedia Support**: HTML5 introduced native support for audio and video elements, eliminating the need for third-party plugins like Flash. This provides better cross-platform compatibility and improved performance.
2. **Canvas Element**: HTML5 introduced the **<canvas>** element, which allows dynamic, scriptable rendering of graphics, animations, and interactive visualizations directly within the browser, without the need for plugins.
3. **Improved Forms**: HTML5 introduced new form input types (e.g., email, date, number) and attributes (e.g., required, placeholder) that make form handling easier and provide better user experience. It also introduced form validation capabilities, reducing the need for client-side scripting.
4. **Geolocation API**: HTML5 introduced the Geolocation API, enabling web applications to access a user's geographical location information. This feature enables location-based services, maps, and personalized experiences.
5. **Offline Support**: HTML5 introduced the Application Cache API, allowing web applications to work offline or in areas with limited connectivity. It enables developers to define which files should be cached locally, providing offline access to web pages and resources.
6. **Improved Semantics**: HTML5 introduced new semantic elements like **<header>**, **<nav>**, **<footer>**, **<section>**, etc., which provide better structure and meaning to web content. This improves accessibility, SEO, and overall document structure.

**Q.7** Create a simple Music player using html only

Ans: <!DOCTYPE html>

<html>

<head>

<title>Simple Music Player</title>

</head>

<body>

<audio controls>

<source src="Achha Sila Diya - B Praak 320 Kbps.mp3" type="audio/mp3">

</audio>

<div>

<button id="play">Play</button>

<button id="pause">Pause</button>

</div>

<script>

*var* audio = document.querySelector("audio");

*var* playButton = document.getElementById("play");

*var* pauseButton = document.getElementById("pause");

playButton.addEventListener("click", *function*() {

audio.play();

});

pauseButton.addEventListener("click", *function*() {

audio.pause();

});

</script>

</body>

</html>

**Q.8** What is the difference between <figure> tag and <img> tag?

Ans: The <figure> tag and <img> tag serve different purposes and have distinct roles within HTML. Here's the difference between the two:

**<img> tag:**

The <img> tag is used to insert an image into an HTML document. It is a self-closing tag and does not require a closing tag. The <img> tag requires the src attribute, which specifies the source URL of the image. It may also include other attributes such as alt, width, height, etc., to provide additional information about the image.

Example usage of the <img> tag:

<img src="path\_to\_image.jpg" alt="Image Description">

**<figure> tag:**

The **<figure>** tag represents self-contained content, typically an image, illustration, diagram, code snippet, etc., that is referenced within the main content of an HTML document. It is used to group the content and provide a context or caption for it using the **<figcaption>** tag.

Example usage of the **<figure>** and **<figcaption>** tags:

<figure>

<img src="path\_to\_image.jpg" alt="Image Description">

<figcaption>Caption for the image</figcaption>

</figure>

In this example, the **<figure>** tag encapsulates both the **<img>** tag and the **<figcaption>** tag. The **<img>** tag represents the image content, while the **<figcaption>** tag provides a caption or description for the image.

**Q.9** What’s the difference between HTML tag and attribute and give example of some global attributes?

Ans: **HTML Tags:** HTML tags define the structure and elements of an HTML document. They enclose specific content and indicate how that content should be displayed or treated by web browsers.

Example: **<h1>This is a heading</h1>**

In this example, the **<h1>** tag is an HTML tag that defines a heading element. The opening tag **<h1>** denotes the start of the heading, and the closing tag **</h1>** denotes the end of the heading. The actual content, "This is a heading," is the element contained within the tags.

**HTML Attributes:** HTML attributes provide additional information or properties to HTML elements. They are used within opening tags to modify the behavior, appearance, or functionality of elements. Attributes are placed inside the opening tag and consist of a name-value pair, separated by an equals sign ("=").

Example: **<a href="https://www.google.com">Visit Google</a>**

In this example, the **<a>** tag represents a hyperlink element. The **href** attribute specifies the URL that the link should point to. The attribute value, "<https://www.google.com>," provides the link destination.

**Global Attributes:** Global attributes are attributes that can be used with any HTML element, regardless of its specific tag. These attributes provide common functionality and properties that apply universally to elements throughout the HTML document. Some examples of global attributes include:

1. **class**: Specifies one or more class names to apply to an element, allowing CSS styles or JavaScript manipulation to target specific elements.
2. **id**: Provides a unique identifier for an element, enabling CSS or JavaScript to select and manipulate that specific element.
3. **style**: Specifies inline CSS styles to be applied to an element, allowing for customization of appearance.
4. **title**: Provides additional information or a tooltip text for an element, typically displayed when hovering over the element.
5. **lang**: Specifies the language of the content within an element, aiding in language-specific processing or styling.

**Q.10** Write Html code so that it looks like the below image

