Assignment Questions 1

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

Ans -

<!DOCTYPE html> is not a tag of HTML; it is called a doctype declaration HTML5. The doctype declaration is used at the beginning of an HTML document to specify the version of HTML being used. It informs the web browser about the markup language used in the document, which helps the browser render the content correctly.

By including <!DOCTYPE html> at the beginning of an HTML document, you are indicating that the document is written in HTML5. HTML5 is the latest version of HTML and is widely supported by modern web browsers. The doctype declaration is important because different versions of HTML have different syntax and rules. Browsers use this information to determine how to interpret and render the content of the web page. Without a proper doctype declaration, the browser may fall back to a different rendering mode or exhibit quirks that can lead to inconsistent behavior across different browsers.

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

Ans -

Semantic tags in HTML are elements that provide meaning and context to the structure and content of a web page. They are designed to convey the purpose and significance of different sections of the document, making it easier for both developers and search engines to understand the content. There are some examples of semantic tags.

- ***Header*** - It defines the introductory part of the web page that contains branding, navigation etc.
- ***Nav*** - Defines a section of navigation link.
- ***Main*** - Defines the main content of the web pages, excluding headers, footers, and sidebars.
- ***Article*** - Represents a self-contained composition within a document, such as a blog post, news article, or forum post.
- ***Section*** - Defines a generic section of content that is thematically related.
- ***Aside -*** Represents content that is tangentially related to the main content, such as sidebars or advertising.

- **_Footer_** - Represents the footer section of a document or a section within a document, typically containing information such as authorship, copyright, and contact details.

Need of semantic tags:-
- The semantic HTML tags help the search engines and other user devices to determine the importance and context of web pages.
- The pages made with semantic elements are much easier to read.
- It has greater accessibility. It offers a better user experience.

Q.3 Differentiate between HTML Tags and Elements?

Ans -

HTML tags -
Tags are the basic building blocks of HTML and are used to define the structure and presentation of web documents.They are represented by angular brackets (< >) and come in pairs: an opening tag and a closing tag. The opening tag contains the name of the HTML element, while the closing tag has the same name preceded by a forward slash (/).
Tags define the beginning and end of an HTML element and enclose the content that makes up that element.
E.g-
<h1>Hello, World!</h1> , Here h1 is the tag.

HTML elements -
Elements are complete units in HTML that consist of an opening tag, content, and a closing tag (if applicable). They include the entire package of tags and the content enclosed between the opening and closing tags.
E.g-
<h1>Hello, World!</h1> , Here <h1>,</h1> and content(Hello, world) all make elements with combination.

Q.4 Build Your Resume using HTML only.

Ans -

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width,
initial-scale=1.0">
    <title>Lakshman's Resume</title>
```

```html
    <link rel="stylesheet"
href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.4.0/
css/all.min.css"
integrity="sha512-iecdLmask17CVkqkXNQ/ZH/XLlvWZOJyj7Yy7tcenmpD1y
pASozpmT/E0iPtmFIB46ZmdtAc9eNBvH0H/ZpiBw=="
crossorigin="anonymous" referrerpolicy="no-referrer" />
</head>
<body >

    <img src="laksh image.jpeg" alt="my picture" width="200px">
    <h1>Lakshman Kumar</h1>
    <p>+91 7672834696 | lakshmankumar2603@gmail.com</p>
    <h2>An aspiring full stack <mark>Web Developer</mark></h2>
    <div class="skills">
        <table >
            <tr>
                <th colspan="2">SKILLS</th>
            </tr>
            <tr>
                <th>Frontend : </th>
                <td>HTML, CSS, Javascript</td>
            </tr>
            <tr>
                <th>Backend : </th>
                <td>Nodejs, Express</td>
            </tr>
            <tr>
                <th>Database : </th>
                <td>MYSQL, MongoDB</td>
            </tr>
            <tr>
                <th>Programming language: </th>
                <td>Java, C/C++, PHP</td>
            </tr>
            <tr>
                <th>Others : </th>
                <td>DSA, Git & Github, Tailwind</td>
            </tr>
        </table>
    </div>
    <div class="education">
```

```html
        <h2>Education</h2>
        <p><b>Bachelor in Computer Application</b></p>
        <p>Ranchi university, Ranchi | 2021 - present</p>
        <p><b>Intermediate in Science (PCM)</b></p>
        <p> Marwari college, Ranchi | 2019 - 2021</p>
    </div>
    <div class="projects">
        <h2>Projects</h2>
        <a
href="https://glowing-boba-b05bd4.netlify.app/">Banking
application</a><br>
        <a
href="https://shimmering-cheesecake-503856.netlify.app/">Passwor
d validator</a><br>
        <a
href="https://64871f84b04d28347b28daa1--thunderous-sprinkles-2d4
7b0.netlify.app/">Real Estate</a>
    </div>
    <div class="social-media">
        <a
href="https://www.linkedin.com/in/lakshman-kumar-76c/"><i
class="fa-brands fa-linkedin"></i></a>
        <a href="https://github.com/Lakshman76"><i
class="fa-brands fa-github"></i></a>
        <a href="https://twitter.com/Lakshman__26"><i
class="fa-brands fa-twitter"></i></a>
    </div>
</body>
</html>
```

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

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width,
initial-scale=1.0">
    <title>Question 5</title>
</head>
```

```html
<body>
    <img src="oguzhan-akdogan-qYMkkREOHa4-unsplash.jpg"
alt="image" width="400px">
    <h3>We will be learning the following things this week</h3>
    <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>
    <form action="">
        <h3>If you want to connect with me, please fill this
form</h3>
        <div>
            <label for="name">Name</label>
            <input type="text" id="name" style="margin-bottom:
10px;">
        </div>
        <div>
            <label for="mob">Phone no:</label>
            <input type="tel" id="mob" style="margin-bottom:
10px;">
        </div>
        <div>
            <label for="email">Email ID:</label>
            <input type="email" id="email" style="margin-bottom:
10px;">
```

```
        </div>
    </form>
    <h2>The following things are important for 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>
</body>
</html>
```

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

Ans -

HTML5, the latest version of Hypertext Markup Language, introduced several advantages and improvements over its previous versions. Here are some of the key advantages of HTML5 -

- *Improved Semantics:* HTML5 introduced new semantic elements like <header>, <footer>, <nav>, <article>, and more. These elements provide a clear structure of web pages, making them more meaningful for search engines.
- *Enhanced Multimedia Support:* HTML5 introduced native support for audio and video elements without the need for third-party plugins like Flash. This made it easier to embed multimedia content directly into web pages, improving compatibility, performance, and accessibility.
- *Mobile Device Support* : HTML5 includes features that are particularly beneficial for mobile devices. It introduced new input types (such as date, time, email, etc.), touch events, and geolocation APIs, making it easier for developers to create mobile-friendly and location-aware web applications.
- *Offline Web Applications:* HTML5 introduced the Application Cache and Local Storage APIs, which enable developers to create offline

web applications. Users can still access and use web applications even when they are not connected to the internet, improving the user experience and productivity.

- ***Canvas Element:*** HTML5 introduced the <canvas> element, which allows dynamic rendering of graphics, animations, and visualizations directly in the browser, eliminating the need for external plugins or technologies.
- ***Cross-platform Compatibility:*** HTML5 was designed to work consistently across different platforms and devices. It is supported by all major web browsers, making it easier for developers to create web applications that work seamlessly across multiple platforms.

Q.7 Create a simple Music player using html only

Ans -

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Music Player</title>
</head>
<body>
    <audio controls src="song.mp3"></audio>
</body>
</html>
```

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

Ans -

<img> :-

- The <img> tag is used to embed an image into an HTML document. It is a self-closing tag and requires the src attribute to specify the image source.
  E.g-
  ```html
  <img src="img-1.jpg" alt="img-1">
  ```

<figure> :-

- The <figure> tag is used to group together multimedia content, such as images, illustrations, diagrams, videos, etc., along with their captions or descriptions.
  E.g-

```
<figure>
    <img src="img-1.jpg" alt="image">
    <figcaption>This is the nature image</figcaption>
</figure>
```

Q.9 What's the difference between html tag and attribute and give examples of some global attributes?
Ans -

HTML tag -
HTML tags are used to define the structure of the web page. They are enclosed with the angle brackets (< >).

```
<h1>This is Heading</h1>
<p>This is a paragraph</p>
```

HTML attribute -
HTML attribute provides additional information about the HTML elements. They are placed within the opening tag of the element.

```
// Here 'href' is an attribute
<a href="https://google.com">Click Me</a>
```

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

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width,
initial-scale=1.0">
    <title>Schedule</title>
    <style>
        table,th,td{
            border: 2px solid black;
```

```html
            font-size: 30px;
        }
    </style>
</head>
<body>
    <table>
        <tr>
            <th rowspan="3">Day</th>
            <th colspan="3">Seminar</th>
            <!-- <th></th>
            <th></th> -->
        </tr>
        <tr>
            <th colspan="2">Schedule</th>
            <th rowspan="2">topic</th>
        </tr>
        <tr>
            <th>Begin</th>
            <th>end</th>
        </tr>
        <tr>
            <td rowspan="2">Monday</td>
            <td rowspan="2">8:00 a.m.</td>
            <td rowspan="2">5:00 p.m.</td>
            <td>Introduction to XML</td>
        </tr>
        <tr>
            <td>Validity DtD Relad NG</td>
        </tr>
        <tr>
            <td rowspan="3">Tuesday</td>
            <td>8:00 a.m.</td>
            <td>11:00 a.m.</td>
            <td rowspan="2">XPath</td>
        </tr>
        <tr>
            <td>11:00 a.m.</td>
            <td>2:00 p.m.</td>
        </tr>
        <tr>
            <td>2:00 p.m.</td>
```

```
            <td>5:00 p.m.</td>
            <td>XSL Transformations</td>
        </tr>
        <tr>
            <td>Wednesday</td>
            <td>8:00 p.m.</td>
            <td>12:00 p.m.</td>
            <td>XSL Formatting Objects</td>
        </tr>
    </table>
</body>
</html>
```