Programs must be written for people to read, and only incidentally for machines to execute

TABLE OF CONTENTS

INTRODUCTION TO HTML

What is HTML?

• HTML stands for HyperText Markup Language.
• It's the standard markup language used to create and design web pages.
• HTML tags tells the browser how to format and display the content.

Basic Structure of HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Title of the Document</title>
</head>
<body>
    <!-- Content goes here -->
</body>
</html>
```

ANATOMY OF HTML TAGS

Opening tags, closing tags, Self-Closing Tag

- \<p\>
- \</p\>
- \<img src="example.jpg" alt="Example Image"\>

Attribute and their significance

- Provides additional information and modifying their behavior or appearance.

<u>Example</u>

1. \<img **src**="example.jpg" **alt**="Example Image" **width**="200" **height**="150"\>
2. \<a **href**="https://example.com" **target**="_blank"\>link content\</a\>
3. \<input **type**="text" **placeholder**="Enter your name" **value**=""\>

HTML div Element

- It is a versatile container used to group together other HTML elements.

ID and class attributes

- The class attribute is used to group HTML elements together and apply CSS styles to them collectively.
- The **id** attribute is used to uniquely identify a specific element on a web page.

TEXT AND LINKS

Text elements

- **Paragraph (<p>):** Used to display paragraphs of text.
- **Heading (<h1> to <h6>):** Used to display headings of different levels.
- **Span (<span>):** Used for styling or grouping inline elements.

Why proper elements is Important?

- Affects how search engines, screen readers, and browsers interpret and display the content.

Link and navigation

- **Anchor (<a>):** Used to create hyperlinks.
- **Image (<img>):** Used to embed images, often within links.
- **Button (<button>):** Used to create clickable buttons, which can also act as links.
- **Navigation (<nav>):** Used to create navigation links.

Position VS Relative Path

- About Us
- <img src="images/example.jpg" alt="Example Image">

- About Us
- <img src="https://www.example.com/images/example.jpg" alt="Example Image">

IMAGES AND MULTIMEDIA

Image

```html
<img src="img_url.jpg" alt="Girl in a jacket" width="5000" height="1000">
```

Multimedia (Video and Audio):

- Video

```html
<video controls>
    <source src="video.mp4" type="video/mp4"> Your browser does not support the video tag.
</video>
```

- Audio

```html
<audio controls>
    <source src="audio.mp3" type="audio/mp3"> Your browser does not support the audio tag.
</audio>
```

HTML INPUT AND FORMS

Forms

- **Email Input**
  <label for="email">Email:</label>
  <input type="email" id="email" name="email" required>

- **Date Input**
  <input type="date" id="birthdate" name="birthdate">

- **Number Input**
  <input type="number" id="quantity" name="quantity" min="1" max="10">

- **File Input**
  <input type="file" id="avatar" name="avatar">

- **Checkbox and Radio Button**
  <input type="checkbox" id="subscribe" name="subscribe" checked>
  <input type="radio" id="male" name="gender" value="male">

- **Color Input**
  <input type="color" id="color" name="color">>

HTML INPUT AND FORMS

Forms

- **Dropdown**
  ```html
  <select name="country">
      <option value="usa">United States</option>
      <option value="canada">Canada</option>
      <option value="uk">United Kingdom</option>
  </select>
  ```

HTML LIST

Forms

- **Ordered List (<ol>):**

  An ordered list is a list where each item is numbered

  ```
  <ol>
    <li>First item</li>
    <li>Second item</li>
  </ol>
  ```

- **Unordered List (<ol>):**

  An ordered list is a list where each item is numbered

  ```
  <ul>
    <li>First item</li>
    <li>Second item</li>
  </ul>
  ```

- **Description List (<ol>):**

  An ordered list is a list where each item is numbered

  ```
  <dl>
    <dt>Coffee</dt>
    <dd>- black hot drink</dd>
    <dt>Milk</dt>
    <dd>- white cold drink</dd>
  </dl>
  ```

- **Nested List (<ol>):**

  An ordered list is a list where each item is numbered

  ```
  <ul>
    <li>Item 1</li>
    <li>Item 2
      <ul>
        <li>Subitem 1</li>
        <li>Subitem 2</li>
      </ul>
    </li>
    <li>Item 3</li>
  </ul>
  ```

HTML TABLE

Table

```html
<table>
 <tr>
    <th>Person 1</th>
    <th>Person 2</th>
    <th>Person 3</th>
 </tr>
 <tr>
    <td>Emil</td>
    <td>Tobias</td>
    <td>Linus</td>
 </tr>
 <tr>
     <td>16</td>
     <td>14</td>
     <td>10</td>
 </tr>
</table>
```

SEMANTIC HTML AND BEST PRACTICES

Introduction

Semantic HTML refers to the practice of using HTML elements in a way that accurately represents the content's meaning and structure.

Why semantic HTML?

- It enhances the accessibility.
- SEO

Semantic Vs non Semantic

```
<header>
    <div class="logo">Logo</div>
    <nav>Menu</nav>
</header>
```

```
<div class="header">
    <div class="logo">Logo</div>
    <div class="menu">Menu</div>
</div>
```

SEMANTIC HTML AND BEST PRACTICES

```html
<nav>
  <a href="/html/">HTML</a> |
  <a href="/css/">CSS</a> |
</nav>

<aside>
 <h3>Related Content</h3>
 <p>Additional information...</p>
</aside>

<section>
    <h2>Home Section</h2>
    <p>Section content...</p>
</section>

<section>
 <h2>Skills Section</h2>
 <p>Section content...</p>
</section>

<footer>
    <p>&copy; 2024 Example Company</p>
</footer>
```

CUSTOM ELEMENTS

```html
<my-custom-element>

</my-custom-element>

<!-- Custom Element Definition -->
<script>
     class MyCustomElement extends HTMLElement {
          constructor() {
           super(); // Custom element implementation...
          }
     }
     customElements.define('my-custom-element', MyCustomElement);
</script>
```

TASKS 1