Complete HTML Notes with Examples and Exercises

1. Introduction to HTML

HTML (HyperText Markup Language) is the foundation of all web pages. It provides the basic structure of a webpage, which is then enhanced by CSS and JavaScript. HTML uses **tags** to mark up text, images, links, and other content for display in a browser.

2. Tags, Elements, and Attributes

- **Tags** are keywords enclosed in angle brackets (e.g., <h1>). They define how the browser should display the enclosed content.
- **Elements** are complete units with an opening tag, content, and closing tag. Example: <p>This is a paragraph.</p>
- **Attributes** provide extra information about elements. They are placed inside the opening tag, like <img src='image.jpg' alt='An image'>.

3. HTML Document Structure

An HTML document follows a standard structure recognized by all browsers. Here's what it looks like:

```
<!DOCTYPE html> <html> <head> <title>My Webpage</title> </head> <body> <h1>Welcome
to My Page</h1> <p>This is a paragraph.</p> </body> </html>
```

4. Headings and Paragraphs

HTML provides six levels of headings (<h1> to <h6>), used to define different levels of titles. Paragraphs are written using the <p> tag.

```
<h1>Main Heading</h1> <h2>Sub Heading</h2> <p>This is a paragraph.</p>
```

5. Lists

HTML supports ordered (<ol>), unordered (<ul>), and definition (<dl>) lists.

```
<ul> <li>Apple</li> <li>Banana</li> <li>Cherry</li> </ul>
```

6. Links and Images

Links are created with the <a> tag and images with the <img> tag.

```
<a href="https://www.example.com">Visit Example</a> <img src="image.jpg" alt="Sample
Image" width="300" height="200">
```

7. Tables and Forms

Tables organize data in rows and columns. Forms collect user input.

```
<table border="1"> <tr><th>Name</th><th>Age</th></tr>
<tr><td>Alice</td><td>24</td></tr> <tr><td>Bob</td><td>30</td></tr> </table> <form
action="/submit" method="post"> <label for="name">Name:</label> <input type="text"
id="name" name="name"> <input type="submit" value="Submit"> </form>
```

8. Semantic HTML

Semantic HTML introduces tags that convey meaning, improving accessibility and SEO. Examples include <header>, <footer>, <article>, <section>, and <nav>.

HTML Exercises

1. Create a webpage with your name as the title and a short biography.
2. Add an image and a hyperlink to your favorite website.
3. Build a list of your top 5 hobbies.
4. Design a table showing names, ages, and favorite colors.
5. Create a contact form with Name, Email, and Submit fields.