

HTML5 – Assignment

Q1: Define HTML. What is the purpose of HTML in web development?

HTML (Hypertext Markup Language) is the standard language used to create and design the structure of web pages. It provides the basic framework of a webpage, allowing developers to add content such as text, images, videos, and links. Its primary purpose is to describe the structure of a webpage in a way that browsers can interpret and display.

Q2: Explain the basic structure of an HTML document. Identify the mandatory tags and their purposes.

An HTML document has a standard structure:

- `<html>`: The root tag that wraps the entire document.
- `<head>`: Contains metadata like the title of the webpage, links to stylesheets, and scripts.
- `<title>`: Sets the title that appears on the browser tab.
- `<body>`: Holds the main content of the webpage displayed to users.

For example:

```
<!DOCTYPE html>
<html>
  <head>
    <title>Page Title</title>
  </head>
  <body>
    <h1>Welcome!</h1>
    <p>This is a webpage.</p>
  </body>
</html>
```

Q3: What is the difference between block-level elements and inline elements in HTML? Provide examples of each.

- **Block-level elements:** Take up the full width of their parent container and start on a new line. Examples: <div>, <p>, <h1> to <h6>, <section>.
- **Inline elements:** Occupy only as much width as necessary and remain on the same line. Examples: , <a>, .

Q4: Discuss the role of semantic HTML. Why is it important for accessibility and SEO? Provide examples of semantic elements.

Semantic HTML uses elements with meaningful names that describe their purpose, like `<header>`, `<footer>`, `<article>`, and `<nav>`. This improves accessibility by helping screen readers understand the content, and enhances SEO by allowing search engines to interpret the structure of the webpage better.

Q5: What are HTML forms used for? Describe the purpose of the input, textarea, select, and button elements.

HTML forms are used to collect user input and send it to a server for processing.

- `<input>`: Collects basic data like text, email, or numbers.
- `<textarea>`: Allows multi-line text input.
- `<select>`: Creates a dropdown menu for predefined choices.
- `<button>`: Used to submit or reset the form.

Q6: Explain the difference between the GET and POST methods in form submission. When should each be used?

- **GET**: Appends data to the URL. Suitable for non-sensitive data like search queries.
- **POST**: Sends data in the body of the request. Used for sensitive or large amounts of data like login credentials.

Q7: What is the purpose of the label element in a form, and how does it improve accessibility?

The `<label>` element connects to an input field (via the `for` attribute), making it easier for users with screen readers to understand the form structure. Clicking the label also focuses the associated input field, improving usability.

Q8 Explain the structure of an HTML table and the purpose of each of the following elements: `<table>`, `<tr>`, `<th>`, `<td>`, and `<thead>`.

- `<table>`: Defines the table structure.
- `<tr>`: Represents a row in the table.
- `<th>`: Defines a header cell.
- `<td>`: Represents a standard cell for data.
- `<thead>`: Groups header rows for easier styling and structure.

Q9: What is the difference between `colspan` and `rowspan` in tables? Provide examples.

- **Colspan**: Merges multiple columns into one.

Example: `<td colspan="2">Merged Column</td>`

- **Rowspan**: Merges multiple rows into one.

Example: `<td rowspan="2">Merged Row</td>`

**Q10: Why should tables be used sparingly for layout purposes?
What is a better alternative?**

Tables can make the code complex and less accessible. A better alternative is to use **CSS Grid** or **Flexbox**, which offer more flexibility and cleaner code for layouts.