ASSIGNMENT 1

1. Difference between HTML and XHTML

ans:

Difference between HTML and XHTML as follows:

|  |  |
| --- | --- |
| HTML | XHTML |
| HTML stands for Hypertext Markup Language. | XHTML stands for Extensible Hypertext Markup Language. |
| It was developed by Tim Berners-Lee. | It was developed by W3C i.e World Wide Web Consortium. |
| It was developed in 1991. | It was released in 2000. |
| It is extended from SGML. | It is extended from XML and HTML. |
| The format is a document file format. | The format is a markup language. |
| All tags and attributes are not necessarily to be in lower or upper case. | In this, every tag and attribute should be in lower case. |
| Doctype is not necessary to write at the top. | Doctype is very necessary to write at the top of the file. |
| It is not necessary to close the tags in the order they are opened. | It is necessary to close the tags in the order they are opened |
| Filename extension used are .html, .htm. | Filename extension are .xhtml, .xht, .xml. |

2. Explain the history of HTML in brief

ans:

HTML is a very evolving markup language and has evolved with various versions updating. Long before its revised standards and specifications are carried in, each version has allowed its user to create web pages in a much easier and prettier way and make sites very efficient.

* HTML 1.0 was released in 1993 with the intention of sharing information that can be readable and accessible via web browsers. But not many of the developers were involved in creating websites. So the language was also not growing.
* Then comes HTML 2.0, published in 1995, which contains all the features of HTML 1.0 along with a few additional features, which remained the standard markup language for designing and creating websites until January 1997 and refined various core features of HTML.
* Then comes HTML 3.0, where [Dave Raggett](https://en.wikipedia.org/wiki/Dave_Raggett) introduced a fresh paper or draft on HTML. It included improved new features of HTML, giving more powerful characteristics for webmasters in designing web pages. But these powerful features of the new HTML slowed down the browser in applying further improvements.
* Then comes HTML 4.01, which is widely used and was a successful version of HTML before HTML 5.0, which is currently released and used worldwide. HTML 5 can be said for an extended version of HTML 4.01, which was published in the year 2012.

3. What is HTML attribute? Describe HTML elements with its types

Ans:

An HTML attribute is a modifier or setting that provides additional information about an HTML element. Attributes are placed inside the opening tag of an element and typically come in name-value pairs. The name identifies the attribute, and the value specifies its setting or effect.

### **Types of HTML Elements**

1.Structural Elements  
These elements define the overall structure of a webpage.

* <html>: The root element of an HTML document.
* <head>: Contains metadata, links to stylesheets, and scripts.
* <body>: Contains the visible content of a webpage.
* <header>: Defines the introductory section of a webpage.
* <footer>: Represents the closing section, often containing copyright or contact info.

2.Text Content Elements  
These elements display textual information.

* <p>: Paragraph.
* <h1> to <h6>: Headings, where <h1> is the most important.
* <span>: Inline container for text styling.
* <blockquote>: Block of quoted text.
* <pre>: Preformatted text.
* <br>: Line break.

3.Media Elements  
These elements are used to embed images, videos, or audio.

* <img>: Embeds an image.
* <audio>: Embeds audio.
* <video>: Embeds a video.

4.Interactive Elements  
Used to create user interaction.

* <button>: Clickable button.
* <input>: Input field for forms.
* <textarea>: Multi-line text input.
* <select>: Drop-down list.
* <label>: Label for form elements.

5.Table Elements  
Used to create tables.

* <table>: Defines a table.
* <tr>: Table row.
* <th>: Table header cell.
* <td>: Table data cell.
* <caption>: Table caption.

6.List Elements  
For creating lists.

* <ul>: Unordered list (bullets).
* <ol>: Ordered list (numbers).
* <li>: List item.

4. What is tag in HTML? Describe the different types of Tags in HTML

Ans:

HTML tags are composed of an opening tag, content, and a closing tag. The opening tag marks the beginning of an element, and the closing tag marks the end. The content is the information or structure that falls between the opening and closing tags.

Here are the different types of tags in HTMLl :

1.[<html> Tag](https://www.geeksforgeeks.org/html-html-tag/):

The <html> tag is the root element of an HTML document. It encapsulates the entire content of the page.

2.[<head> Tag](https://www.geeksforgeeks.org/html-head-tag/):

The <head> tag contains meta-information about the HTML document, such as the title, links to stylesheets, and character set declaration.

3.[<body> Tag](https://www.geeksforgeeks.org/html-body-tag/):

The <body> tag encloses the main content of the HTML document, including text, images, links, and other elements.

4.[Heading Tags <h1> to <h6>](https://www.geeksforgeeks.org/html-h1-to-h6-tag/):

Heading tags are used to define headings in HTML, ranging from <h1> as the largest to <h6> as the smallest.

5.[Paragraph Tag <p>](https://www.geeksforgeeks.org/html-paragraph/):

The <p> tag is used to define paragraphs of text.

6.[Anchor Tag <a>](https://www.geeksforgeeks.org/html-a-tag/):

The <a> tag creates hyperlinks. The href attribute specifies the URL of the linked page.

7.[Image Tag <img>](https://www.geeksforgeeks.org/html-img-tag/):

The <img> tag is used to embed images. The src attribute specifies the image file.

5. Describe the use of hyperlink tag

Ans:

The hyperlink tag, <a>, in HTML is primarily used to create hyperlinks to other web pages or resources. Hyperlinks are the backbone of the web, allowing users to navigate between pages or jump to specific sections within a page.

**HTML Links**, also known as **hyperlinks**, are defined by the **<a>** tag in HTML, which stands for “anchor.” These links are essential for navigating between web pages and directing users to different sites, documents, or sections within the same page.

The basic attributes of the <a> tag include **href**, **title**, and **target**, among others.

Basic Syntax of an HTML Link:<a href="https://www.example.com">Visit Example</a>

6.Create a basic HTML table with cell padding, cellspacing, rowspan, colspan and border attribute

ans:<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Basic HTML Table</title>

</head>

<body>

<table border="1" cellpadding="10" cellspacing="0">

<tr>

<th colspan="2">Header 1</th>

<th rowspan="2">Header 2</th>

</tr>

<tr>

<td>Row 1, Cell 1</td>

<td>Row 1, Cell 2</td>

</tr>

<tr>

<td rowspan="2">Row 2, Cell 1 (Spanning 2 rows)</td>

<td>Row 2, Cell 2</td>

<td>Row 2, Cell 3</td>

</tr>

<tr>

<td colspan="2">Row 3, Cell 2 and Cell 3 (Spanning 2 columns)</td>

</tr>

</table>

</body>

</html>

7.Create a basic HTML form that includes text field for name, number field for age, a field for salary,

a select dropdown, radio button for gender, checkbox for hobbies and text area for description

ans:<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Basic HTML Form</title>

</head>

<body>

<h1>Basic HTML Form</h1>

<form action="/submit\_form" method="POST">

<label for="name">Name:</label><br>

<input type="text" id="name" name="name" required><br><br>

<label for="age">Age:</label><br>

<input type="number" id="age" name="age" required><br><br>

<label for="salary">Salary:</label><br>

<input type="number" id="salary" name="salary" step="0.01" required><br><br>

<label for="gender">Gender:</label><br>

<input type="radio" id="male" name="gender" value="male">

<label for="male">Male</label><br>

<input type="radio" id="female" name="gender" value="female">

<label for="female">Female</label><br><br>

<label for="hobbies">Hobbies:</label><br>

<input type="checkbox" id="hobby1" name="hobbies" value="reading">

<label for="hobby1">Reading</label><br>

<input type="checkbox" id="hobby2" name="hobbies" value="traveling">

<label for="hobby2">Traveling</label><br>

<input type="checkbox" id="hobby3" name="hobbies" value="sports">

<label for="hobby3">Sports</label><br><br>

<label for="description">Description:</label><br>

<textarea id="description" name="description" rows="4" cols="50" required></textarea><br><br>

<label for="options">Choose an option:</label><br>

<select id="options" name="options">

<option value="option1">Option 1</option>

<option value="option2">Option 2</option>

<option value="option3">Option 3</option>

</select><br><br>

<input type="submit" value="Submit">

</form>

</body>

</html>

8.Discuss HTML events with examples.

ans:HTML events are actions or occurrences that happen in the browser, which can be detected and responded to by JavaScript. Events allow developers to create interactive and dynamic web pages by executing JavaScript code when a specific user interaction or system action occurs.

Categories of HTML Events

1. **Mouse Events** Triggered by mouse actions.
   * onclick: Fires when an element is clicked.
   * onmouseover: Fires when the mouse pointer moves over an element.
   * onmouseout: Fires when the mouse pointer moves out of an element.
   * onmousedown: Fires when a mouse button is pressed on an element.
   * onmouseup: Fires when a mouse button is released over an element.

**Example**:<button onclick="alert('Button clicked!')">Click Me</button>

**Keyboard Events** Triggered by keyboard interactions.

* onkeydown: Fires when a key is pressed down.
* onkeypress: Fires when a key is pressed (deprecated; use onkeydown or onkeyup instead).
* onkeyup: Fires when a key is released.

**Example**:<input type="text" onkeydown="console.log('Key pressed')" placeholder="Type here"

**Form Events** Triggered by user interaction with form elements.

* onsubmit: Fires when a form is submitted.
* onchange: Fires when the value of an input element changes.
* onfocus: Fires when an element gains focus.
* onblur: Fires when an element loses focus.

**Example**:<form onsubmit="alert('Form submitted!'); return false;">

<input type="text" placeholder="Enter name">

<button type="submit">Submit</button>

</form>

**Window Events** Triggered by actions on the browser window.

* onload: Fires when the page has finished loading.
* onresize: Fires when the browser window is resized.
* onscroll: Fires when the user scrolls the page.
* onunload: Fires when the user leaves the page.

**Example**:

<body onload="alert('Page loaded!')">

Welcome to my website.

</body>

**Clipboard Events** Triggered during copy, cut, or paste actions.

* oncopy: Fires when content is copied.
* oncut: Fires when content is cut.
* onpaste: Fires when content is pasted.

**Example**:

<textarea oncopy="alert('Content copied!')"></textarea>

**Media Events** Triggered by media elements like <audio> or <video>.

* onplay: Fires when playback starts.
* onpause: Fires when playback is paused.
* onended: Fires when playback ends.

**Example**:

<video width="320" height="240" controls onplay="console.log('Video started')">

<source src="video.mp4" type="video/mp4">

Your browser does not support the video tag.

</video>

**Drag and Drop Events** Triggered during drag-and-drop actions.

* ondragstart: Fires when a drag operation begins.
* ondragover: Fires when an element is being dragged over a valid drop target.
* ondrop: Fires when an element is dropped.

**Example**:

<div ondrop="alert('Dropped!')" ondragover="event.preventDefault()" style="width:200px; height:100px; border:1px solid black;">

Drop here

</div>