Theory Assignment

• Question 1: Define HTML. What is the purpose of HTML in web development?

Html is hyper text markup language. Html use To create webpage.

Html was develop by Tim Berners-Lee in 1991.

Html main purpose web development is to structure and content in the internet.

Purpose of HTML:

- Headings
- Paragraphs
- Links
- Images
- Lists
- Tables
- Forms
- Other multimedia elements

• Question 2: Explain the basic structure of an HTML document. Identify the mandatory tags and their purposes

<!DOCTYPE html> : instruction web browse use html version.

<html> : root element for html.

<head> : container meta information and not display in webpage.

<title> : title of webpage.

<body> : container all visible content heading , paragraph etc… and display in webpage.

Syntex :

```
<!DOCTYPE html>
<html>
 <head>
  <title>My First Web Page</title>
 </head>
 <body>
  <h1>Hello, World!</h1>
  <p>This is my first HTML page.</p>
 </body>
</html>
```

• Question 3: What is the difference between block-level elements and inline elements in HTML? Provide examples of each.

- **Block-level element :** block level element always start new line , full width on webpage.

  Ex : <form> , <h1> , <table> , etc…

- **Inline element :** inline element does not start new line , width per requirement.

  Ex : <b> , <small> , <label> , etc…

• Question 4: Discuss the role of semantic HTML. Why is it important for accessibility and SEO? Provide examples of semantic elements.

Semantic tag is clearly describe the meaning of content both browse and developer .

Ex : <header> , <footer> , <section> , <b> , <i> , <mark> etc…

Role of Semantic HTML :

Structure & Readability : Makes your code easier for developers to understand.

Accessibility : Screen readers can navigate content correctly.

SEO (Search Engine Optimization) : Search engines better understand your page content and importance.

Maintainability : Easier to style and modify without breaking meaning.

⍰ Important :

Accessibility : Screen readers rely on semantic tags to tell visually impaired users what section they're in.

SEO : Search engines like Google use semantic elements to understand: Which part is a heading is the main article content. Which is navigation or footer

• Question 1: What are HTML forms used for? Describe the purpose of the input, textarea, select, and button elements.

Html form is section of document which control content.

Form tag is use to collect user input on webpage and send to the server for processing.

- **<input> :** create siglr-line input field and different type text , email , password , number.

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

- **Textarea :** create multi-line input field ex : address , feed back , massage.

  <textarea name="" id="" style="width: ; height: ;"></textarea>

- **<select> :** create dropdown list use select tag.

<select>

<option value=””></option>

</select>

- **<button> :** create click button and submit the form use button tag.

  <button>submit</button>

• Question 2: Explain the difference between the GET and POST methods in form submission. When should each be used?

- Get : send data from url throw.

  Data visible address bar.

  Less secure

  Less data store and access.

- Post : send data from http request body throw.

  Dat not visible address bar.

  More secure.

  Large and long data store and access.

• Question 3: What is the purpose of the label element in a form, and how does it improve accessibility?

A label tag is representing caption for a form input.

- **Enhanced Screen Reader Support :** When users navigate a form with a screen reader, the <label> text is read aloud, providing context for the corresponding input field. This helps users understand what information to enter.
- **Larger Clickable Area:** Clicking or tapping on a <label> will activate its associated input field (checkbox, radio button, text field, etc.). This creates a

larger clickable area, making it easier for users with motor impairments or those using touchscreens to interact with the form.

- **Improved Understanding and Navigation:** Labels make it clear what each form field is for, reducing confusion and improving the overall user experience.

• Question 1: Explain the structure of an HTML table and the purpose of each of the following elements:

Structure:

```
<table>
<tr>
<thead>
        <th>no</th>
        <th>name</th>
</tr>
</thead>
<tr>
        <td>1</td>
        <td>rohan</td>
</tr>
<tr>
        <td>2</td>
        <td>soham</td>
</tr>
</table>
```

Purpose:

- Table tag: table tag is use to webpage in tabular form(column and row).table tag within th , tr , td tag use.
- Tr tag : tr means table row and execute row in table.
- Th tag : th means table header and execute header in table.
- Td tag : td means table data and execute data in table.
- Thead : this is use the all table header contain within thead tag.

• Question 2: What is the difference between colspan and rowspan in tables? Provide examples.

Colspan and rowspan is table attribute in html.

Colspan : colspan is two or more column marge use colspan.

Rowspan : powspan is two or more row marge use rowspan.

Example :

```
<table>
    <tr>
      <th>no</th>
      <th>name</th>
      <th>course</th>
    </tr>
    <tr>
      <td colspan="2">1 rohan</td>
      <td rowspan="3">it</td>
    </tr>
    <tr>
```

```
    <td>2</td>
    <td>meru</td>
  </tr>
  <tr>
    <td>3</td>
    <td>kishan</td>
  </tr>
  </table>
```

• Question 3: Why should tables be used sparingly for layout purposes? What is a better alternative?

- **Poor Semantic Structure :** Tables are meant to represent **data**, not **design**. Using them for layout breaks the semantic meaning of HTML, making code harder to understand and maintain.
- **Responsiveness Problems :** Table-based layouts are rigid and don't adapt well to different screen sizes, especially on mobile devices.
- **Increased Complexity :** Nesting tables for layout leads to bloated and hard-to-maintain HTML code.

better alternative :

- Accessible
- Responsive
- Easy to maintain