HTML Assignment

Theory:

Question 1: Define HTML what is purpose of html in web development?

Ans: html stands for **Hypertext Markup Language**. It is the standard markup language used to create and design the structure of web pages. Html provides the basic building blocks of a web page by using elements (tags) to define headings, paragraphs, links, images, and other types of content.

 purpose of web development:

- structure: it gives the web page a structured layout using elements like headings, lists, tables, and sections.
- Content presentation: HTML allows developers to present content in a readable and accessible format.
- Integration with other technologies: HTML works in combination with CSS (for styling) and JavaScript (for interactivity) to create dynamic, user-friendly websites.

Question 2: explain the basic structure of an HTML document identify the mandatory tags and their purposes.

Basic Structure:

<html>

<head>

<title> basic tags</title>

</head>

<body>

<h1> hello, world</h1>

<p>this is a paragraph. </p>

</body>

</html>

Mandatory Tages:

<html>: the root element that wraps all content on the web page.

<head>: contains metadata about the HTML document (title, character encoding, links to CSS files).

<title>: sets the title of the page which appears in the browser tab.

<body>: Contains the visible content of the web page, such as text, images, links etc.

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

Ans: Block-level elements:

Start on a new line and take up the full width available.

Typically used for structural layout of the page.

Examples: <div>,<p>,<h1> to <h6>, <ul>, <ol>, <li>,<section>, <article>

Inline elements:

Do not start on a new line and only take up as much width as necessary.

Typically used for formatting content within block level elements.

Examples: <span>, <a>, <strong>, <em>, <img>, <label>

Question 4: discuss the role of semantic html why is important for accessibility and SEO? Provide examples of semantic elements.

Ans: semantic html refers to the use of html tags that clearly describe the meaning of the content they contain, instead of using non - descriptive tags like <div> or <span> everywhere, semantic tags make the structure of the web page more understandable to

browsers, developers, screen readers, and search engines.

Importance of accessibility and SEO:

- Accessibility: helps screen reader better interpret the content and navigate the site, improving user experience for people with disabilities.
- SEO (search engine optimization): search engines better understand the content and hierarchy of the site, which can lead to improved indexing and ranking in search results.

Examples of semantic elements:
- <header>: represents introductory content or navigation links.
- <nav>: defines a set of navigation links.
- <main>: specifies the main content of the document.
- <section>: groups related content.
- <article>: contains self-contained, independent content.
- <footer>: defines the footer of a section or page.

Lab Assignment:

Task: create a simple HTML webpage that includes:

- A header (<header >), footer (<footer>), main section (<main>), and aside section
- (<aside>)/
- A paragraph with some basic text
- A list (both ordered and unordered)
- A link that opens in a new tab
- HTML forms

```
<html>
<head>
  <title> simple webpage </title>
</head>
<body>

<header>
 <h1> welcome to my webpage </h1>
</header>
```

```html
<h2> about me</h2>
<p>
  my name is devika. i am from ahmedabad gujarat.
i am completed my BCA from GLS university in
ahmdabad. crruntly i am parsuing mern stack
tranning in tops technologies.
</p>

<h3> my hobbies </h3>
<ul  type="circle">
  <li>reading</li>
  <li>traveling</li>
  <li>cooking</li>
</ul>

<h3> snacks</h3>
<ol type="1">
  <li> baji pav</li>
  <li>dabeli</li>
  <li> vada pav</li>
  <li> puff</li>
  <li>pizza</li>
  <li>sandwich</li>
  <li>french frice</li>
</ol>
```
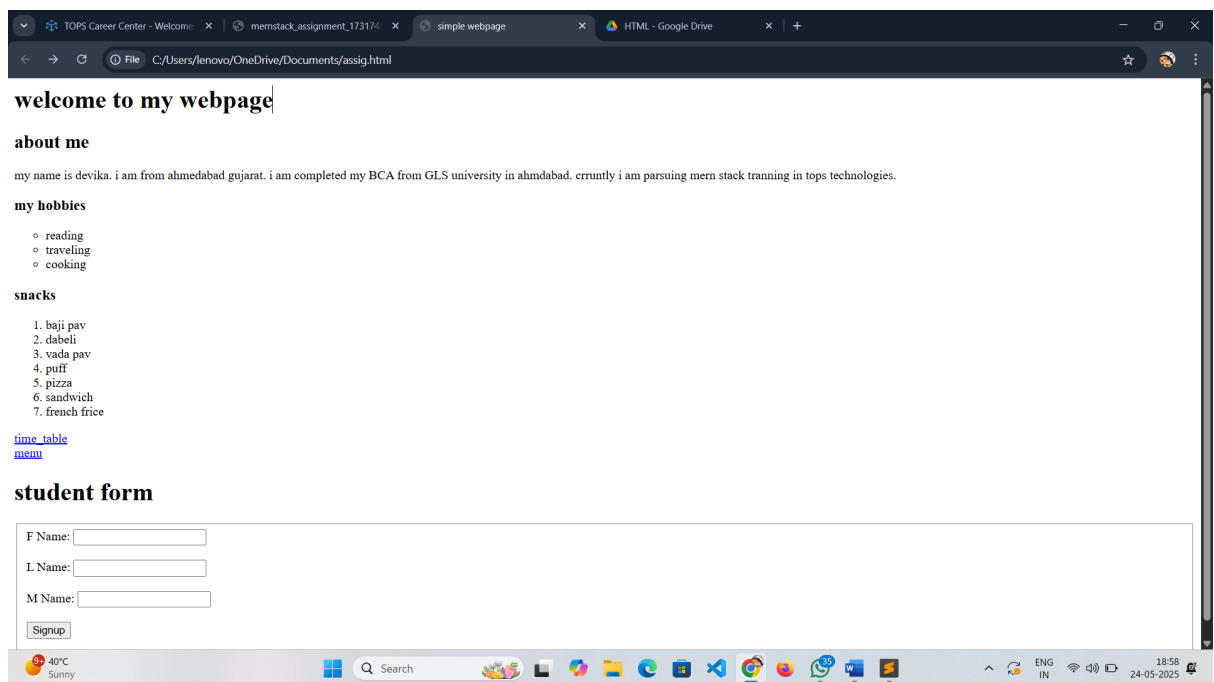
```html
<a href="time_table.html">time_table</a><br>
<a href="menu.html">menu </a>




</body>
</html>
```

Output:

welcome to my webpage

about me

my name is devika. i am from ahmedabad gujarat. i am completed my BCA from GLS university in ahmdabad. crruntly i am parsuing mern stack tranning in tops technologies.

my hobbies

- reading
- traveling
- cooking

snacks

1. baji pav
2. dabeli
3. vada pav
4. puff
5. pizza
6. sandwich
7. french frice

time_table
menu

student form

F Name: [ ]

L Name: [ ]

M Name: [ ]

[Signup]

HTML Forms /Table

Theory:

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

Ans: HTML forms are used to collect user input and send it to a server for processing. forms are essential for tasks such as user registration, login, feedback, and data entry.

- <input> : Used for single-line input. it supports various types via the type attribute, such as text, password, email, checkbox, radio, etc.
- <textarea> : Used for multi- line text input. such as comments or messages.
- <select> : Create a dropdown list. it's often used for choosing one or multiple options from a predefined list. it contains <option> elements.
- <button> : Represents clickable buttons that can be used to submit a form, reset it, or perform custom javaScript actions.

question 2: Explain the difference between the GET and POST methods in form submission. when should each be used?

Ans:

GET:

- Appends form data to the URL as query parameters.
- Suitable for retrieving data(search, filters).
- Data is visible in the URL and can be bookmarked or shared.
- Should not be used for sensitive information(like passwords).

POST:

- Sends form data in the body of the HTTP request.
- Suitable for submitting or Updating data(e.g., login, registration).
- more secure for sensitive information.
- can handle larger amounts of data.

Use get when the action is idempotent (doesn't chage server state), like search.

Use Post when the action changes server data or involves sensitive info.

question 3: when is the purpose of the label element in a form, and how does it improve accessibility?

Ans: the <label> element provides a text description for form inputs. it improves:

- Accessibility: Screen readers can associate the label with the input, helping visually impaired users.
- Usability: Clicking a label focuses the associated input, enhancing user interaction.

use for = "inputID" to link a label to an input, or wrap the input side the label for implicit association.

question 1: Explain the structure of an HTML table and the purpose of each of the following elements: <table>, <tr>, <th>, <td> and <thead>.

- <table>: the container element that defines a table.
- <tr>(table Row): Defines a row in the table.
- <th>(table Header): Defines a header cell in a table, usually bold and centered by default.
- <td>(table data): define a standard cell containing data in the table.

- <thead>:Groups the header content in a table, often used with <tbody> and <tfoot> for structure and styling.

<table>

<thead>

<tr><th>name</th><th>age</th></tr>

</thead>

<tbody>

<tr><td>Alice</td><td>30</td></tr>

</body>

</table>

question 2: what is the difference between colspan and rowspan in tables? provide examples.

- colspan: allows a cell to span multiple columns.
- rowspan: allows a cell to span multiple rows.

Example of colspan:

<tr>

<td colspan="2">Merged cell</td>

</tr>

Example of rowspan:

```
<tr>
  <td rowspan="2">Merged cell</td>
  <td>row 1 </td>
  </tr>
  <tr>
  <td>row 2</td>
</tr>
```

question 3: why should Table be used sparingly for layout purposes? What is a better alternative?

tables should not be used for layout because:

- They create rigid, non responsive designs.
- They make the html more complex and harder to maintain.
- they hinder accessibility and semantic structure.

Better alternatives:

- CSS grid and flexbox: Modern, flexible layout techniques that separate content from presentation, making websites more responsive, accessible, and maintainable.

LAb Assignment :

Form:

create a contact form with the following fields:

full name(text input)

email(email input)

phone number(tel input)

subject (dropdown menu)

message(text area)

submit button

use appropriate form validation using required , minlength, maxlength, and pattern

link form labels with their corresponding inputs using the forattribute.

HTML Table:

create a product catalog table that includes the following columns:

product name

product image(use placeholder images urls)

price

description

Availability(in stock, out of stock)

use theadfor the table header.

add a border and some basic styling using inline css.

use colspan or rowspan to merge cells where applicable.

```html
<html>
<head>
    <title>contact form</title>
</head>
<body>
    <fieldset align="center">
        <h1 align="center"> contact form</h1>
        <form method="post">
            <label>first name:</label>
            <input type="first name" name="first name" minlength="10" maxlength="10"><br><br>
            <label>middele name :</label>
```

```html
<input type="text" name="middele name" minlength="10" maxlength="10"><br><br>

<label> last name:</label>

<input type="text" name="last name" minlength="10" maxlength="10"><br><br>

<label>Email</label>

<input type="Email" name="email" required><br><br>

<label>phone Number</label>

<input  type="Number" name="contact" required><br><br>

subject:

<select name="subject" required>

<option value="spam call"></option>

<option value="spam call">spam</option>

<option value="service call">service call</option>

<option value="banking call">baking call</option>
```
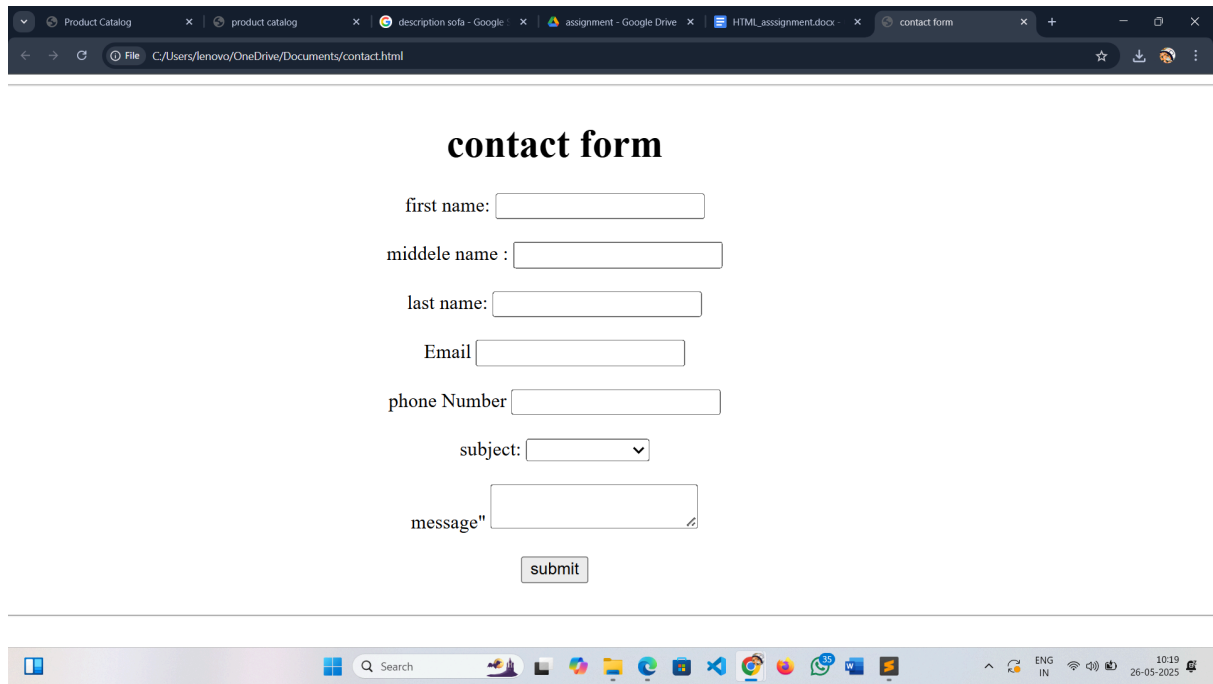
```html
                <option value=" sells call"> sells call</option>
                <option value="feedback call">feedback call</option>
            </select><br><br>


        <label>message"</label>
                <textarea name="message" maxlength="50" minlength="50" ></textarea><br><br>


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


        </textarea>
         </form>
      </fieldset>
</body>
</html>
```

contact form

first name: [_____]

middele name : [_____]

last name: [_____]

Email [_____]

phone Number [_____]

subject: [____ ▾]

message" [_____]

[submit]

```
<html>

<head>

<title>

        product catalog

</title>

</head>

<body>

        <h1 align="center"> Product Catalog</h1>
```

```html
<table border="1" cellpadding="10px" cellspacing="0px" align="center">
    <thead>
    <tr style="background-color: whitesmoke;">
        <th rowspan="2">product<br>Name</th>
        <th rowspan="2">product<br>Image</th>
        <th rowspan="2">Price</th>
        <th rowspan="2" colspan="3">Description</th>
        <th>Availability</th>

    </tr>
    </thead>
    <tbody style="background-color: light-dark(, );">
        <tr>
            <td> Air Conditioners </td>
            <td>
                <a href="https://www.flipkart.com/air-conditioners/pr?sid=j9e,abm,c54">
```

```html
                        <img src="C:\Users\lenovo\OneDrive\Desktop\images\key.jpg" width="100px" height="100px">
                </a>
            </td>
            <td>50000rs</td>
            <td colspan="3">An air conditioner (AC) is a system designed to cool down a space by removing heat and moisture from the air.</td>
            <td > In Stock</td>
        </tr>


        <tr>
            <td> Laptop</td>
            <td>
                <a href="https://www.lenovo.com/in/en/glossary/what-is-laptop/?srsltid=AfmBOorZkRRzGTy52wml2hL814_GSKGjraZ1XFJd5HxptqxWFNaZoXFu">
                        <img src="C:\Users\lenovo\OneDrive\Desktop\images\laptop.jpeg" width="100px" height="100px">
```

```html
        </a>

      </td>

      <td>45000rs</td>

      <td colspan="3">A laptop, also known as a
notebook computer, is a portable, personal computer
designed for use on the go</td>

      <td > Out of Stock</td>

    </tr>

    <tr>

      <td> microwav oven</td>

      <td>

        <a
href="http://www.flipkart.com/lg-20-l-i-wave-technolo
gy-health-plus-indian-cuisine-solo-microwave-oven/p/i
tmf3rygebb6pbk7?pid=MRCF2UQHF5FPDXGP&lid=LST
MRCF2UQHF5FPDXGPJIS1YS&marketplace=FLIPKART&c
mpid=content_microwave-new_8965229628_gmc">

          <img
src="C:\Users\lenovo\OneDrive\Desktop\images\oven.
jpeg" width="100px" height="100px">

        </a>

      </td>
```

```html
            <td>40000rs</td>

            <td colspan="3">a kitchen appliance that
cooks or heats food using electromagnetic radiation,
specifically microwaves</td>

            <td > In Stock</td>

        </tr>

        <tr>

            <td> Sofa Set</td>

            <td>

                <a
href="https://www.amazon.in/Caradel-Lewis-Seater-Liv
ing-Three/dp/B0CCLGZCQB?source=ps-sl-shoppingads-l
pcontext&ref_=fplfs&psc=1&smid=A36FHCS5SCCFW7"
>

                    <img
src="C:\Users\lenovo\OneDrive\Desktop\images\sofa.j
peg" width="100px" height="100px">

                </a>

            </td>

            <td>35000rs</td>
```

```html
            <td colspan="3">Filling may be foam, down, or
padding that is used to make the sofa comfortable.
</td>

            <td > Out of Stock</td>

        </tr>

    </tbody>

    </table>

</body>

</html>
```


Product Catalog

product Name	product Image	Price	Description	Availability
Air Conditioners		50000rs	An air conditioner (AC) is a system designed to cool down a space by removing heat and moisture from the air.	In Stock
Laptop		45000rs	A laptop, also known as a notebook computer, is a portable, personal computer designed for use on the go	Out of Stock
microwav oven		40000rs	a kitchen appliance that cooks or heats food using electromagnetic radiation, specifically microwaves	In Stock
Sofa Set		35000rs	Filling may be foam, down, or padding that is used to make the sofa comfortable.	Out of Stock