Training Day 10

Day 10 – 4th July 2025

Introduction to JavaScript and Dynamic Web Elements

Detailed Description:

On Day 10, we began exploring **JavaScript**, the scripting language that allows web pages to respond to user actions.
The instructor explained that while **HTML structures a webpage** and **CSS styles it**, JavaScript **adds behavior**, making websites dynamic and interactive.

🔹 1. What is JavaScript

JavaScript is a **client-side scripting language** that runs in the browser.
It allows developers to:

- Manipulate webpage content dynamically.
- Respond to user interactions like clicks, hover, or form submission.
- Validate user input.
- Create animations and interactive features.

We learned the difference between **client-side JavaScript** (runs in the browser) and **server-side scripting** (like PHP or Node.js).

🔹 2. JavaScript Syntax and Basics

The instructor introduced basic **JavaScript syntax**:

- Variables: let, const, and var
- Data types: string, number, boolean
- Operators: arithmetic (+, -), comparison (==, ===)
- Comments: // for single line, /* */ for multi-line

Example practiced:

```
<script>
  let name = "Malika";
  alert("Welcome " + name + " to Web Designing!");
</script>
```

Here, the alert() function displays a pop-up message when the page loads.

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3. Functions in JavaScript

We learned to write **functions** to perform specific tasks:

```
function greetUser(username) {
  alert("Hello, " + username + "!");
}
greetUser("Malika");
```

This showed how functions **organize code** and **reuse logic** for multiple actions.

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4. Event Handling

The instructor demonstrated **events**, which allow webpages to respond to user actions.
Common events include onclick, onmouseover, and onload.

Example practiced:

```
<button onclick="changeColor()">Click Me</button>



<script>

 function changeColor() {

   document.body.style.backgroundColor = "lightblue";

 }

</script>
```

Here, clicking the button changes the background color dynamically.
I realized how events make websites **interactive and engaging**.

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5. DOM Manipulation

We were introduced to the **Document Object Model (DOM)**, which represents the HTML structure of a page as objects.
JavaScript can **select, modify, and update elements** using the DOM.

Example practiced:

```
document.getElementById("demo").innerHTML = "Hello World!";
```

By linking JavaScript with HTML elements, we can create **dynamic content changes** without reloading the page.

Learning Outcomes:

- Understood the role of JavaScript in making webpages **interactive**.
- Learned basic syntax, variables, data types, and functions.
- Practiced **event handling** to respond to user actions.
- Understood the **DOM** and how JavaScript can manipulate HTML elements.
- Created simple interactive examples, such as pop-ups, button actions, and dynamic content changes.