

Training Day 18 Report

17 July 2025

Q. What is JavaScript?

JavaScript is a powerful programming language used to make web pages interactive. It runs in the browser, alongside HTML and CSS, and adds logic, interactivity, and dynamic behavior to static websites.

-Real-Life Applications of JavaScript

1. Online Shopping Cart

When you click "Add to Cart", the item is:

- Added instantly without refreshing the page.
- If the same item is added again, the quantity increases.
- The total price updates live.

This is possible using JavaScript.

2. Form Validation

Registration forms:

Fields: Name, Email, Phone, Password

Validations:

- Email format check.
- Password strength.
- Empty field alerts.

JavaScript prevents form submission if data is invalid.

3. Real-Time Updates

Weather apps, Live stock prices, Current date/time

Data is fetched from servers using:

AJAX (Asynchronous JavaScript and XML)

APIs (Application Programming Interfaces)

Think of it like:

User (you) → Waiter (JavaScript) → Kitchen (API) → Response back to you

-JavaScript in Web Development

Feature	Description
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Interactivity	Add click events, mouseovers, animations
Real-time Updates	Update data on screen instantly
Dynamic Content	Show/hide elements, load new content
Form Handling	Validate user inputs without reload
Communication with Server	Fetch or send data via AJAX/APIs
Browser Control	Control browser events like alert, prompt, etc.

JavaScript Syntax & Types

1. Inline JavaScript

Written directly inside HTML tags using the onclick, onchange, etc.

```
<button onclick="alert('Hello!')">Click Me</button>
```

2. Internal JavaScript

Written inside <script> tags, usually in the <head> or end of <body>.

```
<script>
    alert("Hello from JavaScript!");
</script>
```

Example:

```
// This is a single-line comment

/*
```

This is a multi-line comment

explaining multiple lines

*/

-console.log() – Debugging Tool

The console is a special tool in browsers for developers.

Used for:

->Debugging

->Viewing output

->Checking variable values

```
console.log("Hello Developer");
```

```
console.log(5 + 10); // Output: 15
```