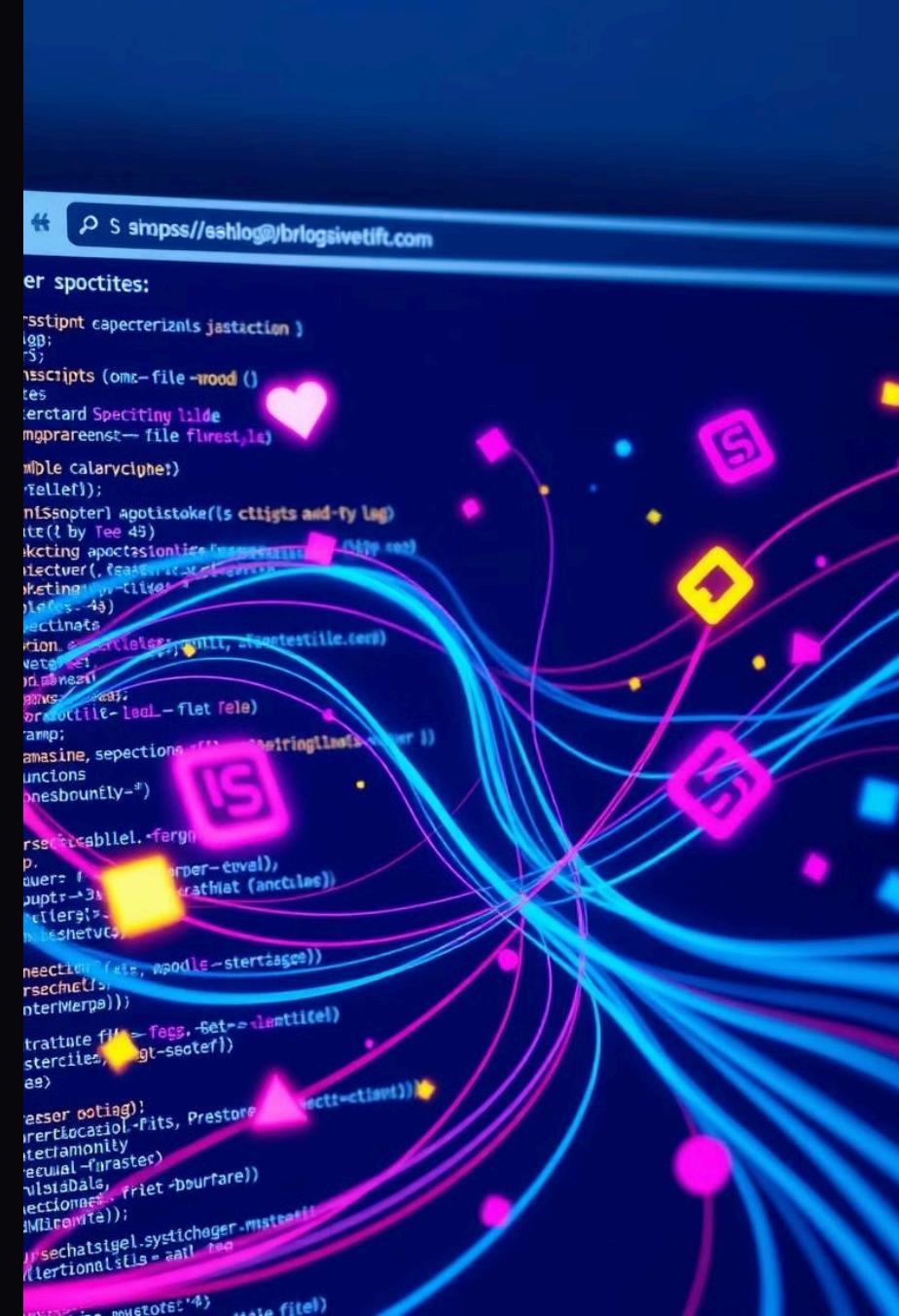


JavaScript Fundamentals: An Overview

This presentation covers JavaScript, a versatile language for web development. We'll explore its history and core features. Learn about its use cases and key concepts. From front-end to back-end, JavaScript powers dynamic web experiences.



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M47 CSE(AI&ML)-A**



Integrating JavaScript with HTML

Embedding JavaScript

- JavaScript can be added to an HTML document using:
- Inline JS: `<button onclick="alert('Hello!')>Click Me</button>`
- Internal JS: Inside `<script>` tags within the HTML file
- External JS: Linking a .js file using `<script src="script.js"></script>`

Features of JavaScript

Dynamic and loosely typed

Event-driven and object-oriented

Supports asynchronous programming

Works with HTML and CSS for web development

Document Object Model (DOM)

The Document Object Model (DOM)

DOM Structure

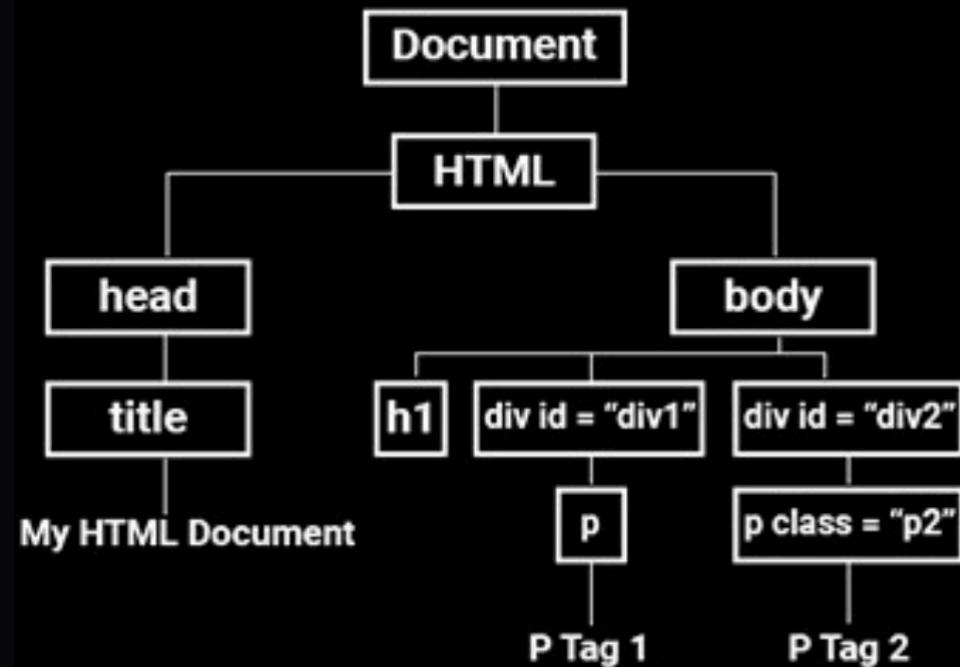
The DOM represents HTML as a tree structure.

DOM Levels

Different DOM levels exist:
DOM , DOM , DOM , DOM ,
and HTML .

Common DOM Methods:

- `document.getElementById("id")` – Selects an element by ID.
- `document.querySelectorAll(".class")` – Selects elements using CSS selectors.
- `element.innerHTML = "New Content"` – Changes the content of an element.



DOM Objects: Properties and Methods

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- document – Represents the entire web page.
- window – Represents the browser window.
- navigator – Provides browser information.
- location – Stores URL details.
- history – Manages browser session history.

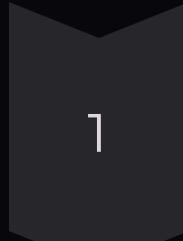




Introduction to jQuery

- jQuery is a fast, small, and feature-rich JavaScript library.
- It simplifies HTML document traversal, event handling, and AJAX calls.
- Advantages of jQuery:Reduces JavaScript code complexity.
- Provides built-in animations and effects.
3
- Cross-browser compatibility.

Loading jQuery



CDN (Content Delivery Network)

```
<script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
```

Local jQuery File

```
<script src="jquery.min.js"></script>
```



Basic jQuery Example

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$(document).ready(function() {  
    $("#btn").click(function() {  
        alert("Button Clicked!");  
    });  
});
```

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Server-Side Technology and Tomcat

Server-Side
Handles requests and processes data



Tomcat
An open-source Java Servlet container

Tomcat's Role
Executes Java Servlets and JSPs

Servlet Servlet

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Servlets and JSPs: An Introduction

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- 1 Servlets
Handle HTTP requests and generate content
 - 2 Servlet Advantages
Offer performance, scalability, and security
 - 3 JSPs
HTML pages with embedded Java code