

JavaScript Fundamentals

Duration: 2 Days

Description

JavaScript is known as the most common language used in the field of object-oriented, high-level, and web development that can run in web browsers. Today, it is also used on many platforms other than the browser. Thanks to platforms such as Node.js, it has become possible to use JavaScript on the server side.

JavaScript is used to make web pages interactive, create dynamic content, manage browser interactions, validate user input, and improve web applications. JavaScript is used in conjunction with HTML and CSS, serving as an essential component for creating dynamic and user-friendly websites that users can interact with in their web browsers.

JavaScript is a scripting language that can run directly in the browser and can be run in the browser without the need for a special compiler or compilation process. This feature allows web developers to quickly experiment in the browser.

This 2-day "Javascript Fundamentals" or "JavaScript Fundamentals" course aims to teach participants the basic concepts of the JavaScript programming language, its language structure, and the most commonly used programming techniques.

Outline

JavaScript Basics:

- What is JavaScript?
- History and evolution of JavaScript
- Usage of JavaScript in browsers and servers

Setting Up the Development Environment:

- Text editors and Integrated Development Environments (IDEs)
- Using browser consoles and developer tools

Variables and Data Types:

- Variable declaration (var, let, const)
- Data types: string, number, boolean, object, array, null, undefined

Operators and Expressions:

- Arithmetic, comparison, logical operators
- Conditional statements (if, else if, else)
- Loops (for, while, do-while)

Functions:

- Function declaration, parameters, return values
- Function expressions and anonymous functions
- Scope and closure concepts

Arrays and Objects:

- Creating arrays, array methods
- Creating objects, properties, and methods

Error Handling and Debugging:

- Types of errors (SyntaxError, TypeError, etc.)
- Using try-catch blocks
- Debugging in browser console

Asynchronous Programming:

- Callback functions
- Usage of Promises
- Async/await structure

DOM Manipulation:

- Creating JavaScript files associated with HTML and CSS
- Selecting and manipulating DOM elements
- Usage of event listeners

ES6+ Features:

- Let and const, arrow functions, template literals
- Destructuring, spread, and rest operators
- Modules (import/export), class declaration

API Requests and Data Exchange:

- Fetch API for data retrieval and sending
- Basics of AJAX and XMLHttpRequest
- JSON data format and manipulation

Prerequisites

There is no prerequisite