

4 Days

JavaScript and HTML5: Develop Web Applications

The JavaScript and HTML5 course for Web Applications Development give knowledge to participants how to code application logic in web applications making use of JavaScript and also how to create HTML5 pages to analyze and send data through HTML5 forms.

This training will make participants add interactive behaviors to web pages building better user experiences and by adding dynamic data using AJAX, REST and WebSocket with JavaScript. Not only this, but they will be able to create and modify the Document Object Model (DOM), draw on the HTML5 canvas, create responsive layouts with CSS3, and store local data with JSON.

Completion of this training course will enable candidates in:

- Coding application logic using JavaScript to control user interactions and display data.
- Creating JavaScript code to recover and display dynamic data from REST services using AJAX.
- Creating JavaScript code to interact with WebSocket for real-time communication.
- Debugging and inspect web applications and styles using browser's tools.
- Creating design templates and standards using CSS and JavaScript.
- Creating applications with HTML5 forms to send data to services.
- Reading and validating data from HTML5 forms using JavaScript.
- Parsing, modifying, and validating data using JavaScript API.
- Adding interactivity in HTML5 forms using events and DOM modification.
- Storing and sending JavaScript Object data to services, local storage or across different pages and HTML5 elements by deploying JavaScript Object Notation.
- Drawing on HTML5 canvas using JavaScript.
- Creating jQuery code to animate elements, handle DOM, events, or AJAX responses.

Course Benefits:

Attaining certification of this course will prepare any web developer with apt knowledge of JavaScript, HTML5, and CSS3 required to build complex and modern sites and for those looking to develop Java EE front-end web applications.

Course Details

Course Outline

1. Introduction

- Understand the objectives of the course
- Setting up the right environment

2. Essentials of Web Application

- Separate CSS and JavaScript content from HTML pages
- Create HTML5 Applications in NetBeans
- Run HTML pages and analyzing them by using the browser's development tools
- Run HTML5 Applications in NetBeans

3. JavaScript Fundamentals

- Write JavaScript code to declare variables, objects, functions and arrays
- Write JavaScript Arrays to store data
- Define JavaScript Objects as a key-value store
- Access the properties of an object
- Practice: Write JavaScript code to pass tests in Jasmine

4. HTML5 and JavaScript in Web Applications

- Create HTML5 Documents
- Write JavaScript functions for HTML5 events
- Create HTML5 Forms to request information and process it
- Validate HTML5 form input
- Manipulate HTML5 elements through DOM
- Practice: Write JavaScript code to modify document elements

5. The JavaScript API

- Validate user input with JavaScript and Regular Expressions
- Handle multiple values with JavaScript Collections
- Manipulate Dates with the JavaScript Date API
- Practice: Create a meal-divider application
- Practice: Calculate the total based on the age

7. Web Application Data

- Parse JSON Strings into JavaScript Objects
- Convert Objects to JSON Strings
- Practice: Save user input using JSON and Local Storage
- Practice: Restore saved data when page loads
- Store Objects by using the JSON API, Cookies, and Local Storage

8. Style Applications using CSS3 and JavaScript

- Apply CSS styles to HTML documents
- Use Media Queries and media data to adapt to different screens
- Use CSS3 features to add dynamic styles to elements with events
- Use JavaScript to add and remove styles from elements
- Practice: Write CSS rules to style elements in the document

9. Advanced JavaScript

- Use the HTML5 Canvas Object to draw in pages
- Write JavaScript functions as modules
- Define Functions
- Create Drag-and-Drop interactions with JavaScript
- Create Closures and explaining Variable Scope
- Create JavaScript Timers and Delays to create animations in HTML
- Practices: Create a Canvas, intervals, Drag and Drop, and implementing Mouse Gestures

10. AJAX and WebSocket

- Use AJAX with JavaScript to request data from an Application Server
- Use AJAX to consume RESTful Web Services
- Use AJAX calls to create "Server Push" interactions
- Identify alternatives to AJAX used in legacy code
- Understand AJAX Security
- Use WebSocket to create Real-time Client/Server interactions
- Identify the required Back-End technologies for REST and WebSocket with Java EE7
- Practices: Create a Single-Page Application using REST and a Tic-Tac-Toe Game Client with WebSocket

11. Developing Applications with jQuery

- Add jQuery and jQuery UI libraries to your projects
- Use Selectors and DOM manipulators to handle documents
- Handle Events with jQuery
- Animate elements and Applying effects in the document
- Handle AJAX server responses

Who Should Attend

This Developing Web Applications using JavaScript and HTML5 course is ideal for:

- Java EE Developers

- Application Developers
- Forms Developer
- Technical Consultant
- J2EE Developer
- Java Developers

Pre Requisite

- Should have basic experience in any programming language
- Should have basic knowledge of web concepts

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