JavaScript and HTML5: Develop Web Applications

Duration: 4 Days

What you will learn

This JavaScript and HTML5: Develop Web Applications training teaches you how to code application logic in web applications using JavaScript and how to create HTML5 pages to parse and send data using HTML5 forms. Expert Oracle University instructors will teach you how to create and modify the Document Object Model(DOM), create responsive layouts with CSS3, store local data with JSON and draw on HTML5 canvas.

Learn To:

Code application logic using JavaScript to control user interactions and display data.
Create applications with HTML5 forms to send data to services.
Debug and inspect web applications and styles using browser's tools.
Create design templates and standards using CSS and JavaScript that adapt to different devices, including mobile with Media Queries and Responsive Design.
Read and validate data from HTML5 forms using JavaScript.
Parse, modify and validate data using Javascript API.
Add interactivity in HTML5 forms using events and DOM modification.
Store and send JavaScript Object data to services, local storage or across different pages and HTML5 elements using JavaScript Object Notation.
Draw on HTML5 canvas using JavaScript.
Store user data in web applications using HTML5 Local Storage
Create JavaScript code to retrieve and display dynamic data from REST services using AJAX.
Create JavaScript code to interact with WebSocket for real-time communication.
Create jQuery code to animate elements, handle DOM, events or AJAX responses.

Benefits to You

Investing in this course will prepare any web developer with enough JavaScript, HTML5 and CSS3 knowledge to build complex and modern sites and for those looking to develop Java EE front-end web applications. You'll develop the skills to add interactive behaviors to web pages; this lets you create better user experiences, while adding dynamic data using AJAX, REST and WebSocket with JavaScript.

Live Virtual Class Format

A Live Virtual Class (LVC) is exclusively for registered students; unregistered individuals may not view an LVC at any time. Registered students must view the class from the country listed in the registration form. Unauthorized recording, copying, or transmission of LVC content may not be made.

Audience

Application Developers
Developer
Forms Developer
J2EE Developer
Java Developers
Java EE Developers
Team Leader
Technical Consultant

Related Training

Required Prerequisites

Basic experience in any programming language

Basic knowledge of web concepts

Course Objectives

Create and run an HTML5 applications in NetBeans

Write JavaScript code to use variables, objects, functions and arrays

Create HTML5 forms to request information and process it

Write JavaScript functions for HTML5 events

Manipulate HTML5 elements through DOM

Use the JavaScript API

Store objects by using the JSON API, Cookies, and Local Storage

Style HTML documents with CSS3

Use Media Queries and media data to adapt the web page to different screen sizes

Create closures, prototypes, and modules in JavaScript

Create a Canvas, intervals, Drag and Drop interactions, and implement mouse gestures in HTML5

Use AJAX to consume RESTful Web Services

Identify the required Back-End technologies for REST and WebSocket with Java EE7

Use Selectors and DOM manipulators to handle documents with jQuery

Handle events and AJAX server responses with jQuery

Introduction
Knowing the objectives of the course
Setting up the Environment

Web Application Essentials
Creating HTML5 Applications in NetBeans
Running HTML pages and analizing them by using the browser's development tools
Separating CSS and JavaScript content from HTML pages
Running HTML5 Applications in NetBeans
Practice: Creating HTML5 Web Applications with NetBeans 8
Practice: Separating JavaScript and CSS Resources

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

Combining HTML5 and JavaScript in Web Applications
Creating HTML5 Documents
Creating HTML5 Forms to request information and process it
Validating HTML5 form input
Writing JavaScript functions for HTML5 events
Manipulating HTML5 elements through DOM
Practice: Writing JavaScript code to modify document elements

The JavaScript API
Validating user input with JavaScript and Regular Expressions
Handling multiple values with JavaScript Collections
Manipulating Dates with the JavaScript Date API
Practice: Creating a meal-divider application
Practice: Calculating the total based on the age

Web Application Data
Converting Objects to JSON Strings
Parsing JSON Strings into JavaScript Objects
Storing Objects by using the JSON API, Cookies, and Local Storage
Practice: Saving user input using JSON and Local Storage
Practice: Restoring saved data when page loads

Style Applications using CSS3 and JavaScript
Applying CSS styles to HTML documents
Using CSS3 features to add dynamic styles to elements with events
Using Media Queries and media data to adapt to different screens
Using JavaScript to add and remove styles from elements
Practice: Writing CSS rules to style elements in the document

Advanced JavaScript
Defining Functions

Creating Closures and explaining Variable Scope
Writing JavaScript functions as modules
Creating Prototypes
Creating Drag-and-Drop interactions with JavaScript
Creating JavaScript Timers and Delays to create animations in HTML
Using the HTML5 Canvas Object to draw in pages
Practices: Creating a Canvas, intervals, Drag and Drop, and implementing Mouse Gestures

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

Developing Applications with jQuery
Adding jQuery and jQuery UI libraries to your projects
Using Selectors and DOM manipulators to handle documents
Handling Events with jQuery
Animating elements and Applying effects in the document
Handling AJAX server responses