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Intermediate Web: Web Development with jQuery

Course Summary

Description

This course is for experienced web developers to gain experience in leveraging jQuery in their applications. Topics covered focus on separating behavior from content, and selectively a using jQuery. Throughout the course performance is discussed and best practices shared. This comprehensive course provides a balanced mixture of theory and practical labs designed to arm students with new skills to design effective, and cross-browser compatible web applications.

Lecture and hands-on exercises will help students to create easy-to-maintain, SEO-optimized, and accessible websites. Students will also learn valuable software tools to help them be more productive and successful in creating websites.

Objectives

By the end of this course, students will be able to:

- Enhance productivity with jQuery and address cross-browser compatibility
- Use jQuery selectors, handle events, and manipulate the DOM using jQuery
- Work with JSON data in applications
- Practice leveraging jQuery for AJAX calls
- Apply web UI design patterns and principles with jQuery UI
- Gain exposure to jQuery Mobile Fundamentals

Topics

- Review of JavaScript Object Notation (JSON)
- jQuery Overview
- jQuery Selectors and CSS manipulation
- jQuery Event Model
- Manipulating the DOM
- Animations and Effects
- AJAX Features
- Using and Creating Plugins
- Web App Design Patterns & jQuery UI
- jQuery Mobile (optional)

Audience

This is an intermediate level web development course, designed for students who have worked with HTML, CSS and JavaScript and wish to extend their knowledge of web design and development or need to reinforce sound HTML and CSS coding practices, immediately.

Prerequisites

This is a hands-on programming class. Attendees should have previous experience or working knowledge of developing software applications, as well as basic HTML, CSS, and JavaScript. Real world programming experience is a must.

Duration

Three days

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Course Outline

I. Review of JavaScript Object Notation (JSON)
- A. JSON vs XML
- B. Arrays
- C. Objects
- D. Arrays in Objects
- E. Objects in Arrays
- F. JSON Syntax and Processing
- G. JSON Parsers

II. jQuery Overview
- A. Overview of jQuery
- B. See how to start using jQuery
- C. Understand the differences between jQuery versions and minified
- D. Know where to place jQuery code to execute
- E. What is the jQuery object?
- F. Avoiding conflicts with more than one framework

III. jQuery Selectors and CSS manipulation
- A. Using jQuery Selectors with html tags, id and classes
- B. Using CSS3 type selectors
- C. Manipulating styles with css()
- D. Considering filters and performance
- E. Using method chaining
- F. Using each()

IV. jQuery Event Model
- A. Working with the jQuery Event Model and event object
- B. Responding to browser resize and scroll events
- C. Handling Click Events
- D. Event Handler Attachment events
- E. Responding to form events using jQuery
- F. Working with mouse events
- G. Using Event object properties

V. Manipulating the DOM
- A. Modifying Object Properties
- B. Modifying Attributes of an element
- C. Setting an elements style properties
- D. Gets and replacements with with html() and text()
- E. Traversing the DOM and adding and removing nodes
- F. Writing efficient jQuery DOM

VI. Animations and Effects
- A. Effects (Basic Animation)
- B. Showing and Hiding elements
- C. Toggling elements
- D. Fading in and out
- E. Sliding up and down
- F. Custom Animations

VII. AJAX Features
- A. Simplifying AJAX with jQuery
- B. Loading HTML Content from the Server
- C. Making GET/POST/PUT/DELETE Requests
- D. Using shorthand methods
- E. Using the ajax() Function
- F. Performing operations when request starts or stops
- G. Working with Promises

VIII. Using and Creating Plugins
- A. Introduction to jQuery Plugins
- B. Finding and evaluating jQuery Plugins
- C. Working with data plugins such as datatables
- D. Creating a custom plugin

IX. Web App Design Patterns & jQuery UI
- A. UI Patterns Overview
- B. Navigation Patterns
- C. Selection Patterns
- D. Rich Interaction Patterns

X. jQuery Mobile (optional)
- A. What is jQuery Mobile?
- B. Creating jQuery Mobile Pages
- C. Page Navigation
- D. Using UI Widgets

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