

Mastering jQuery

Course Summary

Description

Mastering jQuery is a comprehensive, hands-on jQuery training course that introduces students to working with the JavaScript programming language in the environment it's used in the most: the browser. JavaScript is simple and elegant, but is often difficult to work with because it's so different from the programming languages most developers are used to working with. This course also covers jQuery and provides practical and hands-on experience with the preferred JavaScript library for building rich web applications. If you are building for the web, learning jQuery will change the way you write JavaScript, working across multiple browsers and platforms.

Objectives

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

- Become both familiar with the language and confident enough
- to work with it in any context
- Learn what jQuery is and how to add it to your applications
- Use jQuery to select complex sets of elements from the DOM
- Develop rich web pages that respond to user interaction
- Interact with your server-side code using Ajax
- Explore a wide variety of plugins and learn how to write your own
- Test your applications to make sure your JavaScript is as solid as the rest of your code

Topics

- jQuery
- Web Application Performance
- Web App Design Patterns

Audience

This is an introductory and beyond-level web development course, designed for experienced developers who need to extend their knowledge of web design and development.

Prerequisites

This is a hands-on programming class. Attendees should have previous experience or working knowledge of developing software applications. Real world programming experience is a must.

Duration

Four days

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Course Outline

I. jQuery

- A. Lesson: Why jQuery?
 - 1. JavaScript Evolution
 - 2. Why jQuery?
 - 3. jQuery Usage
 - 4. Downloading jQuery
- B. Lesson: Basic jQuery
 - 1. jQuery: Operational Overview
 - 2. jQuery Capability Overview
 - 3. Basic Selectors
 - 4. Multiple Selector
 - 5. Selecting by Order
- C. Lesson: Manipulating the DOM
 - 1. Attributes vs. Properties
 - 2. CSS Box Model Properties
 - 3. Element Content
 - 4. Manipulating Children
 - 5. Wrapping and Unwrapping
 - 6. Effects (Basic Animation)
 - 7. Effects Queues
- D. Lesson: More On Element Selection
 - 1. Hierarchical Selectors (Combinators)
 - 2. Attribute Selectors
 - 3. Basic vs. Child Filters
 - 4. Filtering Methods
 - 5. Traversing Methods
- E. Lesson: More on Attributes!
 - 1. Selecting From Forms
 - 2. Selecting Parent and Children
 - 3. Automatic DOM Traversal
 - 4. Manipulating DOM Elements
 - 5. Getting and Setting Attribute Values
 - 6. Removing Attributes
- F. Lesson: More jQuery!
 - 1. The jQuery Function
 - 2. The jQuery Object
 - 3. Some jQuery "Static" Methods
 - 4. Utility Methods
- G. Lesson: Event Handling
 - 1. Binding Multiple Events to Same
 - 2. Handler
 - 3. Multiple Events to Different Handlers
 - 4. Event Targets
 - 5. Triggering Events
 - 6. Custom Events

- 7. Live Events
- H. Lesson: More On Elements!
 - 1. Changing HTML Content
 - 2. Changing Text Content
 - 3. Managing Elements
 - 4. Introduction to Animations
- I. Lesson: Ajax
 - 1. Posting Data
 - 2. Global Ajax Handlers
 - 3. JSONP
 - 4. Serialization
 - 5. Deferred Objects
 - 6. Promises and Piping
 - 7. Chaining Tasks
- J. Lesson: jQuery Plugins
 - 1. jQuery Validation Plugin
 - 2. jQuery Form plugin
 - 3. jQuery BBQ (Back Button & Query)
 - 4. Plugin
 - 5. jQuery Hotkeys Plugin
 - 6. jQuery Color Plugin
- K. Lesson: jQuery UI
 - 1. jQuery UI Effects
 - 2. Advanced Easing
 - 3. Interactions
 - 4. Position Utility
 - 5. Widgets
 - 6. Icons
- L. Lesson: Templates
 - 1. Micro Templates
 - 2. jQuery Template Plugin
 - 3. Compiling Templates
 - 4. Template Items

II. Web Application Performance

- A. Lesson: Download Options
 - 1. User Experience on Page Load
 - 2. Multi-Stage Downloading
 - 3. Predictive Fetching
 - 4. On-Demand Downloading
 - 5. JavaScript and CSS Minification

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Course Outline (cont'd)

- B. Lesson: Debugging, Optimization &
 - 1. Profiling
 - 2. Internet Explorer Developer Tools
 - 3. FireBug & FireBug Lite
 - 4. Fiddler
 - 5. Code Optimization
 - 6. CSS and Reflow Minimization
- C. Lesson: Memory Management
 - 1. JavaScript Memory
 - 2. Removal of DOM Nodes
 - 3. Cyclic References
 - 4. Reusing DOM Nodes

III. Web App Design Patterns

- A. Lesson: UI Patterns Overview
 - 1. User Interface/Interaction Design
 - 2. Patterns
 - 3. Categories from Yahoo! Design
 - 4. Pattern Library
 - 5. Web Application Design Principles
- B. Lesson: Layout Patterns
 - 1. Page Grids
 - 2. Page Grids Solution
- C. Lesson: Navigation Patterns
 - 1. Accordion
 - 2. Alphanumeric Filter Links
 - 3. Breadcrumbs
 - 4. Item Pagination
 - 5. Search Pagination
 - 6. Module Tabs
 - 7. Navigation Tabs
 - 8. Progress Bar
- D. Lesson: Selection Patterns
 - 1. AutoComplete
 - 2. Calendar Picker
 - 3. Carousel
- E. Lesson: Rich Interaction Patterns
 - 1. Invitations
 - 2. Transitions
 - 3. Drag and Drop
 - 4. Rich Interaction