Web Essentials: Introduction to HTML5 and CSS3

Course Summary

Description

Web Essentials: Introduction to HTML and CSS3 is an in-depth HTML5 and CSS3 hands-on training course geared for web designers / developers who need to understand what the latest in web technologies, performance, optimization, and user interface design patterns and best practices. This comprehensive course provides a balanced mixture of theory and practical labs designed to take students through HTML5, CSS3 and related technologies. Students who attend this course will leave this course armed with the new skills to design, implement, and deploy robust, flexible, and safe web applications.

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

- Understand what HTML5 is, what is new, and how it is used within the context of web applications
- Understand what CSS3 is, what is new, and how it is used within the context of web applications
- Understand the wide variety of options, tools, and approaches that can be used in conjunction with the web design and implementation

Topics

- HTML5
- HTML5 JavaScript API
- CSS3 Overview
- CSS3 Advanced Selectors
- CSS3 Visual Effects

Audience

This is an intermediate-level web development course, designed for underlined experienced developers who need 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. Real world programming experience is a must.

Duration

Two days

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Course Outline

I. Exploring HTML5
   A.   HTML5
1. Future of Web Development
2. HTML5 Overview
3. Background
4. HTML/CSS Timeline
5. Status of HTML5
6. Support in Browsers
7. HTML5 Web Applications
8. HTML5 Graphics & Embedded Content
9. HTML5 Forms Inputs
10. What is HTML5?
11. HTML5 Design Principles
12. HTML5 – New Features
13. DOCTYPE Tag
14. HTML5 – Keeping it Simple
15. HEAD and BODY
16. Basic HTML5 Structure
17. HTML5 Semantic Tags
18. HTML4 Structural Markup Using div
19. HTML5 Structural Markup Using Semantic Tags
20. HTML5 Semantic Tags Example
21. New Tag <header>
22. New Tag <footer>
23. New Tag <article>
24. New Tag <section>
25. New Tag <aside>
26. New Tag <nav>
27. New Tag <figure>
28. New Tag <hgroup>
29. HTML5 Forms
30. HTML5 Forms – New Features
31. New Input Type: email
32. New Input Type: URL
33. New Input Type: number
34. New Input Type: tel
35. New Input Type: range
36. New Input Type: color
37. New Input Type: date
38. More Input Types
39. autofocus Attribute
40. autocomplete Attribute
41. placeholder Attribute
42. <datalist> Tag
43. required Attribute
44. multiple Attribute
45. pattern Attribute
46. More Attributes
47. form Child Outside <form>
48. HTML5 Media
49. Drawing on the Canvas
50. Define canvas and 2D Context
51. Drawing into the Canvas
52. Canvas 2D Drawing Example
53. Drawing Paths
54. Drawing paths - example
55. Drawing Gradients and Patterns
56. Drawing Gradient - example
57. Pixel-Based Manipulation
58. Pixel Manipulation Example
59. More Capabilities
60. Audio and Video
61. Embedding Media in Earlier HTML
62. Embedding Media in Earlier HTML - Issues
63. New Video tag
64. src and loop attributes
65. autoplay and controls Attributes
66. preload Attribute
67. height, width and poster Attributes
68. Video Codecs
69. Audio Codecs
70. Playing Media in Multiple Browsers
71. Multiple <source> Elements
72. Legacy Browsers
73. Media API Methods
74. Media API Methods - Example
75. Media API Events
76. Media API Events - Example
77. Audio and Video Challenges

   B.   HTML5 JavaScript API
1. Drag and Drop API
2. Drag and Drop Components
3. Draggable Object
4. Draggable Object Events
5. Draggable Object Event Handlers
6. Drop Area
7. Bind Events
8. dataTransfer
9. Messaging API
10. postMessage and onMessage
11. Sending Messages Cross-Domain
12. Message Event Listener
13. Message Event Listener - Example
14. Web Storage API
15. Web Storage API Methods
16. setItem() and getItem() Methods

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Course Outline (cont'd)

17. key() Method
18. Removing Data
19. Offline with Application Cache
20. Cache Manifest File
21. Cache Manifest File - Example
22. applicationCache

II. CSS3
  A.   CSS3 Overview
    1. What is CSS3?
    2. CSS3 New Features
    3. CSS3 Advantages
    4. CSS3 Browser Support
    5. CSS3 Selectors Support
    6. CSS3 Properties Support
  B.   CSS3 Advanced Selectors
    1. Attribute Selectors
    2. CSS3 New DOM Attribute Selectors
    3. Beginning Substring Attribute Value Selector
    4. Beginning Substring Selector Example
    5. Ending Substring Attribute Value Selector
    6. Ending Substring Selector Example
    7. Arbitrary Substring Attribute Value Selector
    8. Arbitrary Substring Selector Example
    9. Combinators
    10. Combinators Example
    11. Structural Pseudo-Classes
    12. The nth-* Pseudo-Classes
    13. nth-child and nth-of-type
    14. nth-* Pseudo-Classes Example
    15. nth-last-child and nth-last-of-type
    16. nth-last-* Example
    17. first-of-type, last-child, and last-of-type
    18. First-Last Example
    19. only-child and only-of-type
    20. Only Example
    21. Pseudo-Class Selectors
    22. empty Selector

23. root Selector
24. not Selector
25. target Selector
26. UI Selectors
27. UI Selectors Example
28. Lesson: CSS3 Visual Effects
29. 2D Transformations
30. Transform Property
31. Transformation in Different Browsers
32. Rotate Function
33. Rotate Example
34. Translate Functions
35. Translate Example
36. Skew Function
37. Skew Example
38. Scale Function
39. Scale Example
40. Transitions
41. Transitions Example
42. transition-property Property
43. Transition Property - Duration
44. Transition Property – Timing Function
45. Possible Values for Keyword
46. Transition Property - Delay
47. Transition Property - Shorthand
48. Font and Color in CSS3
49. @font-face
50. @font-face Example
51. Opacity Color
52. Opacity Examples
53. The Alpha Channel in RGBA Color
54. Alpha Examples
55. The Alpha Channel in HSLA Color
56. Border and Box Effects
57. border-radius
58. Border Radius Example
59. border-image
60. Border Image Example
61. box-shadow
62. Box Shadow Example
63. CSS3 : Source