

HTML5 Bootcamp

Course Summary

Description

In this hands-on HTML5 Bootcamp training course, you will learn how to create web applications using HTML5. The HTML5 Bootcamp will give you first-hand experience with all the new HTML5 features so that you can start using it in your projects right away. You will learn how to create your own scalable, real-time Web applications with all HTML5 has to offer.

Objectives

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

- Know how to use HTML5 Markup
- Know how to use the HTML5 JavaScript APIs
- Understand current browser support for the various HTML5 features
- Understand how to emulate certain HTML5 features on older browsers
- Understand the fundamental HTML5 Communication technologies: Web Sockets, Server-Sent Events, Cross-Document Messaging, and XHR Level 2
- Decide when and why to use HTML5 Communication and its implications on your architecture

Topics

- HTML Overview
- Markup
- Styles
- Advanced styling
- Basic HTML5 Scripting
- HTML5 APIs

Audience

This HTML5 Bootcamp is designed for software developers interested in designing, creating, and deploying HTML5 web applications. It is valuable to both beginners and advanced developers that already have experience in developing web applications.

Prerequisites

To get the most out of the course, you should be somewhat familiar with HTML and JavaScript. Prior exposure to any of these concepts will be helpful, but not required:

- HTML/XML
- JavaScript
- Ajax

Duration

Four days

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Course Outline

I. HTML Overview

- A. Why HTML5 is important.
- B. How it fits into the Front End Engineering landscape.
- C. Talking points / general discussion:
 - 1. Native vs Hybrid vs Webapp, and progressive enhancement.
 - 2. Cordova / Phonegap Build.
 - 3. Progressive Web Apps
 - 4. Portable Native Client
 - 5. Polyfills.
 - 6. Why you have to use an MV* pattern.
 - 7. Pros and cons of using a JS Framework.
 - 8. Wireframing.
- D. Tools and platforms.
- E. Best practices.
- F. Gotchas and things to avoid.

II. Markup

- A. Basic syntax of HTML5. Differences with XML
- B. Why markup (div soup) had to change
- C. What's different on mobile devices: viewport definition
- D. Semantic code: elements for containers and content
- E. Accessibility, localization and code styles
- F. The new Forms API for dealing with user input
- G. How to write markup that works on every device
- H. New tags and internal SEO best practices
- I. How to build semantically meaningful webapp markup from scratch (from an image)
- J. Why we are seeing data-* everywhere
- K. Affecting Markup with Chrome Developer Tools
- L. Getting your webapp working on your phone

III. Styles

- A. Undoing the browsers best visual intentions
- B. Formatting your page for all browsers
- C. Working with Chrome Developer Tools for affecting things visually
- D. Learning all the CSS2.1 you will ever need to use
- E. Learning about the new CSS3 features that actually matter

- F. Local modifications and rolling back CSS changes in the developer tools
- G. Creating a pixel perfect webapp from an image representation

IV. Advanced styling

- A. Using SVG
- B. UX principles for multiple devices
- C. Creating transitions and animations for fluid UXs
- D. Different ways to approach responsive design
- E. Making your webapp or hybrid app feel like it is a native app
- F. Why it's ok to let devices view things slightly differently
- G. When its ok to standardize a UI component across devices

V. Basic HTML5 Scripting

- A. Getting to grips with JavaScript
- B. Event handling
- C. Working with core jQuery
- D. Working with the keyword this and event targets
- E. Scope chains, the Event Loop, and how to deal with execution order issues (AMDs)
- F. Getting comfortable with callbacks and closures
- G. Working directly with the DOM, and other JavaScript nightmares
- H. Separating concerns and transcending to a MV* pattern
- I. Pros and cons of jumping on an MV* framework bandwagon
- J. The power of the Object Literal
- K. How to use JSONP, AJAX2, and leverage CORS
- L. Working with public APIs

VI. HTML5 APIs

- A. API's overview
- B. Compatibility and how to detect an API
- C. Polyfills and Shims
- D. Data storage APIs: Web Storage, Web SQL and Indexed DB
- E. Network APIs: AJAX, Web Sockets and other server APIs
- F. Hardware and Platform APIs: Geolocation, Sensors, Battery, Audio, Speech and more
- G. Service Workers introduction
- H. Web App Manifest Introduction