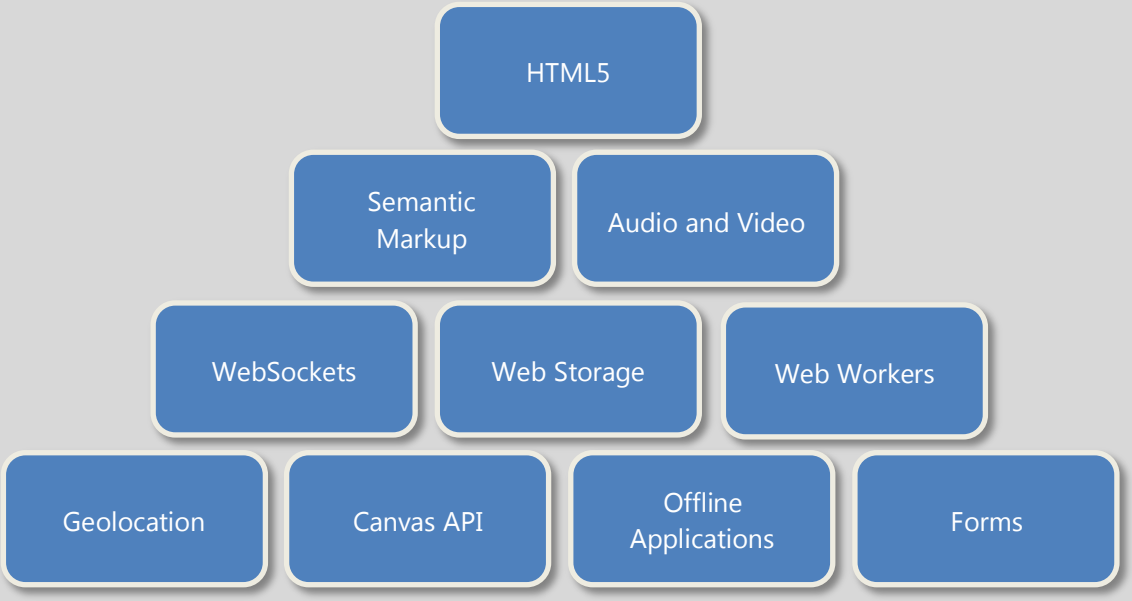
Mastering HTML5 with Jeff Prosise

HTML5 is the newest version of HTML, and it is taking the programming world by storm. It combines new markup elements with a host of new JavaScript APIs to bring HTML into the 21st century and to enable developers to build rich, feature-filled Web applications without relying on browser plug-ins such as Silverlight and Flash.

In addition, HTML5 can be used to build applications for mobile platforms such iPhone, iPad, Android, and (soon) Windows Phone 7. The mobile market is highly fractured, meaning that if you wish to write an application for iPhone and Android using native APIs, you have to write the app twice. Write the app with HTML5 instead and it can be deployed to multiple platforms, often without having to resort to native APIs.

Mastering HTML5 provides developers with the knowledge and skills they need to leverage HTML5 to its fullest, whether to goal is to write richer browser-based applications or write-once, run-anywhere mobile applications. It includes in-depth coverage of the new markup elements and JavaScript APIs, and goes deep into features of HTML5 that are already supported in a wide range of browsers, including the new canvas API, audio and video APIs, geolocation, and Web storage.

The time to learn about HTML5 is now. **Mastering HTML5** will get you up to speed quickly and efficiently and prepare you to blaze new trails in the fast-evolving worlds of Web and mobile development.



Course Number
W1047

Duration
1 day

Formats
Virtual

Languages
JavaScript

Schedule
February 20th
11 am – 6 pm ET

Pricing
$249.50 per person, per computer

Prerequisites
Persons who attend Mastering HTML5 should have previous experience working with HTML and JavaScript to build browser-based applications.

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Introduction to HTML5

What is HTML5, exactly? Believe it or not, there's not a simple answer to that question. In this introductory session, we'll analyze HTML5 and take a first look at its numerous features. We'll also lay the groundwork for the sessions that follow and come away with the knowledge of what comprises HTML5, who's driving it, and why every developer in the world today should care about it.

- What is HTML5?
- The status of HTML5 (2022? Really?)
- New markup elements
- New JavaScript APIs
- Browser support for HTML5
- HTML5 Resources

Audio and Video

HTML5 adds native support to HTML and JavaScript for rich media in the form of audio and video. In addition to introducing new <audio> and <video> elements, HTML5 builds a whole API around them for presenting media content in browsers and mobile devices the way *you* want to present it. Learn about these new elements and APIs and how to encode media for compatibility with a wide range of devices.

- The <video> element
- Video codecs and multiple sourcing
- The <audio> element
- Audio codecs and multiple sourcing
- The audio and video API

The Canvas API

The canvas API is arguably the most important new feature of HTML5. For the first time, developers can draw into the browser window using a pixel-addressable API, opening the door to kinds of applications that were never before possible without browser plug-ins. This session takes a deep dive into the canvas API and provides numerous examples of its uses, capabilities, and even limitations.

- The <canvas> element
- CanvasRenderingContext2d
- Drawing shapes, strokes, and fills
- Drawing paths
- Drawing text
- Drawing shadows
- Drawing images
- Pixel manipulation
- Transforms
- Canvas state
- Animations

Web Storage and Offline Applications

Web storage comes in two forms: local storage and session storage. Local storage permits browser-based applications to persist data permanently on the client, not unlike isolated storage in Silverlight. Session storage enables applications to store data transiently for the length of a browser session. HTML5 also supports offline applications, which permits pages to be browsed absent an Internet connection. Put everything together – local storage, session storage, and offline applications – and you have a powerful mix for building applications that behave less like Web applications and more like native applications.

- Local storage
- Storage quotas
- Storage events
- Session storage
- Offline applications

WebSockets and Web Workers

WebSockets connect clients and servers via duplex TCP connections and enable Web servers to push data to clients asynchronously. Web Workers enable developers to use multithreading to improve responsiveness and leverage multicore processors. Learn about these features and others related to them, and how you can use them to build better applications for browsers and mobile devices alike.

- XMLHttpRequest Level 2
- Web messaging
- Server-sent events (SSE)
- WebSockets
- Web workers

Geolocation

One of the most exciting new features of HTML5 is the geolocation API, which allows you to write location-aware apps that run in the browser and on mobile devices. Integrating geolocation data with mapping platforms such as Bing Maps enables developers to build a whole new genre of applications that simply weren't possible before without browser plug-ins. This session covers the geoolcation API in detail and introduces developers to the brave new world of location awareness.

- navigator.geolocation
- Getting the current position
- Tracking the current position
- Combining geolocation with Bing Maps

HTML5 Forms

HTML5 significantly richens the capabilities of HTML forms by introducing new <input> types, new <input> attributes, and built-in support for client-side validation of user input. Though only a handful of browsers support these features at the moment, HTML5 forms already enjoy partial support on mobile platforms and will play an important role in the future of HTML5 mobile development. Learn what HTML5 forms are all about and how you can leverage them to build better mobile applications today.

- New <input> types
- New <input> attributes
- Input validation

Setup Requirements

Application Requirements

Tool	Version
Operating System	Windows 7 or higher
Development Environment	Visual Studio 2010 Ultimate or Visual Studio 2010 Premium
Development Installation	Must be a default/typical installation (i.e., do not remove any tools) or a full installation

System Requirements

Hardware that can run Visual Studio 2010, additionally lab computers must be connected to the Internet.

Additional Requirements

Also needed, will be a projection system capable of a minimum 1024x768 resolution.

Instructor(s)

Mastering HTML5 is taught by ***Jeff Prosise***; a cofounder of Wintellect. He has written nine books and hundreds of magazine articles on computer programming, and today focuses most of his energy on Web technologies such as ASP.NET, AJAX, and Silverlight, as well as on writing applications for Windows phones. A reformed engineer who discovered after college that there's more to life than computing loads on mounting brackets, Jeff is known to go out of his way to get wet in some of the world's best dive spots and to spend way too much time building and flying R/C aircraft.