

Technical Training Solutions



ASP .NET AJAX BOOT CAMP (USING VB .NET) (3 Day Course)

Technical
Course
Outline

Course Summary

AJAX ("Asynchronous JavaScript and XML") is an exciting web application technology that, along with a rich set of development tools, is becoming an indispensable element for providing the basis for a new generation of Rich Internet Applications (RIAs).

This course provides hands-on experience working with Microsoft's ASP.NET AJAX Script Library, Extensions, & Toolkit. Students will learn about the fundamental technologies required to build custom AJAX applications, how to debug AJAX application code, how to use various ASP.NET AJAX controls & scripts, how to incorporate AJAX into Web Services and much more.

Intended Audience:

AJAX relies heavily upon client-side scripting and an understanding of the request/response nature of the web. As a consequence of this, this course is geared towards **current web developers who have a solid understanding of client-side web development technologies such as: HTML, XHTML, JavaScript and CSS as well as ASP .NET and VB .NET programming experience using Visual Studio.**

While exercises and labs will be taught using VB .NET, this course is also open and applicable to C# developers. Finished code in both languages will be provided.

Prerequisites:

To ensure the best learning experience for all participants, the following pre-requisites **must be met** in order to participate in this course:

- Successful completion of **or** proficiency with the topics from all of the following courses:
 - **Advanced XHTML, HTML & CSS**
 - **Introduction JavaScript**
 - **"VB .NET Fundamentals" or "C# .NET Fundamentals"**
 - **"ASP .NET Fundamentals"**

Course Contents:

Life Before AJAX (Overview/Demonstration/Discussion)

- HTTP Request/HTTP Response & HTML
- The W3C Document Object Model (DOM) Standard
- XHTML, CSS & DHTML
- JavaScript & ECMAScript

Understanding AJAX Technologies & Architectures

- The XmlHttpRequest Control
- Microsoft AJAX Script Library
 - Cross-Browser Issues
- ASP .NET AJAX Extensions
- ASP .NET AJAX Control Toolkit
 - ASP .NET AJAX Control Extenders
- JavaScript in Assemblies
- Providing a ScriptReference
- Embedded JavaScript Files

The ASP.NET AJAX Script Library

- What Is The AJAX Library?
- The AJAX Library Namespaces
- Implementing Global Shortcut Functions
- Canceling Duplicate Asynchronous Requests
- Aborting In-Process Asynchronous Requests
- Writing Custom AJAX Scripts

Microsoft's ASP.NET AJAX Extensions

- Microsoft's Core vs. Extended AJAX Technologies
- AJAX Assemblies Installed In The GAC
- Managing AJAX Scripts With The ScriptManager
- Partial Page Rendering
 - The UpdatePanel Control
 - Properties & Methods
 - UpdatePanel Request Stages
 - Initializing, Loading, Completing
 - Using Triggers
 - The PageRequestManager Class
- Partial-Page Update Notifications With UpdateProgress
- Implementing Timers To Automatically Refresh Data

Debugging ASP.NET AJAX Applications

- Understanding Different Debugging Tools
- Debugging Inline & External Scripts
- Viewing Request & Response Messages Using Fiddler
- Working With The Sys.Debug Client-Side Class

The ASP.NET AJAX Control Toolkit (ACT)

- Installing & Configuring The ASP.NET AJAX Control Toolkit
 - AjaxControlToolkit.dll
- Perform Advanced AJAX Functionality Using Toolkit Controls
 - Controls vs. Control Extenders
 - The TabBrowser Control
 - The Accordion Control
 - The CollapsePanel Control
 - The ModalPopUp Extender Control
 - The CascadingDropDown Control Extender
 - The UpdateProgress Control
 - The MaskedEdit Control
 - The History Control
 - The Calendar Control

Calling Web Services Using ASP.NET AJAX

- Web Service Architecture & Key Technologies
- Creating ASP.NET Web Services
- Applying AJAX Web Service Attributes To Web Services
 - ScriptMethod Attribute
- JavaScript Web Service Proxy Objects Using ScriptManager
 - Calling Web Services Using Proxies
- Creating & Calling Page Methods
- JavaScript Object Notation
 - Comparing JSON and SOAP
 - JSON Data Types
 - JSON Request/Response Messages