

Course 466:
AJAX Programming with the ASP.NET AJAX
Extensions
(3 days)

Course Description...

AJAX (Asynchronous JavaScript and XML) technologies provide a way to build richer and more efficient Web applications using JavaScript, XMLHttpRequest and DHTML. In this hands-on course you'll learn how AJAX technologies work together to perform partial-page updates to speed up data delivery to the browser. You'll see how Microsoft's ASP.NET AJAX Extensions can simplify the process of AJAX-enabling applications and increase developer productivity. Topics covered include ASP.NET AJAX server-side controls, script library classes and functions, creating and calling Web Services, debugging AJAX-enabled applications, using ASP.NET AJAX services and using ASP.NET AJAX Toolkit controls.

Learning Objectives...

- AJAX technologies and architecture
- Cross-browser XMLHttpRequest tips and tricks
- The purpose of the ScriptManager
- How to use the UpdatePanel control
- Providing request progress status to end users
- PageRequestManager events and other client-side classes and functions
- How to cancel or abort AJAX requests
- The process of creating and calling ASP.NET Web Services with AJAX
- The role of JSON
- AJAX debugging tips, tricks and tools
- How to access security and profile information using ASP.NET AJAX
- The purpose of UpdatePanel triggers
- ASP.NET AJAX Toolkit controls

Prerequisites...

Previous experience with ASP.NET 2.0 and C# or VB.NET is required.

See next page for a detailed course outline...

Course Outline...

Chapter 1 – AJAX Technologies and Concepts

- What is AJAX?
- AJAX architecture and technologies
- Using the XMLHttpRequest object to perform asynchronous postback operations
- Cross-browser issues
- Writing callback functions
- Getting started with the ASP.NET AJAX Extensions
- Hands-on lab

Chapter 2 –ASP.NET AJAX Controls

- ASP.NET AJAX controls
- The purpose of the ScriptManager and ScriptManagerProxy controls
- Making asynchronous calls with the UpdatePanel control
- Defining UpdatePanel triggers
- Updating data on a timed basis with the Timer control
- Showing progress with the UpdateProgress control
- Hands-on Lab

Chapter 3 – ASP.NET AJAX Script Library

- Introduction to the ASP.NET AJAX Script Library
- Using ASP.NET AJAX shortcut functions
- What is the PageRequestManager class?
- Handling initialize, load and completion events
- Preventing duplicate AJAX requests and aborting AJAX requests
- Hands-on lab

Chapter 4 – Calling Web Services with ASP.NET AJAX

- Web Services Architecture
- The purpose of JSON
- AJAX-enabling ASP.NET Web Services
- The ScriptService and ScriptMethod attributes
- Referencing Web Services with the ScriptManager
- Using client-side JavaScript proxy objects
- Hands-on lab

Chapter 5 – Debugging AJAX Applications

- Find bugs and issues with AJAX debugging tools
- Debugging with VS.NET 2005 and the Script Explorer
- Viewing AJAX request/response messages with Fiddler
- Debugging with FireFox and FireBug
- Hands-on lab

Chapter 6 – ASP.NET AJAX Membership and Profile Services

- Configuring Membership and Profile services for AJAX applications
- Authenticating users with the Membership service
- Accessing user profiles with the Profile service
- Writing success and failure callbacks
- Hands-on lab

Chapter 7 – ASP.NET AJAX Toolkit Controls

- Introduction to the ASP.NET AJAX Toolkit
- Installing and configuring the toolkit
- Exploring toolkit controls:
 - AutoComplete
 - ReorderList
 - ModalPopUp
 - MaskedEdit
 - ValidatorCallOut
 - More...

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