

Technical Training Solutions



ASP .NET 4.0 & ADO .NET 4.0 FUNDAMENTALS (WITH VISUAL STUDIO 2010) (5 Day Course)

Technical
Course
Outline

Course Summary

The goal of this course is to provide developers the knowledge and skills needed to develop data-driven Web Applications and Web Services using Microsoft's ASP .NET 4.0 and ADO .NET 4.0 technologies. The course focuses on building applications "end-to-end", while adhering to industry standards and best practices.

Intended Audience:

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

Prerequisites:

- Successful completion of **or** proficiency with the topics from the courses in the "Web Developer Course Roadmap"
- Successful completion of the "C# .NET Fundamentals" or "VB .NET Fundamentals" course **or** More than **6 months practical experience** with Visual Studio .NET

Course Contents:

Working With ASP.NET 4.0

- ASP .NET Page Request/Response Architecture
- ASP .NET Web Sites vs. ASP .NET Web Applications
- ASP .NET Namespaces
- Creating & Using Web Forms
- ASP .NET Development Server vs. IIS

Using Web Form Controls (Server Controls)

- Creating The Page UI With Controls
- Controls & Control Families
 - Using Web Form Controls (Server Controls)
 - Client Rendering of Server Controls
 - Using Server Controls To Maintain State
 - HTML Controls vs. HTML Server Controls
- Using Validation Controls

Separating Code From Content

- .aspx, aspx.designer.cs, & .aspx.cs Files
- Advantages Of Using "Code-Behind" Pages
- Adding Code To A Page
 - The Page Class
 - Lifecycle
 - **IsPostBack** Property
 - Cross-Page Postbacks
- Accessing Server Controls Programmatically

Using Trace In ASP .NET Pages

- Overview Of Tracing
- Enabling/Disabling Tracing
 - Page-Level Trace vs. Application-Level Trace
- Adding Custom Trace Information

Building A Tiered Application (End to End)

- Why Build In Tiers?
- Defining A Teir's Boundaries
- Building Backwards (Data, Business, Workflow, Presentation)

.NET Interoperability

- Interoperating With A COM Component In .NET
 - Creating The Runtime Callable Wrapper (RCW)
 - Releasing The COM Object From .NET

State Management

- Overview of State Maintenance Techniques
 - ASP.NET Cache
 - ViewState
 - Session Variables
 - Page & Page Fragment Output Caching

ASP .NET XML Web Services

- Why XML & SOAP?
- Creating A Web Service Class
- Creating A Web Method
- Configuring The Service & Methods Via Compiler Attributes
- Examining The WSDL
- Testing The Web Service In Visual Studio
- Making A Web Reference
- Consuming A Web Service's Web Methods

Using ADO .NET 4.0 To Access Data

- Overview Of ADO .NET
 - The ADO .NET Data Providers
 - The ADO .NET Connected & Disconnected Classes
- Connecting To A Data Repository Via The Connection Classes
- Getting The Data You Need Via The Command Classes
- Accessing The Resulting Data With DataReader Classes
- Storing The Data With A DataSet
- Filtering DataSet Data With A DataView
- Databinding & The Various ASP .NET Databound Controls
- Retrieving & Binding To XML Data
- Generating XML From Traditional Data

Master Pages

- Setting Up A Master Page & A Web Content Page
- How Master Pages & Web Content Pages Compile Together
- The LoadComplete Event

Creating ASP .NET User Controls

- What Is A User Control?
- No More Includes?!
- Creating A User Control
- Referencing & Instantiating A User Control

Configuring & Performance Enhancing Applications

- Using "Web.config"
- Using "Global.asax"