

ASP .NET Using C# and Visual Studio (OI4140)

Duration: 5 days

This five-day course provides a comprehensive and practical hands-on introduction to developing Web applications using ASP.NET 3.5 and C#. It includes an introduction to using ASP.NET AJAX to build rich client applications. ASP.NET is introduced as a Web programming platform that overcomes a number of limitations of ASP. Its architecture is outlined, including the role of compilation, the Page class and code-behind. Web Forms are introduced, including server controls, viewstate, life cycle, and the event model. Request/response HTTP programming using ASP.NET is covered as is ASP.NET Web applications, and caching in ASP.NET. Data access is covered in some detail, including an introduction to ADO.NET, Language Integrate Query (LINQ), and the powerful data access controls provided by ASP.NET 3.5. The final section of the course introduces rich client-side development with ASP.NET AJAX and the architecture and programming of the HTTP pipeline.

Audience: Experienced application developers or architects.

Prerequisites: A working knowledge of C# and .NET Framework. Knowledge of JavaScript is recommended.

Topics:

INTRODUCTION TO ASP.NET

- From ASP to ASP.NET
- Web Forms
- Web Services
- ASP.NET Features
- ASP.NET 2.0
- ASP.NET 3.5

WEB FORMS ARCHITECTURE

- Page Class
- Web Forms Life Cycle
- Web Forms Event Model
- Code-Behind

ASP.NET AND HTTP

- Request/Response Programming
- HttpRequest Class
- HTTP Collections
- HttpResponse Class
- Redirection
- HttpUtility Class

WEB APPLICATIONS USING VISUAL STUDIO

- Using Visual Web Developer
- Visual Studio Forms Designer

- Using Components
- Shadow Copying
- Using the Global.asax File
- Data Binding

STATE MANAGEMENT AND WEB APPLICATIONS

- Session State
- Application State
- Multithreading Issues
- Cookies

SERVER CONTROLS

- HTML Server Controls
- Web Form Server Controls
- Rich Controls
- User Controls

CACHING IN ASP.NET

- What Is Caching?
- Page Level Caching
- Page Fragment Caching
- Optimizing Your ASP .NET Application
- Application Caching

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ASP.NET CONFIGURATION AND SECURITY FUNDAMENTALS

- Configuration Overview
- Authentication and Authorization
- Forms Authentication
- Windows Authentication

DEBUGGING, DIAGNOSTICS, AND ERROR HANDLING

- Debugging
- Application Tracing
- Page Tracing
- Errors Handling

MORE SERVER CONTROLS

- New Controls in ASP.NET 2.0
- Menus
- Master Pages

ADO.NET AND LINQ

- ADO.NET Overview
- .NET Data Providers
- Connections
- Commands
- DataReaders and Connected Access
- Data Sets and Disconnected Access
- Language Integrated Query (LINQ)

DATA ACCESS IN ASP.NET 3.5

- Data Source Controls
- Connection String Storage
- GridView
- DetailsView
- FormView
- Object Data Sources
- ListView
- DataPager
- LinqDataSource

PERSONALIZATION AND SECURITY

- Configuration Overview
- Themes
- Skins
- Security in ASP.NET 2.0
- Membership and Roles
- Login Controls

- User Profiles

INTRODUCTION TO ASP.NET AJAX

- Rich Client Applications
- AJAX
- ScriptManager
- UpdatePanel
- AJAX Client Library
- Remote Method Calls
- AJAX Control Toolkit

HTTP PIPELINE

- Pipeline Architecture
- Context
- Applications
- Handlers
- Modules

APPENDIX A – LEARNING RESOURCES

APPENDIX B – CONFIGURING IIS FOR ASP.NET 3.5