Course duration

- 5 days

Course Benefits

- Gain a thorough understanding of the philosophy and architecture of Web applications using ASP.NET.
- Acquire a working knowledge of Web application development using Web Forms and Visual Studio 2010.
- Optimize an ASP.NET Web application using configuration, security, and caching.
- Access databases using ADO.NET and LINQ.
- Use newer features in ASP.NET.
- Implement rich client applications using ASP.NET AJAX.
- Create Web applications using the Model-View-Controller design pattern.

Course Outline

1. Introduction to ASP.NET
    1. Web Application Fundamentals
    2. Using Internet Information Services
    3. Web Forms
    4. ASP.NET MVC
    5. Web Services
    6. ASP.NET Features
2. Web Forms Architecture
    1. Page Class
    2. Web Forms Life Cycle
    3. Web Forms Event Model
    4. Code-Behind
3. ASP.NET and HTTP
    1. Request/Response Programming
    2. HttpRequest Class
    3. HTTP Collections
    4. HttpResponse Class
    5. Redirection
    6. HttpUtility Class
4. Web Applications Using Visual Studio
    1. Using Visual Web Developer
    2. Visual Studio Forms Designer
    3. Using Components
    4. Shadow Copying

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    5. Using the Global.asax File
    6. Data Binding
5. State Management and Web Applications
    1. Session State
    2. Application State
    3. Multithreading Issues
    4. Cookies
6. Server Controls
    1. HTML Server Controls
    2. Web Forms Server Controls
    3. Rich Controls
    4. Validation Controls
    5. User Controls
7. Caching in ASP.NET
    1. What Is Caching?
    2. Page-Level Caching
    3. Page Fragment Caching
    4. Optimizing Your ASP.NET Application
    5. Application Caching
8. ASP.NET Configuration and Security Fundamentals
    1. Configuration Overview
    2. Authentication and Authorization
    3. Forms Authentication
    4. Windows Authentication
    5. Security and ASP.NET
9. Debugging, Diagnostics and Error Handling
    1. Debugging
    2. Application Tracing
    3. Page Tracing
    4. Error Handling
10. More Server Controls
    1. Newer ASP.NET Controls
    2. Menus
    3. Master Pages
11. ADO.NET and LINQ
    1. ADO.NET Overview
    2. .NET Data Providers
    3. Connections
    4. Commands
    5. DataReaders and Connected Access
    6. Data Sets and Disconnected Access
    7. Language Integrated Query
12. Data Access in ASP.NET 4.0
    1. Data Source Controls
    2. Connection String Storage
    3. GridView
    4. DetailsView

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5. FormView
6. Object Data Sources
7. ListView
8. DataPager
9. Entity Data Model
10. EntityDataSource
11. LinqDataSource
12. QueryExtender

13. Personalization and Security
    1. Configuration Overview
    2. Themes
    3. Skins
    4. Security in ASP.NET 4.0
    5. Membership and Roles
    6. Login Controls
    7. User Profiles
14. ASP.NET AJAX
    1. Rich Client Applications
    2. AJAX
    3. ScriptManager
    4. UpdatePanel
    5. AJAX Client Library
    6. Remote Method Calls
    7. AJAX Control Toolkit
15. ASP.NET MVC
    1. Model-View-Controller Pattern
    2. What is ASP.NET MVC?
    3. ASP.NET MVC versus Web Forms
    4. ASP.NET MVC Projects in Visual Studio
    5. Controllers
    6. Action Methods and Routing
    7. Views
    8. Strongly Typed Views
    9. Model Binding
    10. Validation

Class Materials

Each student will receive a comprehensive set of materials, including course notes and all the class examples.

Class Prerequisites

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Experience in the following *is required* for this ASP.NET class:

- Good working knowledge of Visual Basic and the .NET Framework.
- Knowledge of JavaScript is recommended for the AJAX chapter.

Experience in the following *would be useful* for this ASP.NET class:

- Some prior experience with Web development will also be helpful.

Prerequisite Courses

Courses that can help you meet these prerequisites:

- Visual Studio 2008 Training: New Features for Visual Basic Developers

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