This five-day course provides a comprehensive and practical hands-on introduction to developing Web applications using ASP.NET 4.0 and C#. It includes an introduction to ASP.NET MVC, a new Web programming framework that incorporates use of the Model-View-Controller (MVC) pattern. It also includes coverage of using ASP.NET AJAX to build rich client applications. The fundamentals of Web applications are reviewed, and a testbed is established for ASP.NET and Internet Information Services. The architecture of ASP.NET is outlined, including the role of compilation, the Page class and code-behind. Web Forms are introduced, including server controls, view state, life cycle, and the event model. Request/response HTTP programming using ASP.NET is covered as are ASP.NET Web applications, caching in ASP.NET, and the fundamentals of configuration and security. Data access is covered in some detail in two chapters, including an introduction to ADO.NET, Language Integrated Query (LINQ), and the powerful data access controls provided by ASP.NET 4.0. The final section of the course introduces rich client-side development with ASP.NET AJAX and use of the ASP.NET MVC framework.

Course Objectives:

- 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.

Audience: Experienced application developers or architects.

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

Number of Days: 5 days

1. Introduction to ASP.NET

Web Application Fundamentals
Benefits of ASP.NET
An Echo Program
ASP.NET Features
Compiled Code
Server Controls
Browser Independence
Separation of Code and Content
State Management

2. Web Forms Architecture

Web Forms Architecture
HelloCodebehind.aspx
HelloCodebehind.aspx.cs
Page Class
Code-Behind Inheritance Model
Web Forms Page Life Cycle
View State
Enabling View State for Controls
Web Forms Event Model
Page Processing
Page Events