

Developing ASP.NET Web Applications Using Visual Studio 2008

Course 2310C—Five days—Instructor-led

Introduction

This five-day instructor-led course will teach introductory-level Web developers the fundamentals of Web application development and best practices for Microsoft Web development technologies, including ASP.NET 3.5, ASP.NET AJAX Extensions and Silverlight. This course focuses on using the Microsoft Visual Studio 2008 development environment and the Microsoft .NET Framework 3.5 to create a Web application that delivers dynamic content to a Web site.

Audience

This course is intended for introductory-level Web developers who have knowledge of Hypertext Markup Language (HTML) or Dynamic HTML (DHTML), along with some knowledge of a scripting language such as Visual Basic Scripting Edition or Microsoft JScript.

This course is also appropriate for Microsoft Visual Basic 6.0, Microsoft Visual Basic for Applications (VBA) or classic ASP developers who want to learn ASP.NET 3.5 and other Microsoft Web development technologies.

At Course Completion

After completing this course, students will be able to:

- Describe the key features of the Microsoft .NET Framework and ASP.NET.
- Create a component by using Visual Basic .NET or Visual C#.
- Create a Microsoft ASP.NET Web Form that contains server controls.
- Add functionality to server controls that are on an ASP.NET Web form.
- View runtime information about a Web application by using the Trace and Debug objects.
- Validate user input by using validation controls.
- Create and implement a user control.
- Access data by using Microsoft ADO.NET 3.5 and the built-in data access tools available in Visual Studio 2008.
- Accomplish complex data access tasks from an ASP.NET Web application
- Access and manipulate data that was stored by using Extensible Markup Language (XML).
- Create and extend an ASP.NET AJAX application

- Create a Microsoft Silverlight-based application that delivers dynamic content
- Call a Web service from an ASP.NET Web application and incorporate the returned data into a Web application.
- Store ASP.NET Web application and session data by using a variety of methods
- Configure and deploy an ASP.NET Web application.
- Secure an ASP.NET Web application by using a variety of technologies, including authentication and authorization.

Prerequisites

Before attending this course, students must have:

- Knowledge of HTML or DHTML, including:
 - Tables
 - Images
 - Forms
- Programming experience using Microsoft Visual Basic or Microsoft Visual C#, including:
 - Declaring variables
 - Using loops
 - Using conditional statements

The completion of Course 4994, Introduction to Programming Microsoft .NET Framework Applications with Microsoft Visual Studio 2005, satisfies the preceding prerequisite skills requirements for Visual Basic and Visual C#.

Course Outline

Module 1: Overview of the Microsoft .NET Framework

Lessons

- Introduction to the .NET Framework
- Overview of ASP.NET
- Overview of the Lab Application
- Resources

Module 2: Creating Web Applications by Using Microsoft Visual Studio 2008 and Microsoft .NET-Based Languages

Lessons

- Overview of Visual Studio 2008
- Creating an ASP.NET Web Application Project
- Overview of the Microsoft .NET-Based Languages
- Creating a Component by Using Visual Studio 2008

Module 3: Creating a Microsoft ASP.NET Web Form

Lessons

- Creating Web Forms
- Adding Server Controls to a Web Form
- Creating Master Pages

Module 4: Adding Code to a Microsoft ASP.NET Web Form

Lessons

- Implementing Code-Behind Pages
- Adding Event Procedures to Web Server Controls
- Handling Page Events

Module 5: Tracing in Microsoft ASP.NET Web Applications

Lessons

- Tracing and the Trace Object
- Remote Debugging

Module 6: Validating User Input

Lessons

- Overview of User Input Validation
- Validation Controls
- Page Validation

Module 7: Creating and Implementing User Controls

Lessons

- Adding User Controls to an ASP.NET Web Form
- Creating User Controls

Module 8: Accessing Data with Microsoft ADO.NET and Visual Studio 2008

Lessons

- Overview of ADO.NET
- Connecting to a Database
- Accessing Data

- Accessing Multiple Tables

Module 9: Accomplishing Complex Data Access Tasks

Lessons

- Overview of Stored Procedures
- Calling Stored Procedures
- Data Access with LINQ to SQL

Module 10: Reading and Writing XML Data

Lessons

- Overview of XML Architecture in ASP.NET
- XML and the DataSet Object
- Managing XML Data
- Accessing XML Data by Using the XML Web Server Control

Module 11: Creating an ASP.NET AJAX Application

Lessons

- Introduction to ASP.NET AJAX
- Creating an ASP.NET AJAX Application by Using the ASP.NET AJAX Extensions
- Extending an Application by Using the ASP.NET AJAX Control Toolkit

Module 12: Delivering Dynamic Content with Microsoft Silverlight

Lessons

- Overview of Microsoft Silverlight
- Creating Silverlight-Based Applications with Visual Studio 2008

Module 13: Consuming and Creating XML Web Services

Lessons

- Overview of Using XML Web Services
- Calling an XML Web Service
- Creating an XML Web Service

Module 14: Managing State

Lessons

- State Management
- Application and Session Variables
- Cookies and Cookieless Sessions

Module 15: Configuring, Optimizing, and Deploying a Microsoft ASP.NET Web Application

Lessons

- Implementing the Cache Object
- ASP.NET Output Caching
- Configuring an ASP.NET Web Application
- Deploying an ASP.NET Web Application

Module 16: Securing a Microsoft ASP.NET Web Application

Lessons

- Web Application Security Overview
- Windows-Based Authentication
- Forms-Based Authentication