Developing Web Applications Using Microsoft Visual Studio 2008 SP1

Course 2310D

Duración: 40 hrs.

About this Course

This five-day instructor-led course provides knowledge and skills on developing Web applications by using Microsoft Visual Studio 2008 SP1.

Audience Profile

This course is intended for Web developers who are beginners and 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.

Students are required to have the ability to construct a simple Web page using a Microsoft tool or a third-party tool. For example, students should be able to create or customize a Web Page on a SharePoint site.

Prerequisite

Before attending this course, students must have at least one month of experience in .NET technologies. In addition to their professional experience, students who attend this training should have the following technical knowledge:

Knowledge of HTML or DHTML, including:
- Tables
- Images
- Forms

Programming experience using Visual Basic .NET or Visual C# .NET, including:
- Declaring variables
- Using loops
- Using conditional statements

The completion of Course 2667, Introduction to Computer Programming, satisfies the preceding prerequisite programming skills requirement.

At Course Completion

After completing this course, students will be able to:

Explore ASP.NET Web applications in Microsoft Visual Studio 2008 SP1.

Create Web applications by using Microsoft Visual Studio 2008 SP1 and Microsoft .NET–based languages.

Create a Microsoft ASP.NET Web Form.

Add functionality to a Microsoft ASP.NET Web Form.

Implement master pages and user controls.

Validate user input.

Debug Microsoft ASP.NET Web applications.

Manage data in an ASP.NET 3.5 Web application.

Manage data access tasks by using LINQ.

Manage data by using ASP.NET Dynamic Data.

Create a Microsoft ASP.NET AJAX application.

Consume XML Web services and Windows Communication Foundation (WCF) services.

Manage state in Web applications.

Configure and deploy a Microsoft ASP.NET Web application.

Secure a Microsoft ASP.NET Web application.

Implement new technologies supported by Visual Studio 2008 SP1 for Web development.

Course OutlineModule 1: Exploring ASP.NET Web Applications in Microsoft Visual Studio 2008 SP1
This module explains the key features of Microsoft .NET Framework and Microsoft ASP.NET. It helps you view the complete Web application that you build in the labs throughout this course.
Lessons

Introduction to the .NET Framework

Overview of ASP.NET

Overview of the Lab Application

After completing this module, students will be able to:

Describe the .NET Framework.

Describe ASP.NET.

Describe how the lab application works.

Module 2: Creating Web Applications by Using Microsoft Visual Studio 2008 SP1 and Microsoft .NET–Based Languages
This module describes the different programming languages that are available when you develop Microsoft .NET Framework applications. It explains the fundamental aspects of writing code and creating components by using two of the .NET Framework–based languages, Microsoft Visual Basic and Microsoft Visual C#. It provides an overview of Microsoft Visual Studio 2008 SP1. It also explains how to create a simple Web application.

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Lessons

Choosing a Programming Language

Overview of Visual Studio 2008 SP1

Creating a Simple Web Application

Lab : Creating Web Applications by Using Microsoft Visual Studio 2008 SP1 and Microsoft .NET–Based Languages

Creating an ASP.NET Web Site

Adding and Configuring Server Controls in Web Forms

Building and Deploying an ASP.NET Web Application

After completing this module, students will be able to:

Choose a programming language.

Describe Visual Studio 2008 SP1.

Create a simple Web application.

Module 3: Creating a Microsoft ASP.NET Web FormThis module explains how to create Web Forms and populate them with server controls.Lessons

Creating Web Forms

Adding and Configuring Server Controls in a Web Form

Lab : Creating a Microsoft ASP.NET Web Form

Creating a Web Form

Adding and Configuring Server Controls in a Web Form

After completing this module, students will be able to:

Create Web Forms.

Add and configure server controls in a Web Form.

Module 4: Adding Functionality to a Microsoft ASP.NET Web Form
This module describes the various methods that you can use to add code to your Microsoft ASP.NET Web application. It explains how to use Web server controls, event handlers, code-behind files, and components. In addition, it explains how to use page events, especially the Page_Load event.
Lessons

Working with Code-Behind Files

Handling Server Control Events

Creating Classes and Components by Using Visual Studio 2008 SP1

Handling Page Events

Lab : Adding Functionality to a Microsoft ASP.NET Web Form

Implementing Code in a Web Application

Creating Event Procedures

Creating an Entity Component

Handling Page and Control Events

After completing this module, students will be able to:

Work with code-behind files.

Handle server control events.

Create classes and components by using Visual Studio 2008 SP1.

Handle page events.

Module 5: Implementing Master Pages and User Controls
This module explains how to create and implement master pages and how to implement user controls in a Web application.
Lessons

Creating Master Pages

Adding User Controls to an ASP.NET Web Form

Lab : Implementing Master Pages and User Controls

Adding and Applying a Master Page

Converting Web Forms to Content Pages and User Controls

After completing this module, students will be able to:

Create master pages.

Add user controls to an ASP.NET Web Form.

Module 6: Validating User Input
This module provides an overview of user input validation. It covers information on adding, positioning, and configuring validation

controls on a Web Form. In addition, it covers information on validating Web Forms.
Lessons

Overview of User Input Validation

ASP.NET Validation Controls

Validating Web Forms

Lab : Validating User Input

Adding Validation Controls

Configuring Validation Controls

Adding Server-Side Validation

After completing this module, students will be able to:

Describe user input validation.

Describe Visual Studio 2008 SP1.

Create a simple Web application.

Module 7: Debugging Microsoft ASP.NET Web Applications
This module describes the steps required to enable tracing and debugging, including how you can use debugging and tracing in a
Web application.
Lessons

Debugging in ASP.NET

Tracing in ASP.NET

Lab : Debugging Microsoft ASP.NET Web Applications

Debugging a Web Application

Tracing a Web Application

After completing this module, students will be able to:

Perform debugging in ASP.NET.

Perform tracing in ASP.NET.

Module 8: Managing Data in an ASP.NET 3.5 Web Application
This module provides an overview of Microsoft ADO.NET. It explains how to programmatically work with data by using ADO.NET

and how to create a connection to access the data stored in a Microsoft SQL Server database. In addition, it explains how to use the DataSet and DataReader objects to support the local data storage and data manipulation requirements of Web Forms.
Lessons

 Overview of ADO.NET

 Connecting to a Database

 Managing Data

Lab : Managing Data in an ASP.NET 3.5 Web Application

 Connecting to a Data Source

 Binding a Server Control to a Data Source

 Modifying a Data Source

After completing this module, students will be able to:

 Describe ADO.NET.

 Connect to a database.

 Manage data.

Module 9: Managing Data Access Tasks by Using LINQ
This module explains what LINQ is and how you can use LINQ to manage both XML data and Microsoft SQL Server data in a Microsoft ASP.NET Web application by using Web Server controls and code.
Lessons

 Overview of LINQ

 Managing XML Data by Using LINQ to XML

 Managing SQL Data by Using LINQ to SQL

Lab : Managing Data Access Tasks by Using LINQ

 Loading Data by Using the XmlDataSource Control

 Displaying Data by Using LINQ to XML

 Saving Data by Using LINQ to SQL

After completing this module, students will be able to:

 Describe LINQ.

 Manage XML data by using LINQ to XML.

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Manage SQL data by using LINQ to SQL.

Module 10: Managing Data by Using ASP.NET Dynamic Data

This module provides an overview of Microsoft ASP.NET Dynamic Data. It also covers information on applying ASP.NET Dynamic Data. In addition, it explains how to customize ASP.NET Dynamic Data applications.
Lessons

Overview of ASP.NET Dynamic Data

Applying ASP.NET Dynamic Data

Customizing ASP.NET Dynamic Data Applications

Lab : Managing Data by Using ASP.NET Dynamic Data

Adding Dynamic Data to an Existing Web Site

Registering LINQ to SQL with Dynamic Data

Adding Metadata to the Data Model

After completing this module, students will be able to:

Describe ASP.NET Dynamic Data.

Apply ASP.NET Dynamic Data.

Customize ASP.NET Dynamic Data applications.

Module 11: Creating a Microsoft ASP.NET AJAX Application

This module provides an overview of Microsoft ASP.NET AJAX and explains how to create an ASP.NET AJAX application. It also introduces the ASP.NET AJAX Control Toolkit, and explains how to install the toolkit and add controls from the toolkit to a Web 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

Lab : Creating a Microsoft ASP.NET AJAX Application

Creating a Modal About Box

Customizing Dynamic Data Field Templates with AJAX Controls

Adding the Country Import Progress Indicator

After completing this module, students will be able to:

Describe ASP.NET AJAX.

Create an ASP.NET AJAX application by using the ASP.NET AJAX extensions.

Extend an application by using the ASP.NET AJAX Control Toolkit.

Module 12: Consuming XML Web Services and Windows Communication Foundation Services
This module provides an overview of XML Web services. It describes how to locate and call an XML Web service directly by using a browser and a proxy from a Web application. In addition, this module describes how to call a Windows Communication Foundation (WCF) service directly by using a browser and a proxy from a Web application.
Lessons

Overview of XML Web Services

Locating XML Web Services

Calling XML Web Services

Consuming Windows Communication Foundation Services

Lab : Consuming XML Web Services and Windows Communication Foundation Services

Discovering an XML Web Service

Creating a Web Reference Proxy

Calling a Web Service Method from a Web Form

After completing this module, students will be able to:

Describe XML Web services.

Locate XML Web services.

Call XML Web services.

Consume Windows Communication Foundation services.

Module 13: Managing State in Web Applications
This module explains how to manage state in a Microsoft ASP.NET Web application.
Lessons

State Management

ASP.NET Profiles

ASP.NET Caching

Lab : Managing State in Web Applications

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Examining the View State

Caching Countries

Displaying Visitors Counter on Default Page

After completing this module, students will be able to:

Describe state management.

Describe ASP.NET profiles.

Describe ASP.NET caching.

Module 14: Configuring and Deploying a Microsoft ASP.NET Web Application
This module explains how to configure and deploy a Microsoft ASP.NET Web application by using the machine.config and web.config files.
Lessons

Configuring an ASP.NET Web Application

Deploying an ASP.NET Web Application

Lab : Configuring and Deploying a Microsoft ASP.NET Web Application

Configuring the List View Page Size and Enabling the Save Countries Button

Configuring the Visitor Counter

Deploying the Web Application

After completing this module, students will be able to:

Configure an ASP.NET Web application.

Deploy an ASP.NET Web application.

Module 15: Securing a Microsoft ASP.NET Web ApplicationThis module explains the various Web application security functionalities. It also covers information on the infrastructure to build and deploy various Web application security functionalities.Lessons

Web Application Security Overview

Declaratively Configuring Authentication and Authorization

Working Programmatically with Authentication and Authorization

Lab : Securing a Microsoft ASP.NET Web Application

Enabling Forms Authentication

Implementing Authorization

Protecting the Configuration File

After completing this module, students will be able to:

Describe Web application security.

Describe how to declaratively configure authentication and authorization.

Work programmatically with authentication and authorization.

Module 16: Implementing New Technologies Supported by Visual Studio 2008 SP1 for Web Development
This module explains the various new functionality, changes, and enhancements of Microsoft Visual Studio 2008 SP1 and Microsoft .NET Framework 3.5 SP1 for improved Web development. In addition, it explains how Microsoft ADO.NET Data Services, Microsoft ASP.NET MVC, and Microsoft Silverlight 3 fit in with the .NET Framework 3.5 SP1 and Visual Studio 2008 SP1.
Lessons

Working with ADO.NET Data Services

Working with ASP.NET MVC

Working with Silverlight 3

Lab : Implementing New Technologies Supported by Visual Studio 2008 SP1 for Web Development

Implementing ADO.NET Data Services

Implementing Silverlight Applications

After completing this module, students will be able to:

Work with ADO.NET Data Services.

Work with ASP.NET MVC.

Work with Silverlight 3.

Additional Reading