



Developing ASP.NET 2.0 Web Applications Using Microsoft Visual Studio 2005

(MS2543 + MS2544)

Course Objective:

The Microsoft Certified Technology Specialist credential enables professionals to target specific technologies and distinguish themselves by demonstrating in-depth knowledge and expertise in their subject area technologies.

Developers holding the Microsoft Certified Technology Specialist: .NET Framework 2.0 Web Applications (MCTS: .NET Framework 2.0 Web Applications) certification have demonstrated breadth and depth of skills and knowledge of Web application technology and data access in Web applications.

Technology Specialists typically pursue careers as Web developers, Windows developers, or enterprise software developers. They may also be database developers or systems administrators who do not work daily with the .NET Framework 2.0 but who want to show their technology experience.

Prerequisite:

Working knowledge on programming and IT

Certificate Of Attendance :

Certificate Of Attendance will be awarded to students completing the course achieving minimum 75% attendance.

Training Methodology & Materials:

- Practical hands-on sessions, 75% lab-based and 25% theory-based.
- Well-designed lab sessions to enhance further understanding of the courseware.

Training Duration:

Full-Time : 9.30am to 5.30pm (5 days)

Part-time: 6.45pm to 10.00pm (10 sessions)

Course Fee :

Course Fee : S\$999 excluding Microsoft Exam

Regn Fee : S\$50

DETAILED COURSE OUTLINE

Course Code 2543: Core Web Application Technologies with Microsoft Visual Studio 2005

Unit 1: Creating a Web Application

This unit describes the different types of Web sites that you can create with Visual Studio 2005. It introduces the concept of event handling, and shows how to work with default event handlers for an object. It also explains how to control a Web application through the hierarchy of configuration files.

Lessons

- Visual Studio Web Site Types
- Default Event Handling in Web Applications
- Web Configuration Files

Unit 2: Programming a Web Application

This unit introduces the advanced event-handling capabilities of ASP.NET 2.0 and describes how to work with events in Visual Studio 2005. It shows how to work with non-default event handlers and centralized event handlers. It also addresses other common Web programming concepts, including:

- Detecting the type, version, and capability of the browser being used to view a Web site.
- Accessing information in an ASP.NET Web Page header.
- Using the HttpResponse.Write method to provide feedback to users.
- Handling page-level errors.

Lessons

- Event Handling in Web Applications
- Browser Capability Detection
- Page Header Retrieval
- Page-Level and Application-Level Error Handling

Unit 3: Adding and Configuring Server Controls

This unit explains how to use the HTML controls and Web server controls provided by Visual Studio 2005 and ASP.NET 2.0. It shows how to design and build Web-based user interfaces, and it teaches how to program Web server controls. This unit also describes how the ASP.NET 2.0 postback model works and how it can be used.

Lessons

- HTML Controls and Web Server Controls
- Types of Web Server Controls
- Working with Web Server Controls
- The ASP.NET 2.0 Page Postback Model

Unit 4: Creating a Common Layout by Using Master Pages

This unit explains how to use master pages to define common layouts for Web pages. Master pages provide developers with a new set of features for ensuring consistent page layout. Students will work with master pages and nested master pages in the lab to build a Web application that has a consistent layout and functionality across Web pages.

Lessons

- What Are Master Pages?
- What Are Content Pages?
- Nested Master Pages

Unit 5: Managing State for a Web Application

This unit describes the different state management technologies that students can use in ASP.NET 2.0 Web applications. It discusses how controls can retain state data over multiple requests, and then explains how developers can work with this state data. This unit then shows how to store state data in the Application and Session objects provided by ASP.NET 2.0. It also discusses the different session-data storage mechanisms. Finally, this unit explains how to use the Cache object to cache and retrieve state data.

Lessons

- ViewState Properties and ControlState Data
- Application and Session Objects
- Strategies for Managing Session State Data
- The Cache Object

Unit 6: Accessing and Displaying Data

This unit describes how to add database connections to the Web.Config file and the benefits that this approach adds when building manageable Web applications. This unit then describes the new data controls for accessing data in a variety of formats. It includes details about using the SqlDataSource control, the XmlDataSource control, and the ObjectDataSource control. This unit also describes how user interface data controls are bound to the data source controls, and it includes a discussion about binding data-aware standard controls to data.

Lessons

- Database Connections and the Web.Config File
- Relational Data and Data Source Controls
- XML Data and Data Source Controls
- Object Data and Data Source Controls

Unit 7: Controlling Access to a Web Application

This unit describes authentication and authorization for Web applications. It also shows how to develop login, sign-up, and other membership pages for Web applications based on the ASP.NET 2.0 Membership system.

Lessons

- Authentication for Web Applications
- Authorization for Web Applications
- Site Membership Systems Using the Membership Class
- Web Site Security Administration Using the Roles Class

Unit 8: Deploying a Web Application

This unit describes three different ways to deploy Web applications:

- Using the Copy Web Site utility to deploy a Web application in a non-compiled state
- Using the Publish Web Site utility to deploy a precompiled version of the Web application
- Building Microsoft Windows(Installer packages to create a redistributable application with full setup logic

Lessons

- The Copy Web Site Utility
- The Publish Web Site Utility
- Windows Installer Setup Packages

Unit 9: Making Web Applications Available to Mobile Devices

This unit explains how to enable browsers running on mobile devices, such as Pocket PCs and mobile phones, to access pages within your application.

Lessons

- Device Emulators for Mobile Web Forms
- Mobile Device Detection and Redirection
- Mobile Web Forms
- Device-Specific Features in Mobile Web Forms

Course Code 2544: Advanced Web Application Technologies with Microsoft Visual Studio 2005

Unit 1: Building Dynamic Web Applications

This unit introduces many different aspects of dynamic Web applications. It includes discussions on creating and configuring controls at run time. It then explains how to build dynamic globalization features into a Web application to ensure that it is localizable, including using localized resources and applying different master page layouts in response to culture and language settings. It concludes with explanations about how to enable dynamic configuration for site administrators.

Lessons

- Dynamic Control Creation
- Localization and Globalization
- Dynamic Master Pages
- Dynamic Web Configuration

Unit 2: Creating Controls for Web Applications

This unit explains how developers create different types of controls for different scenarios. The different types of controls include user controls, custom Web server controls, composite Web server controls, and templated controls.

Lessons

- User Controls
- Custom Web Server Controls
- Composite Web Server Controls
- Templated Controls

Unit 3: Optimizing Web Application Performance

This unit introduces topics that will help you improve the performance of Web applications. It describes how the Page Scripting Object Model can help reduce the number of round trips for communication between the server and the browser, and then explains how tracing and instrumentation can be used to monitor and, therefore, improve the performance of a Web application. The unit discusses how caching and asynchronous processing can help increase Web application

performance; it then highlights some considerations that developers must address if the Web application is to be deployed in a Web farm environment.

Lessons

- The Page Scripting Object Model
- Tracing and Instrumentation in Web Applications
- ASP.NET 2.0 Caching Techniques
- Asynchronous Processing in Web Applications
- Web Farm Development Considerations

Unit 4: Implementing Personalization and Themes in Web Applications

This unit introduces building customizable functionality into a Web application by adding personalization support. It discusses using the personalization features of ASP.NET 2.0 to provide this functionality. In addition, it discusses applying themes to Web applications and allowing users to choose color schemes to personalize their experience in using the Web application. It concludes by explaining how to include features that enable users to personalize themes.

Lessons

- ASP.NET 2.0 Personalization Features
- Theme Support in ASP.NET 2.0

Unit 5: Building Web Part Pages and Web Parts

This unit introduces the concept of a Web part, and describes how it is used in portal pages and other scenarios. It introduces the concept of a Web part page, and discusses how a Web part page contains some Web parts that provide the user interface, along with other controls that manage the Web part infrastructure. Additionally, it introduces the advanced features of connected Web parts and discusses scenarios where they are typically used.

Lessons

- What Is a Web Part?
- What Is a Web Part Page?
- Connected Web Parts



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