

## #2543 CORE WEB APPLICATION TECHNOLOGIES WITH MICROSOFT VISUAL STUDIO 2005

Available Dates: **Call for Dates**

Class Length: **3 day**

Cost: **\$1,497**

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### **Class Outline:**

#### **Description:**

This three-day instructor-led workshop provides students with the knowledge and skills to develop Microsoft( ASP.NET 2.0 Web applications using Microsoft Visual Studio( 2005. The workshop focuses on user interfaces, Web site structure and functionality, and implementation details. This workshop is intended for corporate/ISV application developers who have a desire to learn more about specific technology areas in Web application development.

#### **Table of Contents:**

##### **Session 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

Lab : Creating a Web Application

- Creating a New Web Application
- Configuring and Building a Web Application

##### **Session 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

Lab : Programming a Web Application

- Implementing Non-Default Event Handlers
- Detecting Browser Capabilities and Setting Page Header Properties
- Handling Page-Level Exceptions

##### **Session 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

Lab : Adding and Configuring Server Controls

- Building Graphical User Interfaces with HTML Controls
- Building Graphical User Interfaces with Web Server Controls
- Programming Web Server Controls and Working with Postbacks

##### **Session 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

Lab : Creating a Common Layout by Using Master Pages

- Designing a Master Page
- Adding and Configuring Content Pages
- Designing Nested Master Pages

### **Session 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

Lab : Managing State for a Web Application

- Configuring ViewState Properties for Web Server Controls
- Storing and Retrieving Application and Session State
- Implementing Out-of-Process Session State
- Storing and Managing State Data in the Cache Object

### **Session 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

Lab : Accessing and Displaying Data

- Creating and Retrieving Database Connections
- Accessing Data by Using SqlDataSource Controls and Data Controls
- Accessing Objects as Data with ObjectDataSource Controls
- Accessing XML Data by Using XmlDataSource Controls

### **Session 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

Lab : Controlling Access to a Web Application

- Configuring Authentication and Authorization for a Web Application
- Implementing a Membership Registration Page
- Implementing a Login Page and Adding Login Controls
- Creating a Membership Management Administrative User Interface

### **Session 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

Lab : Deploying a Web Application

- Deploying a Web Application by Using the Copy Web Site Utility
- Precompiling and Deploying a Web Application by Using the Publish Web Site Utility
- Building a Windows Installer Package for Deploying a Web Application

### **Session 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
- Lab : Making Web Applications Available to Mobile Devices

- Managing Redirection for Mobile Devices
- Designing and Implementing a Mobile Web Form
- Designing Device-Specific Features for a Mobile Web Application
- Browsing a Mobile Web Application with Specific Device Emulators