



Course 10175A:

## Microsoft SharePoint 2010, Application Development

### **Course Length:**

5 days

### **Overview**

This course provides existing .NET developers with practical information and labs that enables them to build solutions on the Microsoft SharePoint 2010 platform.

### **Target Student**

This course is intended for professional developers who use Microsoft SharePoint 2010 in a team-based, medium-sized to large development environment. Members of the audience are experienced users of Microsoft Visual Studio 2008 SP1. The audience understands how to use the new features of SharePoint 2010 and Visual Studio 2010.

### **Objectives**

After completing this course, students will be able to:

Describe the SharePoint 2010 development platform and the benefits and features that it offers to developers.

Use development tools that are integrated with the SharePoint 2010 development platform, such as Visual Studio 2010 and SharePoint Designer 2010.

Develop Web Parts for SharePoint 2010 solutions.

Develop code that uses the server-side objects provided by the SharePoint 2010 development platform.

Develop event receivers and manipulate application settings for SharePoint 2010 solutions.

Develop solutions that access external data by using Business Connectivity Services.

Develop workflows as part of SharePoint 2010 solutions.

Develop code that uses the client-side objects provided by the SharePoint 2010 development platform.

Develop server ribbon controls and client dialogs for the new user interface platform of Share-Point 2010.

Develop Microsoft Silverlight applications that are integrated with SharePoint 2010 data and solutions.

Develop sandboxed solutions for SharePoint 2010.

Develop code that uses the taxonomic and user profile services of the SharePoint 2010 development platform.

Develop code that uses the content management services of the SharePoint 2010 development platform.

### **Prerequisites**

Before attending this course, students must have:

An understanding of the problem-solving techniques that apply to software development

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Approximately 12 months experience with ASP.NET 3.5 with Visual Studio 2008 (or later)  
Approximately 1 month development experience with SharePoint 2007 or SharePoint 2010 and VS2010 (includes beta releases) creating code that interacts with the SharePoint Server-side APIs

Experience performing end user tasks with SharePoint 2007 or SharePoint 2010 and an understanding of the purpose and use of the following:

Lists

Documents and Libraries

Personalizing an SP page/site

Using MySites

Using SharePoint Designer

### Course Outline

Module 1: Introduction to the SharePoint 2010 Development Platform

This module describes the SharePoint 2010 development platform and the benefits and features that it offers to developers.

Lessons

Lesson 1: SharePoint 2010 as a Development Platform

Lesson 2: SharePoint 2010 Object Hierarchy

Lesson 3: Working with SharePoint 2010 Objects

Lab : Developing with the SharePoint 2010 Object Hierarchy

Exercise 1: Creating SharePoint 2010 Application Pages by Using Visual Studio 2010

Exercise 2: Enumerating SharePoint 2010 Farm Hierarchies

Exercise 3: Manipulating Properties of Objects in the SharePoint Farm

After completing this module, students will be able to:

Describe SharePoint 2010 as a development platform.

Describe the SharePoint 2010 object hierarchy from the perspective of a developer.

Work with SharePoint 2010 objects programmatically.

Module 2: Using SharePoint 2010 Developer Tools

This module describes how to use development tools that are integrated with the SharePoint 2010 development platform, such as Visual Studio 2010 and SharePoint Designer 2010.

Lessons

Lesson 1: Developing SharePoint Sites by Using SharePoint Designer 2010

Lesson 2: Developing SharePoint Solutions by Using Visual Studio 2010

Lesson 3: Packaging and Deploying SharePoint 2010 Solutions

Lab : Using SharePoint 2010 Developer Tools

Exercise 1: Creating Document Libraries by Using SharePoint Designer 2010

Exercise 2: Creating SharePoint List Definitions and Instances by Using Visual Studio 2010

Exercise 3: Packaging Features and Solutions by Using Visual Studio 2010

After completing this module, students will be able to:

Develop SharePoint sites by using SharePoint Designer 2010.

Develop SharePoint solutions by using Visual Studio 2010.

Package and deploy SharePoint 2010 solutions.

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### Module 3: Developing SharePoint 2010 Web Parts

This module describes how to develop Web Parts for SharePoint 2010 solutions.

#### Lessons

Lesson 1: Developing Standard Web Parts

Lesson 2: Developing Connected Web Parts

Lesson 3: Developing Visual Web Parts

Lab : Creating SharePoint 2010 Web Parts by Using Visual Studio 2010

Exercise 1: Creating, Deploying, and Debugging a Simple Web Part by Using Visual Studio 2010

Exercise 2: Using SharePoint Components in a Web Part

Exercise 3: Creating a Visual Web Part by Using Visual Studio 2010

After completing this module, students will be able to:

Develop standard Web Parts.

Develop connected Web Parts.

Develop Visual Web Parts.

### Module 4: Working with SharePoint Objects on the Server

This module describes how to develop code that uses the server-side objects provided by the SharePoint 2010 development platform.

#### Lessons

Lesson 1: Working with SharePoint Sites Programmatically

Lesson 2: Working with SharePoint Lists Programmatically

Lesson 3: Working with List Data Programmatically

Lab : Creating and Manipulating Server-Side Objects

Exercise 1: Creating and Securing Sites Programmatically

Exercise 2: Creating Lists Programmatically

Exercise 3: Retrieving Secured Data

After completing this module, students will be able to:

Create and manipulate SharePoint sites.

Create and manipulate SharePoint lists.

Retrieve, add, update, and delete SharePoint list data.

### Module 5: Creating Event Receivers and Application Settings

This module describes how to develop event receivers and manipulate application settings for SharePoint 2010 solutions.

#### Lessons

Lesson 1: Creating Event Receivers

Lesson 2: Working with Web.Config Programmatically

Lab : Creating Event Receivers and Web.Config Modifications

Exercise 1: Creating List Event Receivers

Exercise 2: Creating Feature Receivers to Modify Web.Config

Exercise 3: Creating Web Event Receivers

After completing this module, students will be able to:

Create event receivers for SharePoint 2010 solutions.

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Add, modify, and retrieve Web.config settings programmatically for use in your SharePoint solutions.

### Module 6: Developing Solutions by Using Business Connectivity Services

This module describes how to develop solutions that access external data by using Business Connectivity Services.

#### Lessons

Lesson 1: Business Connectivity Services Overview

Lesson 2: Developing External Content Types and Lists by Using SharePoint Designer

Lesson 3: Developing Business Connectivity Services Solutions by Using Visual Studio 2010

Lab : Building Business Connectivity Services Solutions

Exercise 1: Creating External Content Types and Lists by Using SharePoint Designer 2010

Exercise 2: Creating Business Data Catalog Models by Using Visual Studio 2010

After completing this module, students will be able to:

Describe Business Connectivity Services.

Develop external content types and lists by using SharePoint Designer 2010.

Develop Business Connectivity Services solutions by using Microsoft Visual Studio 2010.

### Module 7: Developing SharePoint 2010 Workflows

This module describes how to develop workflows as part of SharePoint 2010 solutions.

#### Lessons

Lesson 1: Creating Workflows with SharePoint Designer

Lesson 2: Creating Workflows with Visual Studio 2010

Lab : Creating Workflows for SharePoint 2010

Exercise 1: Creating Workflows by Using SharePoint Designer

Exercise 2: Creating a Sequential Workflow by Using Visual Studio 2010

After completing this module, students will be able to:

Create workflows for SharePoint by using SharePoint Designer 2010.

Create workflows for SharePoint by using Microsoft Visual Studio 2010.

### Module 8: Working with Client-Based APIs for SharePoint 2010

This module describes how to develop code that uses the client-side objects provided by the SharePoint 2010 development platform.

#### Lessons

Lesson 1: Overview of the SharePoint 2010 Client Object Model

Lesson 2: Working with the SharePoint 2010 Client Object Model in .NET Applications

Lab : Developing .NET Applications by Using the SharePoint Client Object Model

Exercise 1: Creating a SharePoint 2010 Site, List, and List Items Using the Client Object Model

Exercise 2: Building and Using the Console Application

After completing this module, students will be able to:

Describe the SharePoint 2010 Client Object Model.

Work with the SharePoint 2010 Client Object Model in Microsoft .NET Framework applications.

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### Module 9: Developing Interactive User Interfaces

This module describes how to develop server ribbon controls and client dialogs for the new user interface platform of SharePoint 2010.

#### Lessons

Lesson 1: Creating Menu Items and Ribbon Controls

Lesson 2: Creating Client-Side Dialogs

Lab : Developing User Interface Components for SharePoint 2010 Solutions

Exercise 1: Creating a Site Actions Menu Item

Exercise 2: Creating a Ribbon Item

Exercise 3: Creating a Client-Side Dialog

After completing this module, students will be able to:

Create menu items and ribbon controls.

Create client-side dialogs.

### Module 10: Developing Silverlight Applications for SharePoint

This module describes how to develop Silverlight applications that are integrated with SharePoint 2010 data and solutions.

#### Lessons

Lesson 1: Creating Silverlight Applications for SharePoint 2010

Lesson 2: Deploying and Debugging Silverlight Applications for SharePoint 2010

Lab : Developing Silverlight Applications by using the SharePoint Client Object Model

Exercise 1: Creating a Silverlight Application

Exercise 2: Developing the Silverlight Application

After completing this module, students will be able to:

Develop Silverlight applications for SharePoint 2010.

Deploy and debug Silverlight applications for SharePoint 2010.

### Module 11: Developing Sandboxed Solutions

This module describes how to develop sandboxed solutions for SharePoint 2010.

#### Lessons

Lesson 1: Sandboxing and User Solutions

Lesson 2: Restrictions for Sandboxed Solutions

Lab : Creating Sandboxed Solutions for SharePoint 2010

Exercise 1: Creating a Sandboxed Solution by Using Visual Studio 2010

Exercise 2: Investigating Allowed and Disallowed Operations in Sandboxed Solutions

After completing this module, students will be able to:

Develop sandboxed solutions.

Describe what is allowed and what is not allowed in sandboxed solutions.

### Module 12: Working with SharePoint Server Profiles and Taxonomy APIs

This module describes how to develop code that uses the taxonomic and user profile services of the SharePoint 2010 development platform.

#### Lessons

Lesson 1: User Profiles

Lesson 2: Taxonomies

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Lab : Working with User Profiles and Taxonomies Programmatically

Working with User Profiles and Taxonomies Programmatically

Exercise 1: Managing User Profiles

Exercise 2: Working with User Profiles Programmatically

After completing this module, students will be able to:

Create, retrieve, and manipulate user profiles and user profile properties.

Create and retrieve taxonomic terms.

Module 13: Developing Content Management Solutions

This module describes how to develop code that uses the content management services of the SharePoint 2010 development platform.

Lessons

Lesson 1: Developing Enterprise Content Management Solutions

Lesson 2: Developing Web Content Management Solutions

Lab : Branding SharePoint Sites

Exercise 1: Customizing Master Pages

Exercise 2: Applying a Theme to a SharePoint Site

After completing this module, students will be able to:

Describe how to develop enterprise content management solutions for Microsoft SharePoint Server 2010.

Describe how to develop Web content management features Microsoft SharePoint Server 2010.