

## 20488 - Developing Microsoft SharePoint Server 2013 Core Solutions

Duration: 5 days

### Overview:

This five-day Microsoft 20488 training course teaches students the core skills that are common to almost all SharePoint development activities. These include working with the server-side and client-side object models, developing and deploying features, solutions, and apps, managing identity and permissions, querying and updating list data, managing taxonomy, using workflow to manage business processes, and customising the user interface.

### Target Audience:

The course is intended for professional developers who develop solutions for SharePoint products and technologies in a team-based, medium-sized to large development environment. While some familiarity with SharePoint solution development is required, candidates are not expected to have prior experience with the new features in SharePoint Server 2013. The ideal candidate is a technical lead with at least four years of SharePoint and web development experience. The candidate is responsible for designing custom code for projects that are deployed to or interact with SharePoint environments. This includes:

- Selecting an appropriate approach and building customisations in SharePoint.
- Creating and implementing a strategy for solution packaging, deployment, and upgrading.
- Identifying SharePoint data and content structures for customisations.
- Performing diagnostics and debugging.
- Planning and designing applications for scalability and performance.
- Identifying and mitigating performance issues of customisations.
- Understanding authentication and authorisation.
- Experience with Windows PowerShell.

### Module 1: SharePoint as a Developer Platform

#### Lessons

- Introducing the SharePoint Developer Landscape
- Choosing Approaches to SharePoint Development
- Understanding SharePoint 2013 Deployment and Execution Models

#### Lab: Comparing Web Parts and App Parts

- Creating and Deploying a SharePoint Web Part
- Creating and Deploying a SharePoint App Part

### Module 2: Working with SharePoint Objects

#### Lessons

- Understanding the SharePoint Object Hierarchy
- Working with Sites and Webs
- Working with Execution Contexts

#### Lab: Working with Sites and Webs

- Working with Sites and Webs in Managed Code
- Working with Sites and Webs in Windows PowerShell

#### Lab: Working with Execution Contexts

- Running Code with Elevated Privileges
- Adapting Content for Different User Permissions

### Module 3: Working with Lists and Libraries

#### Lessons

- Using List and Library Objects
- Querying and Retrieving List Data
- Working with Large Lists

#### Lab: Querying and Retrieving List Data

- Querying List Items
- Updating List Items

#### Lab: Working with Large Lists

- Using the ContentIterator Class

### Module 4: Designing and Managing Features and Solutions

#### Lessons

- Understanding Features and Solutions
- Configuring Features and Solutions
- Working with Sandboxed Solutions

#### Lab: Working with Features and Solutions

- Configuring SharePoint Features
- Creating Feature Receiver Classes
- Creating Features with Dependencies

### Module 5: Working with Server-Side Code

#### Lessons

- Developing Web Parts
- Using Event Receivers
- Using Timer Jobs
- Storing Configuration Data

#### Lab: Working with Server-Side Code

- Developing an Event Receiver
- Updating a Web Part
- Creating a Timer Job

### Module 6: Managing Identity and Permissions

#### Lessons

- Understanding Identity Management in SharePoint 2013
- Managing Permissions in SharePoint 2013
- Configuring Forms-Based Authentication
- Customising the Authentication Experience

#### Lab: Managing Permissions Programmatically in SharePoint 2013

- Managing List Permissions Programmatically

#### Lab: Creating and Deploying a Custom Claims Provider

- Creating a Custom Claims Provider
- Supporting Search and Resolve in a Claims Provider
- Deploying and Testing a Claims Provider

### Module 7: Introducing Apps for SharePoint

#### Lessons

- Overview of Apps for SharePoint
- Developing Apps for SharePoint

#### Lab: Creating a Site Suggestions App

- Creating a New SharePoint App
- Using the Client-Side Object Model

### Pre-requisites:

Before attending this course, students must have:

- A working knowledge of using Visual Studio 2010 or Visual Studio 2012 to develop solutions
- A basic working knowledge of SharePoint solution development, either in SharePoint 2013 or in earlier versions of SharePoint
- A working knowledge of Visual C# and the .NET Framework 4.5
- A basic understanding of ASP.NET and server-side web development technologies, including request/response and the page lifecycle
- A basic understanding of AJAX and asynchronous programming techniques
- A basic working knowledge of client-side web technologies including HTML, CSS, and JavaScript
- Familiarity with approaches to authentication and authorization, including claims-based authentication

### At Course Completion:

After completing this course, students will be able to:

- Design and manage features and solutions
- Develop code for custom server-side components
- Manage and customise authentication and authorisation
- Create custom sites and lists and manage the site lifecycle
- Explain the capabilities and design choices for SharePoint apps
- Use the client-side object model and the REST API
- Develop provider-hosted and auto-hosted SharePoint apps
- Distribute and deploy SharePoint apps
- Create custom workflows to automate business processes
- Use fields and content types to manage taxonomy
- Customise the appearance and behaviour of user interface elements
- Customise navigation and site branding

### Module 8: Client-Side SharePoint Development

#### Lessons

- Using the Client-Side Object Model for Managed Code
- Using the Client-Side Object Model for JavaScript
- Using the REST API with JavaScript

#### Lab: Using the Client-Side Object Model for Managed Code

- Add Site Column
- Add the Mileage Claim Content Type
- Add the Claims List

#### Lab: Using the REST API with JavaScript

- Creating List Relationships
- Add Vote Recording
- Display Votes for Each Suggestion

### Module 9: Developing Remote Hosted SharePoint Apps

#### Lessons

- Overview of Remote Hosted Apps
- Configuring Remote Hosted Apps
- Developing Remote Hosted Apps

#### Lab: Configuring a Provider Hosted SharePoint App

- Configuring An Server to Server Trust Relationship
- Creating a Provider Hosted App

#### Lab: Developing a Provider Hosted SharePoint App

- Working with SharePoint Data
- Using the Chrome Control

### Module 10: Publishing and Distributing Apps

#### Lessons

- Understanding the App Management Architecture
- Understanding App Packages
- Publishing Apps
- Installing, Updating, and Uninstalling Apps

#### Lab: Publishing an App to a Corporate Catalog

- Creating an App Catalog
- Creating an App Package
- Publishing an App Package

#### Lab: Installing, Updating, and Uninstalling Apps

- Installing an App
- Upgrading an App
- Removing an App

### Module 11: Automating Business Processes

#### Lessons

- Understanding Workflow in SharePoint 2013
- Building Workflows by using Visio 2013 and SharePoint Designer 2013
- Developing Workflows in Visual Studio 2012

#### Lab: Building Workflows in Visio 2013 and SharePoint Designer 2013

- Creating Workflows by Using Visio
- Editing Workflows by Using SharePoint Designer

#### Lab: Creating Workflow Actions in Visual Studio 2012

- Creating Custom Workflow Actions
- Using a Custom Workflow in SharePoint Designer

### Module 12: Managing Taxonomy

#### Lessons

- Managing Taxonomy in SharePoint 2013
- Working with Content Types
- Working with Advanced Features of Content Types

#### Lab: Working with Content Types

- Create a System to Capture Vacation Requests

#### Lab: Working with Advanced Features of Content Types

- Creating an Event Receiver Assembly
- Registering an Event Receiver with a Site Content Type

### Module 13: Managing Custom Components and Site Life Cycles

#### Lessons

- Defining Custom Lists
- Defining Custom Sites
- Managing SharePoint Sites

#### Lab: Managing Custom Components and Site Lifecycles

- Creating a Site Definition
- Creating a List Definition
- Developing an Event Receiver

### Module 14: Customising User Interface Elements

#### Lessons

- Working with Custom Actions
- Using Client-Side User Interface Components
- Customising the SharePoint List User Interface

#### Lab: Using the Edit Control Block to Launch an App

- Configuring an App to Display Customer Orders
- Use a Custom Action to Launch an App

#### Lab: Using jQuery to Customise the SharePoint List User Interface

- Creating a Custom List View

### Module 15: Working with Branding and Navigation

#### Lessons

- Creating and Applying Themes
- Branding and Designing Publishing Sites
- Tailoring Content to Platforms and Devices
- Configuring and Customising Navigation

#### Lab: Branding and Designing Publishing Sites

- Creating SharePoint Master Pages
- Building Master Page Functionality
- Publishing and Applying Design Assets

#### Lab: Configuring Farm-Wide Navigation

- Creating a Custom Site Map Provider
- Adding Custom Navigation Controls to a Master Page