

COURSE OVERVIEW:

In this .NET programming course, you will learn to develop advanced ASP.NET Model-View-Controller (MVC) 4 applications using .NET Framework 4.5 tools and technologies. You will learn how to enhance the performance and scalability of the web site application through coding activities. Additionally, Microsoft training students will also be introduced to ASP.NET MVC 4 with comparison to Web Forms so you know when each should/could be used. You will learn how to create websites that separate the user interface, data access, and application logic.

Learn more about this extensive and in-depth .NET training course offered by NterOne by reading below about prerequisites, course objectives, module information, and more.

WHO SHOULD ATTEND

The primary audience for this course is as follows:

- Professional web developers who use Microsoft Visual Studio 2010 in an individual-based or team-based, small-sized to large development environment.
- Developers who are interested in developing advanced web applications and want to manage the rendered HTML comprehensively, as well as learn to create web sites that separate the user interface, data access, and application logic.

PREREQUISITES

The knowledge and skills that a learner should have before attending this course are as follows:

- At least two to three years of experience developing web-based applications using Microsoft Visual Studio and Microsoft ASP.NET
- Proficiency using the .NET Framework
- Familiarity with the C# language



COURSE OBJECTIVES

Upon completing this course, the learner will be able to meet these overall objectives:

- Microsoft Web Technologies stack and select an appropriate technology to use to develop any given application
- Architecture and implementation of a web application that will meet a set of functional requirements, user interface requirements, and address business models
- Create MVC 4 Models and write code that implements business logic within model methods, properties, and events
- Add controllers to an MVC 4 application to manage user interaction, updates models, and select and return views
- Create views in an MVC 4 application that display and edit data and interact with models and controllers
- Run unit tests and debugging tools against a web application in Visual Studio 2012 and configure an application for troubleshooting
- Develop a web application that uses the ASP.NET routing engine to present friendly URLs and a logical navigation hierarchy to users
- Implement a consistent look and feel, including corporate branding, across an entire MVC 4 web application
- Use partial page updates and caching to reduce the network bandwidth used by an application and accelerates responses to user requests
- Write JavaScript code that runs on the client-side and utilizes the jQuery script library to optimize the responsiveness of an MVC 4 web application
- Implement a complete membership system in an MVC 4 web application
- Build an MVC application that resists malicious attacks and persists information about users and preferences
- Write a Windows Azure web service and call it from an MVC 4 application
- Web API and why developers might add a Web API to an application
- Modify the way browser requests are handled by an MVC 4 application
- Package and deploy an ASP.NET MVC 4 web application from a development computer to a web server for staging or production

COURSE OUTLINE

Module 1: Exploring ASP.NET MVC 4

- Lesson 1: Microsoft Web Technologies
- Lesson 2: ASP.NET 4.5
- Lesson 3: ASP.NET MVC 4

Module 2: Designing ASP.NET MVC 4 Web Applications

- Lesson 1: Planning in the Project Design Phase
- Lesson 2: Designing Models, Controllers, and Views

Module 3: Developing ASP.NET MVC 4 Models

- Lesson 1: Creating MVC Models
- Lesson 2: Working with Data

Module 4: Developing ASP.NET MVC 4 Controllers

- Lesson 1: Writing Controllers and Actions
- Lesson 2: Writing Action Filters

Module 5: Developing ASP.NET MVC 4 Views

- Lesson 1: Creating Views with Razor Syntax
- Lesson 2: Using HTML Helpers
- Lesson 3: Reusing Code in Views

Module 6: Testing and Debugging ASP.NET MVC 4 Web Applications

- Lesson 1: Unit Testing MVC Components
- Lesson 2: Implementing an Exception Handling Strategy

Module 7: Structuring ASP.NET MVC 4 Web Applications

- Lesson 1: Analyzing Information Architecture
- Lesson 2: Configuring Routes
- Lesson 3: Creating a Navigation Structure

Module 8: Applying Styles to ASP.NET MVC 4 Web Applications

- Lesson 1: Using Template Views
- Lesson 2: Applying CSS to a MVC Application
- Lesson 3: Creating an Adaptive User Interface

Module 9: Building Responsive Pages in ASP.NET MVC 4 Web Applications

- Lesson 1: Using AJAX and Partial Page Updates
- Lesson 2: Implementing a Caching Strategy

Module 10: Using JavaScript and jQuery for Responsive MVC 4 Web Applications

- Lesson 1: Rendering and Running JavaScript Code
- Lesson 2: Using jQuery and jQueryUI

Module 11: Controlling Access to ASP.NET MVC 4 Web Applications

- Lesson 1: Implementing Authentication and Authorization
- Lesson 2: Assigning Roles and Membership

Module 12: Building a Resilient ASP.NET MVC 4 Web Application

- Lesson 1: Developing Secure Sites
- Lesson 2: State Management

Module 13: Using Windows Azure Web Services in ASP.NET MVC 4 Web Applications

- Lesson 1: Windows Azure
- Lesson 2: Designing and Writing Windows Azure Services
- Lesson 3: Consuming Windows Azure Services in a Web Application

Module 14: Implementing Web APIs in ASP.NET MVC 4 Web Applications

- Lesson 1: Developing a Web API
- Lesson 2: Calling a Web API from Mobile and Web Applications

Module 15: Handling Requests in ASP.NET MVC 4 Web Applications

- Lesson 1: Using HTTP Modules and HTTP Handlers
- Lesson 2: Using Web Sockets

Developing ASP.NET 4.5 MVC Web Applications (M20486)

Module 16: Deploying ASP.NET MVC 4 Web Applications

- Lesson 1: Deploying Web Applications and MVC 4 Applications

LAB OUTLINE

- Lab 1: Explore ASP.NET MVC 4
- Lab 2: Design ASP.NET MVC 4 Web
- Lab 3: Develop ASP.NET MVC 4 Models
- Lab 4: Develop ASP.NET MVC 4 Controllers
- Lab 5: Develop ASP.NET MVC 4 Views
- Lab 6: Test and Debug the ASP.NET MVC 4 Web
- Lab 7: Structure ASP.NET MVC 4 Web Applications
- Lab 8: Apply Styles to ASP.NET MVC 4 Web Applications
- Lab 9: Build Responsive Pages in ASP.NET MVC 4 Web Applications
- Lab 10: Use JavaScript and jQuery for Responsive MVC 4 Web
- Lab 11: Control Access to ASP.NET MVC 4 Web Applications
- Lab 12: Build a Resilient ASP.NET MVC 4 Web
- Lab 13: Use Windows Azure Web Services in ASP.NET MVC 4 Web Applications
- Lab 14: Implement Web APIs in ASP.NET MVC 4 Web Applications
- Lab 15: Handle Requests in ASP.NET MVC 4 Web Applications
- Lab 16: Deploy ASP.NET MVC 4 Web Applications