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ASP.NET MVC 5 Development

(5 days)

Course overview

MVC Web applications offer a clean separation of concerns between the business-logic classes, Web pages, and the controller. Microsoft ASP.NET MVC 5 offers Web developers all the benefits of MVC allied with all the power of the .NET platform. This course provides full coverage of ASP.NET MVC 5.1, including Bootstrap, Web API and attribute routing, and the mobile UI API.

What you'll learn

- Understand MVC architecture principles and benefits
- Implementing industrial-strength MVC solutions
- Creating views, partial views, and layouts using Razor
- Testing an MVC application
- Defining custom routes
- Using Ajax effectively
- Creating RESTful services using Web API
- Creating mobile sites

Prerequisites

- 6 months experience of C# programming
- ASP.NET development experience is advantageous but not essential

Course details

- **Getting Started with ASP.NET MVC:** ASP.NET MVC project templates; What's new in ASP.NET 5 and 5.1; Understanding the structure of an ASP.NET MVC project; Naming conventions; Creating views; Defining controllers; Defining a data model
- **Creating a Complete ASP.NET MVC Application:** Creating strongly-typed views; Understanding URLs and action methods; Using HTML helpers; Handling form post-backs; Data validation
- **Using the Razor View Engine:** Razor design goals; Implementing a Razor view; Razor syntax; Accessing model data in Razor views
- **Industrial-Strength ASP.NET MVC Applications:** ASP.NET application architecture best practices; Implementing a repository and Entity Framework data model; Using Dependency Injection; Implementing a custom controller factory
- **Test Driven Development with ASP.NET MVC:** Recap of TDD; Unit Testing frameworks; Walk-through of using TDD with ASP.NET MVC
- **View Techniques:** Defining and using custom HTML helpers; Defining a layout/master page; Using styles; Defining and using partial views; Razor helper method syntax

- **Implementing Navigation:** Defining view-model classes; Implementing data filtering in a controller; Understanding the routing mechanism; Adding custom entries to a route table; Defining defaults, parameters, and validation; Generating URLs and hyperlinks; Custom route constraints
- **State Management:** Using hidden fields; Session and application state; Custom model bindings
- **Additional Techniques:** View scaffold templates; Controller scaffold templates; Global filters; Model binding; Asynchronous controllers
- **Using Ajax and jQuery with ASP.NET MVC:** Overview of Ajax and ASP.NET MVC; Unobtrusive Ajax and the 'this' context; Using Ajax action links; Overview of jQuery; jQuery techniques
- **Using the ASP.NET Web API:** Overview of the ASP.NET Web API; Building servers and clients; Content negotiation; Validation; Queryable interfaces; Dependency Injection; Attribute routing
- **Creating Mobile Sites:** Overview of jQuery mobile; Creating a mobile user interface; Managing data; Implementing UI behaviour; Overview of Bootstrap; Adaptive rendering