

# Deccansoft Software Services

(A Microsoft Learning Partner)

## ASP.NET MVC Syllabus

### Module 1: Introduction to Web Programming

In this module, You will learn about the Http Protocol, Request life cycle, Response structure .

- ❖ Communication between Web
- ❖ Server and Web Browser
- ❖ HTTP Protocol
- ❖ HTTP Request Life Cycle
- ❖ Request and Response Structure
- ❖ About Get and Post methods

### Module 2: Overview of HTML and JavaScript.

In this module, You will learn about the basics of Html, Javascript and debugging

- ❖ HTML Overview
- ❖ HTML Tags Reference
- ❖ HTML Examples
- ❖ Introduction to JavaScript
- ❖ JavaScript Examples
- ❖ Debugging JavaScript in VS.NET

### Module 3: Overview of Classic ASP

In this module, You will learn about the Classic Asp, IIS installation on windows and Html form behavior.

- ❖ ASP Objects
- ❖ Understanding Form Tag
- ❖ Request and Response Model
- ❖ Sample Programs

### Module 4: Overview of ASP.NET WebForms

In this module, You will learn about the ASP.Net Architecture, ASP.Net WebForms Controls, Navigation and Masterpage.

---

Address: Block No-402, Saptagiri Towers, Landmark: Above Pantaloons, Begumpet Main Road, Hyderabad - 500 016, TELANGANA, Phone No: +91 80083 27000.

Email: [enquiry@deccansoft.com](mailto:enquiry@deccansoft.com) , [support@bestdotnettraining.com](mailto:support@bestdotnettraining.com)

- ❖ Creating an ASP.NET Website
- ❖ Using ASP.NET WebForm Controls
- ❖ ASP.NET Architecture
- ❖ Understanding Page Controller
- ❖ Architecture
- ❖ Navigating between Pages
- ❖ Overview of Master Pages

#### **Module 5: Introducing to ASP.NET MVC**

In this module, You will learn about the benefits of MVC design over traditional ASP.NET Web Forms.

- ❖ What is MVC Architecture?
- ❖ What is ASP.NET MVC?
- ❖ Understanding Model
- ❖ Understanding View
- ❖ Understanding Controller
- ❖ Advantages of MVC based Web Application
- ❖ Features of ASP.NET MVC Framework

#### **Module 6: First MVC Application**

In this module, You will learn about the role of Model, View and Controller in integrating them to develop complete web application and Request life cycle.

- ❖ Software Requirements
- ❖ Developing First MVC Application
- ❖ Rendering HTML output
- ❖ Understanding Life Cycle of ASP.MVC Request

#### **Module 7: Exploring Controller's**

In this module, You will learn about the Passing data from controller to view, Action methods, Action filters and Asynchronous Controllers.

- ❖ Exploring Controllers and ControllerBase class
- ❖ Passing data from Controller to View using ViewData/ViewBag
- ❖ Types of Action Methods
- ❖ Action Method Parameters
- ❖ Action Selectors

- ❖ Action Filters Overview
- ❖ Authentication Filters in MVC 5
- ❖ Building Custom Action Filters
- ❖ Filter Override features.
- ❖ Asynchronous Controllers

#### **Module 8: Exploring Razor Views**

In this module, You will learn about the Razor Syntax Fundamentals, Layout View ,Sections and Partial Views.

- ❖ Types of Views
- ❖ Introducing Razor View
- ❖ Razor Syntax Fundamentals
- ❖ Enum Support
- ❖ Layout view Razor (Master Pages)
- ❖ Significance of \_ViewStart.cshtml
- ❖ Working with Sections
- ❖ Working with Partial Views
- ❖ Bootstrap support for editor templates

#### **Module 9: Digging into HTML Helpers**

In this module, You will learn about how to reuse the code rendering HTML using custom HTML Helper methods

- ❖ HTML Helper Methods.
- ❖ Render HTML Form
- ❖ Using DropDownList
- ❖ Binding Html Helper to Model
- ❖ Using “For” Methods with Typed Model
- ❖ Overriding Display Templates
- ❖ Overriding Editor Templates
- ❖ Writing Custom Helper method

#### **Module 10: -- Understanding Model Binders**

In this module, You will learn about the Default Model Binders and Building Custom Model Binders for typical conditions in which built-in default binders are not usable.

- ❖ Default model Binder
- ❖ Complex Type Model Binding
- ❖ FormCollection Model Binding

- ❖ Http Posted File Model Binding
- ❖ Bind Attribute

### Module 11: Annotations and Validations

In this module, You will learn about applying validation framework for both client and server validations.

- ❖ Overview of Data Annotations
- ❖ Annotations and Validation Attributes
- ❖ How Validation Works
- ❖ Explicit server side validations of Models
- ❖ Custom Validations using IValidatableObject
- ❖ Developing Custom Unobtrusive Client Side Validation
- ❖ Applying Annotations to Model classes using Metadata class

### Module 12: Web Configuration File and Global Application Class

In this module, You will learn about the Architecture of Config File, App Settings, Exception Handling and Encrypting Connection String.

- ❖ Architecture of Config File
- ❖ Machine.config and Web.Config
- ❖ AppSettings
- ❖ system.web Section
- ❖ Exception Handling
- ❖ Location Section
- ❖ Encrypting ConnectionString

### Module 13: State Management Techniques

In this module, You will learn about the Sharing data across requests by same client/user using Cookies and Session management.

- ❖ Cookies
- ❖ Managing Cookies in ASP.NET MVC Application
- ❖ Authentication in Cookies
- ❖ Cookie Dictionary
- ❖ Sessions Management
- ❖ Sharing data between clients using static class

**Module 14: Web Caching**

In this module, You will learn about the Output Caching and Data Caching.

- ❖ Output Cache
- ❖ Implement DataCaching using ObjectCache and MemoryCache

**Module 15: CRUD operations using Entity Framework**

In this module, You will learn about the CRUD operations using LINQ and Entity Framework.

- ❖ Basic CRUD Operations using Scaffold Templates
- ❖ Separation of work using BO Classes
- ❖ Using Single Database Context Object across all Business Objects
- ❖ Writing Generic Class / Repository
- ❖ Caching in Repository
- ❖ Custom Controller Factory and Dependency Injection.

**Module 16: Authentication and Authorization**

In this module, You will learn about the Windows,Forms and Role-Based Authentication.

- ❖ Overview of Authentication and Authorization
- ❖ Types of Authentication
- ❖ [Authorize] and [AllowAnonymous] attributes
- ❖ Windows Authentication Implementation
- ❖ Forms Authentication Implementation
- ❖ Roles Based Security

**Module 17: ASP.NET Identities**

In this module, You will learn about the Single Sign On using Facebook & Google,Two Factor Authentication,Email Confirmation and Role Management.

- ❖ ASP.NET Identity Introduction
- ❖ OWIN and Katana
- ❖ Customizing Template Generated Code
- ❖ Extending Identity Model and using Integer Key instead of String Key
- ❖ OAuth and Social Authentication
- ❖ Code MVC Application with Facebook, Twitter, LinkedIn and Google OAuth2 Sign-on
- ❖ Implementing Email Confirmation
- ❖ Two Factor Authentication

- ❖ User and Role Management

### Module 18: URL Routing

In this module, You will learn about the Mapping URL to Controller Action Method,Applying Constraints and Attribute Routing in MVC 5.

- ❖ Overview
- ❖ Mapping URL to Controller Action Method
- ❖ Applying Constraints on Route parameters
- ❖ Resolving Namespace Ambiguity Ignoring Routes
- ❖ Attribute Routing improvements in MVC 5

### Module 19: Working with Areas

In this module, You will learn about the concept of Areas.

- ❖ Understanding Areas
- ❖ Adding Areas
- ❖ Registering Areas
- ❖ Linking between Areas

### Module 20: AJAX and JQuery

In this module, You will learn about the Ajax Helper Methods, JQuery UI Controls and JQuery Templates.

- ❖ Ajax implementation using JQuery
- ❖ Using Ajax.BeginForm Helper method
- ❖ JQuery UI Controls
- ❖ JQuery Templates

### Module 21: Bundling and Minification

In this module, You will learn about Optimizing the CSS & .JS files using bundling and minification features.

- ❖ Why Bundling and Minification
- ❖ What is Bundling?
- ❖ What is Minification?
- ❖ Impact of Bundling and Minification
- ❖ Implementing Bundling and Minification
- ❖ Creating and Using Bundles
- ❖ Using Wildcard to Select Files

- ❖ Using a CDN while Bundling

### **Module 22: Mobile Compatibility**

In this module, You will learn about the Mobile Compatible Views.

- ❖ Built in support for DisplayModes
- ❖ Adding Custom DisplayModes
- ❖ Overriding DisplayModes

### **Module 23: RESTful Services using ASP.NET Web API**

In this module, You will learn about the RESTful services using Web API feature of ASP.NET MVC.

- ❖ Introduction to REST Protocol
- ❖ Web API Routing
- ❖ Developing Sample application
- ❖ Creating a Web API that Supports
- ❖ CRUD Operations using EF
- ❖ Calling Web API Service methods from JavaScript/jQuery

### **Module 24: TDD and Debugging a Web Application**

In this module, You will learn about the Unit testing using Mock.

- ❖ Create and Run Unit Tests
- ❖ Create Mocks;
- ❖ Create and run Web Tests, including using Browser Link;

### **Module 25: Multi Layered Architecture Demo App**

In this module, You will learn about the creating reusable and flexible application.

