**THE MODULES – Day 40**

### Exploring ASP.NET MVC

* Exploring ASP.NET MVC 5
* ASP.NET Web Forms – issues
* ASP.NET MVC Architecture
* ASP.NET MVC Benefits
* features of MVC 5
* ASP.NET Web Forms or MVC?
* Exploring a Web Pages Application
* Exploring a Web Forms Application
* Exploring an MVC Application

### Getting Started with ASP.NET MVC

* ASP.NET MVC project templates
* 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 (Ajax call with json)
* Data validation
* Defining Models and Views
* Handling Form Submissions
* Custom model bindings

**THE MODULES – Day 41**

### Working with Controllers in ASP.NET MVC

* Routes and Controllers
* Adding custom entries to a route table
* Actions and Parameters
* Action Results
* Action Selectors
* Action Filters
* Passing validation errors to Views
* Passing temporary data to Views
* Asynchronous Controllers

### Using the Razor View Engine

* What, why and when
* Razor Syntax
* Code Expressions
* Code Blocks
* Layout Views
* HTML Helpers
* Partial Views
* Rendering Sections
* Commenting
* Calling utility functions
* Calling Model data
* Bundling and Minification

### Building a Resilient ASP.NET MVC 5 Web Application

* Developing Secure Sites
* State Management
* View bag
* View data
* Temp Data
* Using hidden fields
* Session and Application State

**THE MODULES – Day 42**

### Working with Data (Part 1)

* The Entity Framework (Code based/model based/ DB first)
* Building Entities
* Using LINQ
* Defining a data repository
* Performing CRUD operation in database using Scaffolding
* Html Custom Helper Templates

### Working with Data (Part II)

* Performing complex custom CRUD operations
* Using ADO.NET Entity Framework
* Using ADO.NET
* Table relation in code first approach and others
* Data Annotation

**THE MODULES – Day 43**

### Controlling Access to ASP.NET MVC 5 Web Applications

* Authentication & Authorization
* Membership providers
* Roles based authentication
* Avoiding cross site request forgery
* OAuth - social login
* Implementing Authentication and Authorization
* Assigning Roles and Membership

**THE MODULES – Day 44**

### RESTful Web Services using Web API

## Why REST Services?

## What is REST?

## Comparing REST with other SOA frameworks

## Introduction to ASP.NET Web API

### Implementing Web APIs in ASP.NET MVC 5 Web Applications

## Developing a Web API

## Calling a Web API from Web Applications

## Developing a Web API to perform a CRUD operation

* Calling a Web API from ASP.NET MVC application

**THE MODULES – Day 45**

### Introduction to ASP.NET Core

* Introduction
* What is ASP.NET Core?
* ASP.NET Core Features
* Advantages of ASP.NET Core
* MVC Pattern
* Understanding ASP.NET Core MVC
* ASP.NET Core vs. ASP.NET MVC vs. ASP.NET Web Forms

### ASP.NET Core First Application

* ASP.NET Core Environment Setup
* ASP .NET Core First Application
* Project Layout
* Understanding Life Cycle of ASP.Net Core Request

### Controllers & Action Methods

* Controllers Overview
* Action Methods and IActionResult object
* Passing data from Controller to View
* Understanding Action Selectors
* Action Filters
* Building Custom Action Filters
* Middleware
* Asynchronous Action Methods

### Views

* Introducing Razor View
* Advantages of Razor View
* Razor Syntax
* Types of Views
* Partial Views
* Layout Pages
* Special Views
* View Categorization based on Model

**THE MODULES – Day 46**

### Model Binding

* Html Form behavior
* Model Binder Overview
* DefaultModelBinder
* Binding to Complex Classes
* IFormCollection Model Binding
* IFormFile Model Binder
* Bind Attribute
* TryUpdateModelAsync

### Validations & Data Annotations

* Data Annotations and Validations Overview
* Validations with Data Annotation
* Server Side and Client-Side Validation
* Custom Server-side validation
* Model level validation using IValidatableObject
* Custom unobtrusive Client-side Validation
* Remote Validation

**THE MODULES – Day 47**

### MVC and Entity Framework Core

* Basic CRUD Operations using Entity Framework
* Separation of work using BO Classes
* Writing Generic Class / Repository
* Caching in Repository

### Routing

* Url Routing Overview
* Custom Routes
* Attribute Routing
* Routing Constraints