Developing ASP.NET MVC 5 Advance Web Applications

**About Course:**

This course is step by step learning from the basics to the more advanced patters used by industry professionals. You will become an expert ASP.NET MVC Web Developer.

**Introduction**

• What is MVC? Why MVC? How MVC Works & Benefits ?

• Understanding the ASP.NET MVC Solution Architecture

• MVC Page Life Cycle – Model View Controllers

• Razor View Engine Vs Aspx View Engine

**URL Routing**

• What is URL Patterns ?

• Routing in MVC, Default Routes & MVC Route tables

• Custom URL Routing

• Constraining, Attribute Routing

**Security in MVC**

• Security Model in MVC & how it works?

• Authentication and Authorization, ASP.NET User Identity

• Enable User & role-based security in MVC web application

• Creating Login & Register new user module using security Model.

• MVC 5 App with Social media Single Sign On

**Filters**

• What are Filter & types ? How to use them?

• Authorization Filters, Authentication Filters, Exception Filters, Action Filters, Result Filters

**ASP.NET Web API 2.0**

• WCF vs WebApi, Why Webapi?

• ApiController implementation & debugging with different type of data

* Newtonsoft.json.dll usage

• Json serialization & deserialization.

• MediaTypeFormatters

• HTTP Method implementation.

**Razor View Engine**

• What is view engine ?

• How to design MVC view using HTML5, CSS3

• Implementation of Razor view

• Razor syntax & Expressions in Razor

• View implementation using model & viewModel.

• Advantages & disadvantages of Razor

**Views**

• What is view ? It’s mapping with controller & Action

• Views in CRUD operations

• Viewdata, Session, TempData and Viewbag

• Strongly-Typed Views

• Default Pages &Layout Pages

• Custom Sections

• Custom Error Pages

• Partial Views

• Child Actions

• Bundling & Minification – App\_Start Config Files

• HTML Helpers & extension methods

• Action Links, Action Buttons, Post Form

**Controllers and Actions**

• IController, ControllerBase, Controller & Async Controllers

• MVC Actions & their data return types

• HTTP Verbs- GET, POST,PUT, DELETE

• HttpContext, ActionExecutingContext and RouteData

• Returning Data with ActionResult

**Model Binding**

• Object Relational Mapping (ORM)

• Entity Framework (EF) Database-first & Code-first approach

• Repository Pattern

• Unit of work design pattern

• Model Validation & Data Annotations

• ModelState

• Client Side Validation

• Html.ajax forms & Unobtrusive AJAX

• Ajax calls using generic plugin

**Creating Responsive UI**

• Basics of HTML 5, Jquery, CSS3, Bootstrap & best UI practices

**Single-page Applications(SPA)**

• What is SPA & importance of SPA ?

• How to implement it ?

**Unit Testing in MVC**

• Test driven development - TDD

• Mocking & Service Testing

• Xunit Testing framework

**Web App Deployment to Server**

**Overview of Latest Trends in industry, MVC 6 & old versions**

1. Task parallel Liabrary, Async Await Programming.
2. Git, GitLab
3. .Net Framework 4.6.1, C#6.0
4. Web Api v2.
5. Guidance to prepare for Microsoft MVC Certification 70-486

**Prerequisites**

C# Asp.Net OOP Concepts

Basic SQL Concept

Visual Studio

**Goal**

This course is step by step practical implementation of advance responsive web application using ASP.NET MVC 5, C#6.0, VS 2013, .Net Framework 6.1, WebApi 2, Entity Framework, bootstrap, Basic AngularJs,HTML5, CSS3, Jquery, Git as Version Control.