**Course Content**

**Introduction to ASP.NET MVC**

* Introduction to MVC
* Classic Asp (vs) NET Web Forms (vs) ASP.NET MVC
* Advantages and disadvantages of each
* Determining when-to-use which one
* List of Versions of ASP.NET MVC
* Differences between versions of ASP.NET MVC
* Overview of installing ASP.NET MVC in various versions of Visual Studio
* MVC Architecture
* What is MVC?
* Architecture Explanation
* What is Controller and action method
* What is View
* What is Model
* Request Flow in ASP.NET MVC

**Getting started with MVC**

* New Project in Visual Studio
* Overview of Folders and files of MVC project

**Controllers**

* Introduction to Controllers
* Creating Controllers and Actions
* Calling action methods thru the browser
* Returning from action methods
* Parameters in Action methods
* ActionLink
* URL Routing
* Overview
* The need of URL Routing
* Parameters in URL
* Default Parameter Values
* Parameters with Constraints
* Literals in URL

**Views (Razor)**

* Introduction to Views (Razor)
* ActionResult and ViewResult
* Returning a view
* Creating a Simple Razor View
* Intermingling Code and Markup in Razor Views
* View Bag / View Data / Temp Data
* Shared Views
* ASPX View Engine (vs) Razor

**ActionResult**

**Different Types of ActionResult classes with Example**

**LayoutViews**

* Introduction to LayoutViews
* The need of layout views
* cshtml
* Creating custom layout views
* Layout Views with Sections
* RenderSection()
* cshtml
* Overriding the \_ViewStart.cshtml

**Partial Views**

* Partial Views
* RenderPartial()

**Models**

* Introduction to Models
* Need of models
* Creating models using ‘CodeFirst approach’

**Ado.Net**

* Crud Operation using Ado.net

**Entity Framework in MVC**

* Introduction to Entity Framework
* Need of Entity Framework
* Creating DbContext and DbSet
* Configuring connection string
* Database Approach, Model First Approach

**Dapper**

* Crud Operation using Dapper

**Scaffold Templates in MVC**

* Introduction to scaffold Templates in MVC
* Need of Scaffolding
* Creating controllers and views using scaffold
* Strongly typed views
* Understanding Index, Details, Create, Edit, Delete action methods and views

**HTML Helpers**

* Introduction to HTML helpers
* DisplayNameFor( )
* DisplayFor( )
* BeginForm( )
* LabelFor()
* EditorFor( )
* ValidationMessageFor( )
* RadioButtonFor( )
* DropDownListFor( )
* ListBoxFor( )
* CheckBoxFor( )
* AntiForgeryToken()
* Code First Migrations

**Action Filters**

* Introduction to action filters
* [HttpPost]
* [HttpGet]
* [ValidateAntiForgeryToken]
* [OutputCache]
* [HandleError]
* [NonAction]
* [ActionName]

**Bundles and Minification**

* Introduction to Bundles and minification
* Understanding BundleConfig.cs
* ScriptBundle (vs) StyleBundle
* Importing a ScriptBundle and StyleBundle
* Creating and consuming custom bundles

**Validations**

* Introduction to Validations
* Model level validations (vs) View level validations
* Importing jQuery Validation Plug in
* [Required]
* [RegularExpression]
* [Range]
* [StringLength]
* [Compare]
* [Remote]
* IsValid

**Data Annotations**

* [Display]
* [Datatype]
* [DisplayFormat]
* [ScaffoldColumn]

**WebServices**

* Introduction to Web Services
* Demo on it

**WCF**

* Introduction to WCF Service
* Creating RestFul and Non Restful Services
* Hosting Wcf Services
* Creating Multiple Endpoints in Wcf Services

**Web API**

* Introduction to Web API
* WCF REST (vs) Web API
* Understanding HTTP methods(GET, POST, PUT, DELETE)
* Creating API controller
* API configuration
* Calling Web API from jQuery
* Demo: CRUD operations using jQuery AJAX with Web API

**Security in MVC**

* Forms based security with [Authorise]
* Token Based Authentication

**Repository Layer and Service Layer**

* Introduction to Repository Layer and Service Layer
* MVC Architecture with both layers
* Demos

**Dependency Injection**

* Problems in accessing repository layer / service layer directly in controller
* What is Dependency Injection
* Installing ‘Unity’ plug in
* Configuring Unity
* Construction injection and property injection using interface

**Areas in MVC**

* Introduction to areas in MVC
* Demos on areas

**Deployment and Hosting MVC**

* Deployment
* Configuring IIS
* Publishing MVC web applications to local IIS

Asp.Net MVC Core

**INTRODUCTION TO .NET CORE**

* What is .NET CORE
* What is new in.NET core
* What is APP.NET core
* .NET core platform

**ASP.NET CORE MVC APLICATIONS**

* Introduction
* Set up, A new project
* Command line tools & code
* ASP.NET core MVC project structure
* Adding a configuration source
* Creating &injecting greeting service

**START UP & MIDDLEWARE**

* Introduction
* How middleware works?
* What is app.Use()

**CONTROLLERS IN THE MVC FRAMEWORK**

* Introduction
* The MVC design pattern
* Routing, Conventional routes, Attribute routes
* Action routes, Rendering views
* Action results in MVC

**MODEL IN THE MVC FRAMEWORK**

* Introduction
* Models & view
* Transport data from controller to view
* Accept form input in controller
* Model validation with data annotations

**ENTITY FRAME WORK CORE**

* Introduction
* SQL Server & Local DB
* Installing EF Core
* EF Core Architecture
* EF Core Library
* Creating & Implementing DB Context
* Configuring EF Services
* Entity Framework Migrations
* UP & Running
* Various Approaches in EF
* Creating CRUD Application in MVC

**RAZAR VIEWS**

* Introduction
* Layout views,
* View start
* View Imports
* Razor Pages
* Razor Syntax
* Partial View
* View Components
* Taghelpers & HTML Helpers

**ASP.NET CORE AUTHENTICATION**

* Identity in ASP.NET
* Open in Connect
* Using Secure Connections & Registering App
* Authentication Services & Middleware
* Identities & Claims

**WEB API**

* Creating & Configuring API
* Creating Restful Services
* Consuming in MVC CORE with JQUERY – AngularJS & Angular
* Micro Services
* JwtToken

**FRONT END TOOLS & FRAMEWORKS**

* Tools
* Command line visual studio
* Setting UP NPM
* Serving file from node modules
* Boots trap & Bundling
* Integration of Angular 8 & Angular JS
* Client Side Validation
* Consuming Services
* Using CDN & Call Backs