MVC 5 Syllabus

Introduction
- Introduction to different Web Technology
- What is ASP.NET MVC
- Role of Model, View, and Controller
- How ASP.NET MVC Works
- Key Benefits of ASP.NET MVC
- Understanding the structure of an ASP.NET MVC project

ASP.NET MVC Architecture
- The MVC Pattern
- MVC Page Life Cycle
- Controllers, Models, and Views
- URL Routing
- Controller Actions
- Razor View Engine
- Extensibility

URL Routing
- Introducing URL Patterns
- Creating and Registering a Simple Route
- Defining Default Values
- Using Static URL Segments
- Defining Custom Segment Variables
- Constraining Routes
- Using Attribute Routing
- Generating Outgoing URLs in Views

Razor View Engine
- Razor Basics
- Razor design goals
- Implementation of Razor view
- Razor syntax
- Using Razor Expressions
- Accessing Model Data in Razor views

Views
- View Engines
- Templates and Scaffolding
- ViewData and ViewBag
- Strongly-Typed Views
- Layout Pages
- Custom Sections
- Partial Views
- Child Actions
- Using a ViewModel Object
- Bundling & Minification

HTML Helpers
- Basic Helpers
- Strongly-Typed Helpers
- Creating Custom Helpers
- Declarative Helpers

Bootstrap
- What is Bootstrap?
- Bootstrap File Structure
- Basic HTML Template
- Global Styles
- Grid System
- Tables, Forms, Button
- Dropdown Menus

Controllers and Actions
- IController, ControllerBase, and Controller
- Defining Actions
- Action Selectors, Action Filters
- HTTP Verbs
- HttpContext and RouteData
- Returning Data with ActionResult
- Parameters and the Model Binder

Model Binding
- Object Relational Mapping (ORM)
- Entity Framework (EF) Database-first approach
- Entity Framework (EF) Code-first approach
- Repository Pattern
- Unit of work design pattern
- Model Binders

Model Validation
- Data Annotations
- Validation HTML Helpers
- ModelState
- Client Side Validation

Using AJAX and jQuery with ASP.NET MVC
- Overview of AJAX and ASP.NET MVC
- Overview of jQuery
- jQuery Techniques
- Using jQuery UI
- Ajax calls using Jquery

Security in MVC
- Authentication and Authorization
- ASP.NET Identity
- Configuring Forms Authentication
- MVC 5 App with Facebook, and Google OAuth2 Sign-on
- Authorize attribute

Filters

- Introducing the Filter Types
- Using Authorization Filters
- Using Authentication Filters
- Using Exception Filters
- Using Action Filters
- Using Result Filters
- Using Other Filter Features

ASP.NET Web API2 with MVC
- Overview of the ASP.NET Web API
- Building servers and clients
- Content negotiation
- Validation
- ApiController
- MediaTypeFormatters

Angular2 – Building a Rich Client-Side UI
- Introduction to Angular2
- Angular Modules
- ESModules
- Node Lite Server
- Angular Components
- Angular 2 Application Setup
- HTTP Services

- Typescript Fundamentals

Single-page Applications

- Understanding Single-page Applications
- Using Web API
- Using Angular2 for Single-page Applications

Features of MVC 6
- Overview of Visual Studio 2017
- Overview of Signal R