



Web Development Using Asp.net Core with Azure & Angular 11

ASP.NET MVC CORE WITH AZURE & ANGULAR 11

Module-1 – Asp.Net MVC Core

.NET Core

- Introduction to .NET Core
- .NET Core Features
- .NET Core Framework Architecture
- .NET Core Supports
- Advantages of .NET Core
- .NET App Model

.NET CLI

- Introduction to .NET CLI
- .NET CLI Commands
- Creating Projects using CLI
- Running code using CLI
- VS Code for .NET Core Development

ASP .NET Core

- Introduction to ASP.NET Core
- ASP.NET Core Features
- ASP.NET Core 1.0 vs. ASP. NET MVC5 vs. ASP .NET WebForms
- Advantages of ASP.NET Core

Module 2

Model, View, Controller & Actions

- Understanding Model, View and Controller
- Types of Views
- Creating Controller
- Understanding Actions
- Communication between Controller and View

Razor View Engine

- Understanding Razor View Engine
- Razor Syntax
- Razor Statements, Loops etc.

Routes & URLs

- Introduction to Routing
- Defining Routes
- Attribute Routing
- Need of attributes routing
- Actions and Non- Actions Methods
- Understanding Action Results

Module 3

Helpers

- Understanding HTML Helpers
- Types of HTML Helpers
- Built – In HTML Helpers
- Tag Helpers
- Inline Helpers
- Custom Helpers
- Url Helpers

Server – side Data Receiving Ways

- Action Parameters
- View Model/Objects
- IForm Collection

Reusable UI Components

- Partial View
- View Components

Module 4

View Model & Validation

- Creating View Model
- Understanding ASP.NET Core MVC Validation
- Need of Server Side and Client – Side Validation
- Validation with Data Annotation

Data Passing Techniques

- View Data
- View Bag
- Temp Data
- Session
- Query String
- Cookies

Module 5

Entity Framework Core

- What is ORM?
- ORMs used with .NET
- EF6 vs. EF Core
- Advantages of Entity Framework

Database Modeling

- Defining Mapping using Data Annotation
- Implementing CRUD Operations
- Defining Mapping using Fluent API

Database Migration, DB Procedures and Functions

- Entry Framework Code First Migrations
- Updating Database when the Model Changes
- Calling Stored Procedures and functions
- Code First with existing Database

Module 6

Repository Design Pattern and Unit of Work Design Patterns

- Understanding Repository and UOW Design Pattern
- Need of Repository Design Pattern
- Need to Unit of Work Design Pattern
- Implementing Repository and UOF Design Pattern

Dependency Injection

- Understanding Dependency Injection
- Need of Dependency Injection
- Implementing DI
- Data Listing, Paging and Sorting (Self- Paced)

Module 7 – Angular 11

Introduction to Angular 11.0

- Introduction to Angular
- Advantages of Angular
- Angular vs. AngularJS

Exploring Angular App Structure

- Understanding Angular folder Structure
- Angular Initialization Process
- Angular Building Blocks

Modules and Components

- Understanding Modules
- Introduction to Component Template
- Creating a Component
- Bootstrapping the Component

Decorators and Metadata

- Understanding Decorators
- Understanding Metadata

Data binding

- Understanding Data Binding
- Interpolation
- Property Binding
 - Two-way Data Binding Event Binding
- Event Binding

Module 8

Directives

- Introduction to Directive
- Built in Directives- ngIf, ngFor, ngSwitch etc.
- Creating Custom Directives
- Using Custom Directive

Pipes

- Introduction to Pipes
- Built in Pipes- lowercase, uppercase, currency
- Using third -Party Pipes
- Creating Custom Pipes

Debugging

- Understanding Angular Error Messages
- Debugging Code in the Browser
- Debugging Code using IDE

Module 9

Angular Forms and Controls

- Introduction to Angular 11 Forms
- Types of Angular 11 Forms – Template Driven and Model Driven
- Template Driven vs. Model Driven

Template Driven Form

- Creating Template Driven Form
- Angular form input controls

- Angular form validation
- Angular form and controls properties

Services in Angular

- Understanding Angular 8 Services
- Creating Services

Module 10 – Web API

Web API

- Introduction to SOA
- Introduction to REST
- REST Principle
- Understanding web API
- Choosing between WCF and WebAPI

Web API Controller & Actions

- Understanding Controller & Actions
- Creating Controller
- Creating Actions

Database Operations and Postman

- CRUD Operations using Web API
- Using Postman for testing Web API
- Consuming Web API using ASP.NET Core

Module 11 – Azure Fundamentals

Core Azure concepts

- Azure Fundamentals
- Azure Concepts
- Azure Architectural Components

Core Azure services

- Azure Compute Services
- Storage Services
- Database Services

- Networking and Other Services

Core solutions and management tools on Azure

- Tools to build better solutions
- Tools for Monitoring Services
- Tools for Managing and Configuring Azure Environment.

General security and network security features

Identity, governance, privacy, and compliance features

- Azure Identity Services
- Examine Privacy, Compliance and Data Protection Standards

Module 12 (Project: Ecommerce Site Development)

Discussing Project Architecture

- Understanding Application layers
- Discussing Application Entities Properties
- Discussing Relationship among Application Entities

Developing Project

- Designing Application Architecture
- Developing DAL layer using Entity Framework Core

Implementing Design Pattern

- Developing BAL layer
- Repository Design Pattern
- User Login Process
- Dependency Injection

Module Development

- Creating Admin Module using Area
- Creating User Module using Area

ASP.NET Core MVC Authentication: Identity

- ASP.NET Core MVC Authentication Options
- Introduction to Identity

- Implementing Identity

ASP.NET Core MVC Pipeline, Middleware and Filters

- Exploring ASP.NET Core Pipeline
- ASP.NET Core MVC Middleware
- ASP.NET Core MVC Filters
- Extending ASP.NET Core MVC Filters
- Configuring ASP.NET Core MVC Filters