

.Net MVC with ANGULAR



CURRICULUM

Language Integrated Query (LINQ)

- Introduction to LINQ
 - What is LINQ
 - Need of LINQ
 - How LINQ Works
 - Using Linq via Method based and Query based syntax
- Standard Linq Operators
 - Sorting Data
 - Filtering Data
 - Joining Data
 - Partitioning Data
- Linq Provider
 - LINQ to Object
 - LINQ to XML
 - LINQ to SQL
- Understanding Lazy Loading and Eager Loading
- Difference B/w Lazy and Eager Loading
- Using Stored Procedure in LINQ
- Working with Single table Inheritance
- Using of SQLMetal

Entity Framework

- Overview of the Entity Framework
- Difference b/w Linq to Sql and Entity Framework
- Using Schema First Approach
- Using Model First Approach
- Using Code First Approach
- Using Stored Procedure in Code First Approach
- Using Sql Profiler with Stored Procedure
- Creating/Managing one to many and many to one relations
- Using Table, Column and Key attributes
- Associations & Foreign Keys

Software Engineering Models and Concept:

- What is Software Development Life Cycle?
- Phases of a SDLC
- Project initiation and planning
- Feasibility study
- System design
- Coding
- Testing
- Implementation
- Maintenance

Business Requirement Specification (Project Based)

- Objective of Project
- DFD
- UML Diagram
- Class Diagram
- ER Diagram

System Requirement Database Structure (Project Based)

- Database Table Structure
- Database Design
- DDL
- DML
- Stored Procedure
- Database Security

Windows Communication Foundation (WCF)

- IntroductionToWCF
- What is Distributed Application
- What is WCF
- Evaluation of WCF
- Understanding WCF Architecture
- WCF comparison with WebServices
- WCF comparison with Remoting
- Benefits of WCF Service
- Understanding WCF Templates
 - WCF Service Library
 - WCF Service Application
 - WCF Workflow Service Application

Endpoints in WCF

- What is EndPoint in WCF
- End points settings in app. Config & web.config file
- ServiceMetaData HTTP_Get enabled
- IMetaDataExchange Contract/Endpoint for Http and Tcp
- What is Address-Binding-Contract (ABC)
- **Address**
 - What is Address
 - Understanding importance of address
 - Difference between HTTP & HTTPS address
 - Use of TCP and MSMQ address
 - What is Named Pipe address
 - Understanding IIS address
- **Binding**
 - Understanding WCF Bindings
 - Types of bindings
 - Basic Binding
 - Web Binding
 - WS Binding
 - WS Dual Binding
 - TCP Binding
 - IPC Binding
 - MSMQ Binding
- **Contract**
 - What is the of contract
 - Types of Contract
 - Service Contract
 - Operation Contract
 - Data Contract
 - Fault Contract
 - Message Contract

Developing WCF Service Application

- Hosting WCF Service in IIS/ASP.NET Development Server
- Hosting WCF Service in Managed Application(Self Hosting)
- Hosting WCF Service in Window Service
- WCF service durable service
- Use of WCF service Request-Replay
- Use of WCF service One-Way
- Use of WCF Callback service

Understand WCF Service instancing behavior

- Single(Singleton)
- PerCall
- PerSession

Understand Concurrency in WCF Service

- Single
- Multiple
- Reentrant

Restful WCF Service

- Understand Restful service in WCF
- Use of Restful service
- How to make Restful service in WCF
- Use of XML/JSON in Restful service

Implementing Security in WCF Service

- Understanding security terms
- Authentication
- Authorization
- Confidentiality
- Integrity

Security

- Message security
- Transport security
- TransportWithMessage security

ASP.NET MVC

- Introduction to ASP.NET MVC
- Brief history of ASP.NET MVC
- Understanding ASP.NET MVC Design Pattern
- Setup & Installation process
- Compare ASP.Net Web Forms with ASP.NET MVC
- Life cycle of ASP.NET MVC
- Key Benefits of ASP.NET MVC
- Understanding ASP.NET MVC project templates

View Engine

- What is View Engine
- Role of View Engine
- Types of View Engine
- Compare ASP View & Razor View Engine
- Understanding Razor syntax
- Accessing model data in Razor views
- Working with Razor Layouts
- Understanding Razor Expressions

Models

- What is MVC
- Understanding scaffolding template
- Scaffolding template with Entity Framework

- Defining a data model
- Understanding Model Binding
- Working with explicit model binding
- Responding to the edit post request

Views

- Purpose of Views
- Understanding View Conventions
- Types of View
- Understanding ViewBag, TempData, ViewData and ViewDataDictionary
- Creating strongly-typed views
- Adding a View
- Using Razor syntax in View
- Code Block in View
- Working with Partial View
- Introduction of Layout/Master page
- Working with Layout

Controllers and Actions

- What is the Controller
- Use of Controller
- What is Action and Action Results
- Action Filters
- Authorize Filters
- Result Filters
- Built In Filters
- Processing Input and Output Action

Membership, Authorization And Security

- Session and application state
- Using the Authorize Attribute to Login
- Securing Controller Action
- Authorize Attribute with Forms Authentication
- Windows Authentication
- Using Role wise Login
- Managing users and roles
- Configuring OAuth And OpenID Providers
- Login via OAuth and OpenID
- Security Implications of External Logins

URL Routing

- Introducing URL Routing
- Routing Approaches
- Defining Attribute and Traditional Routes
- Understanding Route Parameters
- A Details look at URL Generation
- Creating and Registering a Simple Route
- Ambient Route Values
- Using Static URL Segments
- Constraining Routes
- Bypassing the Routing System

Forms And Helper Methods

- Using Form Helper Methods
- The Action and the Methods
- Using GET or POST Method
- Using Template Helper Methods
- Using Model Metadata
- Making Helpers Do your Bidding Inside HTML Helpers
- Setting up the Edit Forms
- Using Strongly Typed Helpers

- Helpers and Model Metadata
- Helpers and Model State
- Html.Hidden
- Html.Password
- Html.RadioButton
- Html.CheckBox
- Html.DropDownList
- Html.Partial and Html.RenderPartial
- Html.Action and Html.RenderAction

Data Annotations And Validation

- Using Validation Annotations
- Custom Error Messages and Localization
- Using Range validator Attribute
- Regular Expression validator Attribute
- Required validator Attribute
- String Length validator Attribute
- Custom Validation and Annotation
- Using display format

Additional Techniques

- View scaffold templates
- Model Validation
- Global filters
- Model binding
- Bundling and Display Modes

Using Ajax, jQuery with ASP.NET MVC

- Overview of JQuery
- Unobtrusive Ajax and the 'this' context
- Using Ajax action links
- Using Ajax Helpers
- Autocomplete with jQuery UI
- JSON & Client-Side Template
- Bootstrap Plug-in

Using the ASP.NET Web API

- Overview of the ASP.NET Web API
- Building servers and clients
- Adding routes to your web API
- Incoming Action Parameters
- Validation
- Understanding IHttpController
- Enabling Dependency Injection
- Session Management in Web API
- Securing a Web API
- Single and Multiple Registered Services in API

Technical Design & Development (Project Based)

- Working with Project
- Programming Language: C# (MVC Razor)
- Designing Tools
- CSHTML
- Using CSS
- Using Ajax
- Using JavaScript

WPF

- Introduction to WPF
- Understanding WPF Controls
- Understanding XAML
- Creating Custom Controls
- Using Panels/Layout
 - Introduction to WPF Layout

- StackPanel
- Grid Panel
- Dock Panel
- Canvas Panel
- Border
- Wrap Panel
- Data Binding
 - Types of Data Binding
 - Debug DataBinding Issues
 - Data Validation Rules
 - Value Converters
 - Data Viewing, Sorting and Filtering
- Using Triggers
- Styling
 - Themes
 - Styles
- 2D & 3D Graphics
 - Draw exactly on physical device pixels
 - Geometry Transformer
 - How to get a Bitmap from a Visual
 - DrawRoundedRectangle
- Multithreading
- Working with Slides & Animations

Angular

Introduction to TypeScript

- Compiling TypeScript
- Why Use TypeScript
- Let and Const
- Lambda/Arrow Functions
- Basic Types
- Type Assertion
- Type Definitions
- Classes and Interfaces
- Constructor

Environment Setup

- Node / NPM
- Angular CLI
- Application File Structure
- Code Editors

Introduction to Angular

- What is Angular?
- Advantages Of Angular
- Disadvantages Of Angular
- Key Features of Angular
- Comparison Between Angular with Other Frameworks.

Modules

- Why use Modules
- NgModule
- Declarations
- Providers
- Imports
- Bootstrapping
- The Core Module
- Shared Modules
- LazyLoading

Components

- Introduction to Components
- Component Architecture Patterns
- Decorator Metadata
- State & Behaviour

Templates

- Inline vs External
- Template Expressions
- Data Bindings
- *ngIf else, *ngFor and *ngSwitch
- Built-in Structural Directives
- Built-in Attribute Directives

Custom Directives

- Create your own Structural Directive
- Create your own Attribute Directive

Pipes

- Built-in Pipes
- Custom Pipes

Services

- Introduction to Services
- Building a Service

Lifecycle Hooks

- Component LifeCycle
- All lifecycle Hooks

Routing

- The Component Router
- Defining Routes
- Navigation
- Route Params
- Child Routes
- Primary Route and Named Route
- Multiple routerOutlet

Advanced Routing

- Route Guard

Template-driven Forms

- Introduction to forms
- Template-driven forms
- Validation

Model-driven Forms

- Introduction to Reactive forms
- FormGroup&FormControl
- Validators
- Custom Validation

Asynchronous Operations

- Introduction to Async
- Observables
- Observables vs Promise
- HTTP Request / Response

Communication Between Component

- @Input()
- @Output()
- @ViewChild()
- @ViewChildren()
- Shared Service

Angular Testing

- Introduction to Testing
- Unit Testing



Partners :



Java



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E-mail: info@ducatindia.com

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NOIDA

A-43 & A-52, Sector-16,
Noida - 201301, (U.P.) INDIA
☎ 70-70-90-50-90
📠/📞 +91 99-9999-3213

GURGAON

1808/2, 2nd floor old DLF,
Near Honda Showroom,
Sec.-14, Gurgaon (Haryana)
☎ 70-70-90-50-90

GHAZIABAD

1, Anand Industrial Estate,
Near ITS College, Mohan Nagar,
Ghaziabad (U.P.)
☎ 70-70-90-50-90

PITAMPURA (DELHI)

Plot No. 366, 2nd Floor,
Kohat Enclave, Pitampura,
(Near- Kohat Metro Station)
Above Allahabad Bank,
New Delhi- 110034.
☎ 70-70-90-50-90

SOUTH EXTENSION (DELHI)

D-27, South Extension-1
New Delhi-110049
☎ 70-70-90-50-90
📠 +91 98-1161-2707