

## Day 1 → Module 1::Basic .NET

**.NET Architecture:** .NET Introduction, CLR, Base Classes and Garbage Collector, CLS, CTS and Generation of Garbage Collector, ILDASM, Assembly.

**C# Language:** variables, constant, casting, data types and looping.

**OOPS:** Class, object, Property, Constructor and Constructor overloading, Property with Constructor, Function and Function Overloading, Static, Value type and Reference type and Boxing.

## Day 2 → Module 1::Basic .NET & Module 2::ORM

**OOPS:** Inheritance & Polymorphism, Function Overriding, sealed and abstract class, Interface, Delegate & Events, Partial class & StringBuilder.

**Generics:** Generic collection- List<T>, Dictionary<T, T>, Generic class, Generic Methods

**LINQ:** What is LINQ? Why LINQ?, Advantage & disadvantage of LINQ, Restriction Operator-Where, Projection Operator-Select, SelectMany, var keyword, Anonymous Type,

## Day 3 → Module 2::ORM [Object Relational Mapping]

**LINQ:** Partition Operator-Skip, Take, Element Operator- First, FirstOrDefault, Last, LastOrDefault, Single, SingleOrDefault, ElementAt, Ordering Operator-OrderBy, OrderByDescending, Join Operator- Join [Inner and Outer], Conversion Operator- Cast, ToList, ToArray, ToDictionary, Deferred and immediate execution, Lazy/deferred and eager loading, Extension Method, Best practices to improve LINQ performance

**Entity Framework 6:** What is Entity Framework and ORM? Why entity framework? History of EF. Creating Visual Models from Existing Databases[.edmx]-Using EF to Interact with Your Data, Inserting, Querying & Updating Objects, Retrieving Data with the Find and SqlQuery Methods, Deleting Simple Objects, Inserting & Loading Related Data, Projection Queries Creating a Code Based Model and Database- Creating an Entity Framework Model, Validating Your EF Model, Fixing How EF Interprets Your Model, Using Code First Migrations to Create a Database, Migrating a Database When Your Model Changes.

## Day 4 → Module 3::SOA [Service Oriented Architecture]

**Entity Framework 6:** How StoreProcedure work in Entity Framework, IQueryable verses IEnumerable verses IList verses var, Difference between LINQ and StoreProcedure

**WCF:** Introduction of SOA, WCF Architecture, Binding, Endpoint and Contract, WCF Hosting using Self hosting, WCF Hosting using IIS hosting, DataContract & MessageContract, Host service on Multiple Endpoints, Consuming Service Using Proxy, Consuming Service Using Channel Factory, WCF Channel- OneWay, Request-Reply, Duplex. Exception Handling Using FaultContract, Instance management, Session management,

## Day 5 → Module 3::SOA & Module 4::MVC

**WCF:** Transaction management, Concurrency management, Security - WCF Authentication & Authorization

**ASP.NET MVC 5:** What is MVC and ASP.NET, Routing Mechanism, ASP.NET MVC Pipeline Understand ViewBag, ViewData, TempData & session, Attribute Routing, Introduction to Razor engine, Html Helpers- Inline Html helper, built in Html helper-Standard, Strongly type. Understand Model layer, Model Validation- Client Side and Server Side, Apply styles, Layout, Section and ViewStart.

## Day 6 → Module 4::MVC

**ASP.NET MVC 5:** CRUD using Entity Framework, Passing Form Data using UpdateModel and ModelBinder, Implement Ajax in MVC, Implement JQuery in MVC

## Day 7 → Module 4::MVC

**ASP.NET MVC 5:** Bundling & Minification, Partial Views, ActionResult JsonResult: JsonResult, ViewResult, PartialViewResult, FileResult., MVC Filters: Authenticate, Authorize, Action, Result, Exception., Custom Form Authentication & Authorization in MVC, Areas, Caching, Create Unit Test, Deployment.

## Day 8 → Module 4:: MVC-DI , Design Pattern & Web API

**Dependency Injection & Design patterns:** Implement Dependency Injection in MVC, Implement Repository pattern in EF & MVC, Implement Unit of Work pattern in EF & MVC

**ASP.NET Web API-2:** Introduction to REST, History of Asp.Net Web API, Fundamentals of ASP.NET Web API. CRUD Operations Using Web API, Hosting Web API.

## Day 9 → Module 4:: MVC-Angular JS & Bootstrap

**Angular JS:** A Brief History of Angular, Advantages of Angular, Client-side Development with .NET, File Organization, Understanding Modules, Organizing Modules, Naming Overview, Namespacing, Naming Objects, Creating an Angular View inside an MVC View, Using Angular Inside MVC Layouts, Bootstrapping Data in Angular Views, Mini SPA Introduction, Creating a Mini SPA inside an MVC View, Getting Ready for Production

**Bootstrap:** Introduction to Bootstrap, Quick Styles after Dark, Our First Web Page, Scripts and Styles Core Concepts, Layout with Bootstrap, Grid Layouts, Simple Layout, Fixed Grids, Fluid Grids, Responsive Design, Responsive Utilities, Typography, Tables, Forms, Buttons, Images and Icons, Bootstrap Components, Dropdown Menus, Buttons with Menus, Tabs and Pills, Navbar