

## Overview of C#

- Introduction to C# technology
- C# programming basics
- Data Types and Primitive Types
- Control Structure
- C# Arrays
- OOP
- Exception handling
- Generic type. Collections
- Delegate
- Thread. Task
- FileStream. File IO
- Sorting Algorithms, Searching Algorithms (practice)

## ASP.NET Core fundamentals

- What is Web Application?
- ASP.NET Core Application Structure
- Dependency Injection
- Middleware
- Application Settings
- Logging
- Routing
- Handle errors, Validation
- Make HTTP requests
- Static files

## DB SQL

- RDBMS
- DML. DDL. DCL. TCL.
- SQL,SQL Server

## Using Database in Application

- Connection from application to database
- ORM. Entity Framework, Dapper
- Code First, Database First, Migrations, Configurations
- Sql View and Prodecure

## APIs with ASP.NET Core

- What is Web API Project?
- SOAP&Rest services
- Handling DTO with AutoMapper
- Documentation with Swagger / OpenAPI
- API Versioning

## Web UI with ASP.NET Core

- ASP.NET Core Razor Pages And MVC
- Routing
- Views, View Model
- Partial views
- View Components
- Tag Helpers
- Dependency injection into views
- Filters
- Areas
- Upload files
- From Validation
- Single Page Apps

## ASP.NET Core Advance

- Security and Identity
- ASP.NET Core SignalR
- Test, debug, and troubleshoot
- Performance Best Practices
- Globalization and Localization
- Host and deploy (IIS,Azure,Docker,Nginx)
- CI/CD

## ASP.NET Core Application Architecture

- Repository Pattern
- Clean Architectures.
- CQRS Design Pattern
- Microservices