.Net Fullstack

Course Outline

Part 1 (10 Days)

- Overview of Application Architecture
- Introduction to .NET Framework
- Introduction to .NET Core
- Working with C#
- Hello World Application
- Compiling and Running Application
- Understanding .Net Assembly
- Understanding Namespace
- Object Oriented Programming
- Classes and Objects
- Encapsulation
- Static
- Introduction to Unit Testing
- Different Unit Testing framework
- nUnit
- Test cases and Assert
- Advantage of Unit Testing
- Test Driven Development
- Inheritance and Interface
- Exception
- Generics and Collection
- Extension method
- Linq
- Reflection

Part 2 SQL Server and . NET(4 Days)

- Introduction to Database
- What is RDBMS system
- Introduction to Sql Server
- Database
- Table
- Relationship
- Queries

- Normalization
- Views
- Stored Proc
- Introduction to ADO.NET
- Performing Database Operations using C# front-end
- Understanding EF Core
- Creating the Model
- Creating Context
- Performing basic CRUD Operations
- Database Migration

Part 3 ASP.NET Web API (5 Days)

- Understanding HTTP Protocol
- Web Application and Microservice Architecture
- How Asp.Net core works
- Middleware
- Services
- Dependency Inversion
- Configuration
- Setting up Application Pipeline
- Creating an Asp.Net webapi
- Creating Controller
- Creating Actions
- Mapping HTTP Methods
- Returning proper responses
- Testing the REST service
- Understanding Validation
- Handling Custom Exception
- Authentication

Part 4 Angular (6 Days)

- Developing a frontend
- Understanding Java Script
- What is NodeJS
- Working with TypeScript
- JavaScript/TypeScript constructs
- What is Angular
- Creating an Angular Project
- Anatomy of Angular Project
- Important Angular Elements
  - Components
  - Module
  - Templates

- - Data Binding
    - Interpolation
    - Pipes
    - Directives

- Handling Angular Form
- Interacting with database

Part 5 Azure (3 Days)

- What is Azure
- Important Azure elements
- Azure Functions
- Service Bus
    - Queue Triggered
    - Http Triggered
- Cosmos DB
- Blob Storage
- Table Storage

Part 6 Project and Evaluation (2 Days)

- Project and evaluation.