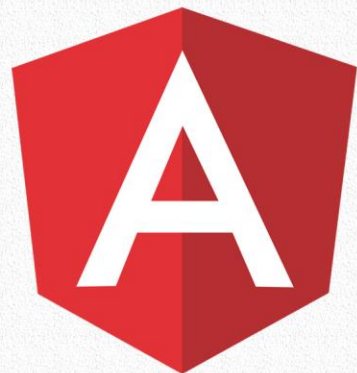


ASP.NET Core with Angular Development

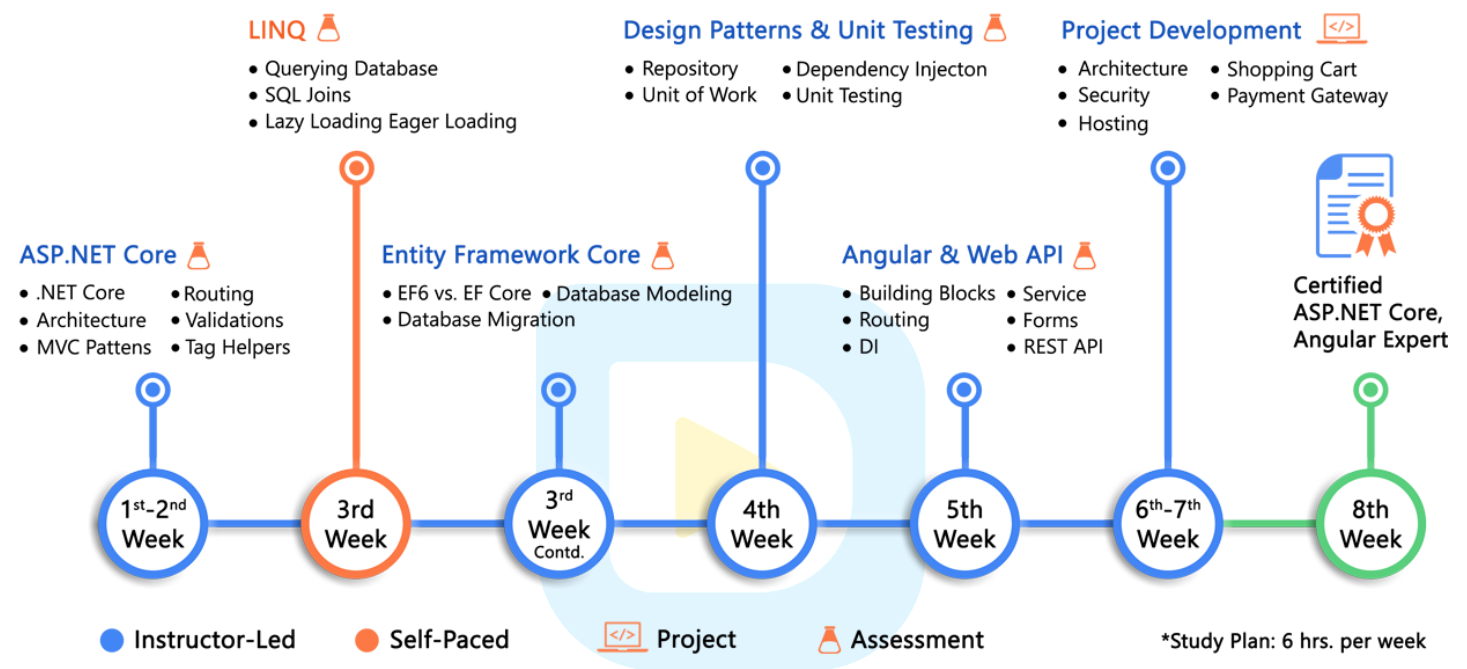


ASP.NET Core with Angular Development

About the Course

The ASP.NET Core with Angular course is primarily designed for .NET Beginner(s)/Professional(s) who want to learn how to develop modern cloud based app using ASP.NET Core and Angular. In this course, you will learn about .NET Core, middleware, MVC pattern, html helpers, tag helpers, custom helpers, validation and custom validation, querying database using Entity Framework Core. Making page more interactive using Angular, and finally publish it on IIS.

Learning Path



Course objectives

At the completion of this course, attendees will be able to;

- Understand .NET Core architecture and Advantages
- Build and run cross-platform ASP.NET apps on Windows, Mac and Linux
- Understand ASP.NET Core middleware
- Configure ASP.NET Core MVC
- Use Dependency Injection in ASP.NET Core
- Work with Entity Framework Core
- Handle Errors in ASP.NET Core
- Create REST Service using Web API
- Understand and Implement Repository, Unit of Work and Dependency Injection Design Pattern
- Understand Angular Core and advanced concepts
- Secure application based on user roles
- Publish their Apps on IIS

Who can do this course?

All .NET Beginner(s)/Professional(s) who are keen to develop modern, light weight and cloud based web applications should go for this course.

Pre-requisites

Anyone who wants to learn ASP.NET Core with Angular development should have a basic knowledge of C# and HTML.

Tools/IDE

Visual Studio 2017, SQL Server 2016, Visual Studio Code

Course Curriculum

Module 1

.NET Core

- Introduction to .NET Core
- .NET Core Features
- .NET Core Framework Architecture
- .NET Core 1.0 vs. .NET 4.5
- .NET Core Supports
- Advantages of .NET Core
- .NET App Model

.NET CLI

- Introduction to DNX, DNVM, DNU
- Introduction to .NET CLI
- .NET CLI Commands



Module 2

ASP.NET Core

- Introduction to ASP.NET Core
- ASP.NET Core Features
- ASP.NET Core 2.0 vs. ASP.NET MVC5 vs. ASP.NET WebForms
- Advantages of ASP.NET Core

Visual Studio Project Templates

- Understanding Visual Studio ASP.NET Core Templates
- Creating an ASP.NET Core project
- Understanding ASP.NET Core project folder structure
- Understanding configuration files

Model, View, Controller & Actions

- Understanding Model, View and Controller
- Types of Views
- Creating Controller

- Understanding Actions
- Actions and Non-Actions Methods
- Understanding Action Results
- Communication between Controller and View

Razor View Engine

- Understanding Razor View Engine
- Razor View Engine vs. Web Form Engine
- Razor Syntax
- Razor Statements, Loops etc.

Routes & URLs

- Introduction to Routing
- Defining Routes
- Attribute Routing
- Need of attributes routing

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 Models/Objects
- FormCollection

Reusable UI Components

- Partial View
- View Components

Module 4

ViewModel & Validation

- Creating ViewModel
- Understanding ASP.NET Core MVC Validation
- Need of server-side and client-side Validation
- Validation with Data Annotation

Custom Validation

- Custom client-side Validation
- Custom Server-side validation

Data Passing Techniques

- ViewData
- ViewBag
- TempData
- Session
- Query String
- Cookies

Assessment #1

- Mock-up test
- Assignment

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

- Entity 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

Assessment #2

- Mock-up test
- Assignment

Module 7

Introduction to Angular2+4 & Angular5

- Introduction to Angular
- Advantages of Angular
- Angular1 vs. Angular2
- Browsers Support

Get Started with Angular5

- Setting up an Angular App
- Running an Angular App
- Understanding Angular folder structure
- Angular Initialization Process

Angular Building Blocks: Components, Modules, Decorators

- Understanding Component
- Creating a Component
- Understanding Modules
- Understanding Decorators

Databinding

- Understanding Data Binding
- Attribute Binding
- Two-way Data Binding
- Event Binding etc.

Routing

- Understanding Routing
- Defining Routes
- Routing Building Blocks – Routes, Router Outlet and Router Link



Module 8

Directives and Pipes

- Built in Directives - ngIf, ngFor, ngSwitch etc.
- Creating Custom Directives
- Angular2 Pipes
- Creating Custom Pipes

Angular Forms and Controls

- Introduction to Angular Forms
- Creating Angular Form
- Angular form input controls
- Angular form validation
- Angular form and controls properties

Services

- Introduction to Services

- Creating Services
- Data sharing using Services

Assessment #3

- Mock-up test
- Assignment

Module 9

Web API

- Introduction to SOA
- Introduction to REST
- REST Principles
- Understanding Web API
- Choosing between WCF and WebAPI

Web API Controller & Actions

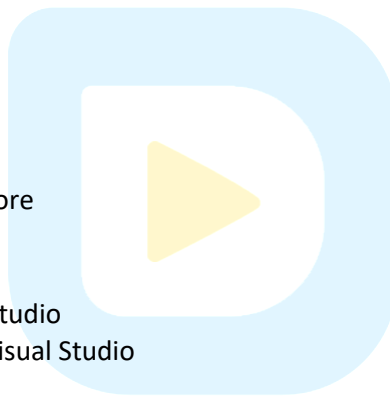
- Understanding Controller & Actions
- Creating Controller
- Creating Actions

Database Operations and Postman

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

Angular SPA

- Setting Up Angular App using Visual Studio
- Building and Running Angular using Visual Studio
- Consuming Web API using Angular



Module 10 (Project: Online Shopping 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

Assessment #4

- Mock-up test
- Assignment

Module 11 (Project: Online Shopping Site Development)

Securing ASP.NET Core MVC App

- Implementing Authorization using Authorization Filter
- Passing Logged in User Info Across the App

Category and Product Listing

- Category CRUD Operations
- Product CRUD Operations

Bundling & Minification

- Understanding Bundling & Minification
- Minimize number of static files requests

Web API and Angular

- Developing Web API for shopping Cart
- Setting Up Angular with ASP.NET Core
- Developing Shopping Site Store using Angular

Shopping Cart

- Creating Shopping Cart
- Adding Products to Shopping Cart
- Removing Products from Shopping Cart

Module 12 (Project: Online Shopping Site Development)

Payment Gateway

- Understanding Payment Gateway Process

- Integrating Payment Gateway
- Sending/Receiving data to and from Payment Gateway
- Placing order

Error Logging

- Understanding Error Logging Options
- Configuring Error logging provider
- Tracing Error log

Securing Web API

- Understanding Token based Security
- Implementing Token based Security
- Implementing Authorization

Deployment

- Deployment on IIS

Assessments

Dot Net Tricks allows its esteemed users to take your skills to the next level with articles, books and courses on the most popular programming languages. Skill Assessments are good for anyone and everyone practicing technology.

In less than 10 minutes, with our skill assessments having 20 questions, you can identify your knowledge gaps and strengths. Your results tell you, how much you know, and what you need to learn. Here at Dot Net Tricks, you can learn the essential skills to be an exceptional leader and an outstanding professional.

Dot Net Tricks assignments help the professionals to work on real-world projects and to get an edge in their careers and make their lives better. This training program includes **4 mock-up tests and 4 assignments**.

Mockup-Tests objectives

At the completion of mockup-tests, attendees will be able to;

- Monitor their learning progress
- Evaluate themselves
- Crack their technical interview first round with objective questions

Assignments objectives

At the completion of assignments, attendees will be able to;

- Gain confidence to work on ASP.NET Core project with latest technologies
- Evaluate their development skills
- Prepare themselves for real-application development

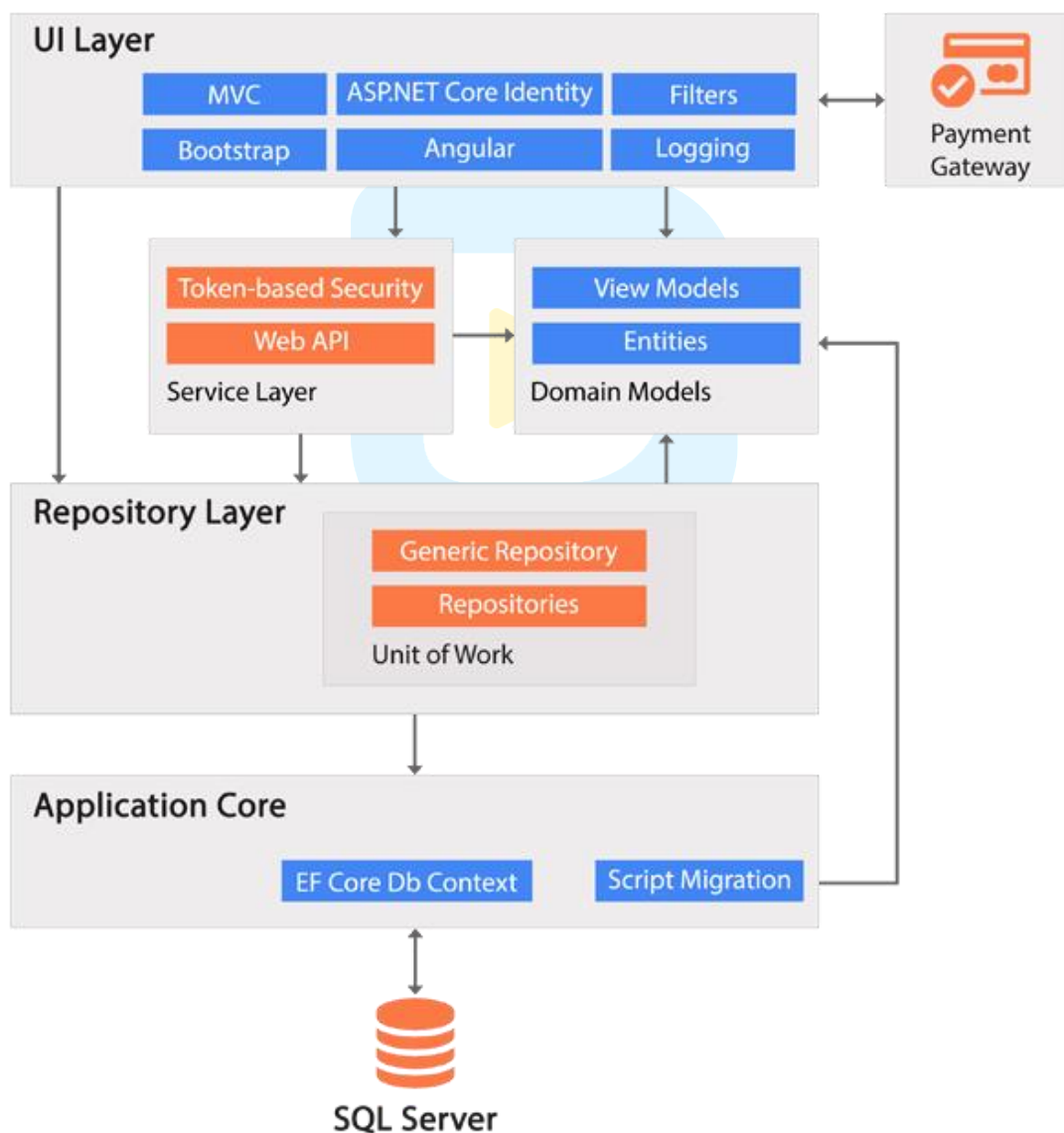
Project Details

Description

You will learn how to develop an online shopping site. The site will show the list of products to User/Customer. A user can purchase products and see the previous order history. Here, admin will be responsible for adding products, categories and approving customer order. The application will use three-tier architecture with extensible approach. We would be using payment gateway to do online payment and finally publishing it on IIS.

Project Architecture

The primary goal of this architecture is to share as much code as possible across the web application and further reuse existing code for mobile apps development if necessary. This architecture will help you to develop web application with the recommended design patterns and practices.



What you will learn through project?

At the completion of project, attendees will be able to;

- Create shopping cart using Angular
- Integrate payment gateway
- Create Application core layer using Entity Framework Code First approach
- Create Repository layer using Repository and Unit of Work design pattern
- Decouple modules using Dependency Injection
- Break a project into multiple modules
- Create Service layer using Web API
- Scale application for Phone, Tablets, Laptop & Desktop using Bootstrap
- Consuming Web API using Angular
- Do errors logging
- Optimize web pages performance
- Secure application based on user roles
- Authenticate/authorize user
- Securing ASP.NET Web API using Token based security
- Publish their App on IIS

Contact Us

- For more information about the course, visit: www.dotnettricks.com/training/asp-net-core-angular
- Feel free to call us at **+91 11 330 34100** or email us at info@dotnettricks.com

