

KOENIG SOLUTIONS · COURSE OUTLINE

Developing Web Applications Using .NET 6

Learn to build, test and deploy MVC web applications and APIs using .NET 6, from middleware to Azure.

8

MODULES

41

TOPICS

COURSE OVERVIEW

This course covers the fundamentals of .NET 6, including its core framework, comparisons with earlier ASP.NET versions, and the MVC structure, alongside working with middleware and services. It then examines the Model-View-Controller pattern in depth, covering controllers, views, and a model-first approach with Entity Framework Core, followed by UI design using HTML5, CSS, JavaScript, and Bootstrap. Testing practices such as TDD, unit testing and exception handling are addressed, along with authentication, authorization, caching and session management. The course concludes with building and consuming Web APIs and deploying applications on Microsoft Azure.

WHO THIS COURSE IS FOR

Web Developers

ASP.NET Developers

Full Stack Developers

Software Engineers

API Developers

LEARNING OBJECTIVES

- Explain the core structure and features of .NET 6
- Configure middleware and services within a .NET 6 application
- Develop controllers, views and models using MVC
- Implement Entity Framework Core for CRUD operations
- Apply responsive UI designs using HTML5, CSS and Bootstrap
- Apply unit testing and exception handling in MVC projects
- Configure authentication, authorization and session management
- Build and consume Web APIs and deploy to Azure

8 Modules, 41 Topics

01

Introduction to .NET 6

TOPICS

- Understanding Core form of .NET framework
- What's new with .NET 6
- Comparing ASP.NET 4.X and ASP.NET CORE 3.1 with .NET 6
- Understanding MVC structure with Core

USING VISUAL STUDIO 2022 CREATE PROJECTS WITH FOLLOWING TEMPLATES AND COMPARE STRUCTURE OF ALL

- .NET FRAMEWORK (4.x)
- Core
- Core MVC

02

Working with Middleware Using .NET 6

TOPICS

- Applications of RUN, MAP AND USE middleware
- Difference between Middleware and Service in .NET
- Declare MVC as service to transform and use empty project as MVC project
- Accessing media files from wwwroot folder

03

Working with MVC (Model-View-Controller)

DEVELOPING CONTROLLERS

- Dependency Injection with Controllers
- Actions and Action Filters
- Overriding default route and Configuring Routes

DESIGNING VIEW

- Understanding Razor Syntax
- Working with HTML tag libraries - HTML Helper and Tag Helper
- Dependency Injection with Views
- Working with Partial views and view components

DEVELOPING PROJECT USING MODEL FIRST APPROACH

- Understanding Model First Approach
- Working with Models => MVC project
- Working with Forms & Validation using Data Annotations
- Introducing Entity Framework core with MVC project
- Understanding Nuget packages
- CRUD using LINQ functions with SQL Database

04

Designing UI and Client-Side Styling

TOPICS

Working with HTML 5 tags and styling with CSS · Overview of JavaScript · Working with Layouts · Understanding NPM · Apply responsive designing using Bootstrap · Working with SASS or LESS using task runners

05

Understanding Testing in MVC

TOPICS

What is TDD approach · Working with Unit Testing · Exceptional handling

06

Authentication and Authorization

TOPICS

- Working with Authorization & Authentication
- Working with Cache Memory v/s local and session storage
- Working with Session

07

Implementing Web APIs

TOPICS

Understanding Web API · Understanding Pub-Sub concept · Creating API with .NET 6 · Consuming API

08

Deployment of Application on Azure

TOPICS

Microsoft Azure Fundamentals

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training

Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

Flexi (Self-Paced)

1-on-1 Training

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