KOENIG step forward

Microsoft Solutions Partner
Microsoft Cloud Training Services

KOENIG SOLUTIONS · COURSE OUTLINE

ASP.NET Blazor Development with Microservices

Learn to build, secure and deploy dynamic web applications with ASP.NET Razor and Blazor, then extend them using microservices architecture.

5 Days	17	77
DURATION	MODULES	TOPICS

COURSE OVERVIEW

This course begins with ASP.NET Core MVC and Razor fundamentals, covering syntax, project setup, controllers, components, views and validation. It then moves into client-side development with Bootstrap, CSS and JavaScript, followed by Web API integration, Entity Framework Core, performance tuning and Razor class libraries. Later modules address testing, troubleshooting, security, and hosting and deployment on Microsoft Azure. The course concludes with microservices architecture, covering design principles, development, security, monitoring, logging and testing of microservices.

WHO THIS COURSE IS FOR

ASP.NET Developers | **Web Developers** | **Software Architects** | **Backend Developers** | **Full-Stack Developers**

LEARNING OBJECTIVES

- Explain the fundamentals of ASP.NET Core MVC and Razor syntax
- Configure a Razor development environment and create new projects
- Develop controllers, Razor components and views with data binding
- Implement validation using EditForm and validation components
- Apply Bootstrap, CSS and JavaScript for responsive client-side design
- Implement Web API services and Entity Framework Core migrations
- Secure Razor applications through authentication and authorization
- Compare microservices architecture with monolithic and SOA approaches

COURSE SYLLABUS

17 Modules, 77 Topics

DAY 1 Introduction to ASP.NET Razor

01

Exploring ASP.NET Core MVC and Razor

TOPICS

Overview of Microsoft Web Technologies · Overview of ASP.NET · Understanding Core form of .NET · What is ASP.NET Razor? · Benefits of Using Razor

02

Setting Up Your Development Environment

TOPICS

Installing Visual Studio 2022 · Configuring Your Development Environment · Creating a New Razor Project · Planning in the Project Design Phase

03

Basic Razor Syntax and Structure

TOPICS

Understanding Razor Syntax · Writing Your First Razor Script · Razor Syntax vs. HTML

DAY 2 Building Dynamic Web Pages

04

Developing Controllers and Razor Components

TOPICS

- Writing Controllers and Actions
- Configuring Routes
- Writing Action Filters
- Razor Syntax & Directives
- Pages vs Components
- Routing in Razor
- Rendering Components
- Data Binding
- Communication Between Components
- Passing Parameters

05

Developing Views

TOPICS

Creating Views with Razor Syntax · Using HTML Helpers and Tag Helpers · Reusing Code in Views

06

Validation

TOPICS

Introduction to Validation · Using EditForm Component · Input Components · Validation Components

07

Using Bootstrap and Client-Side Development in Blazor Applications

TOPICS

Providing a Responsive User Interface · Layout Using Bootstrap · Using CSS and JavaScript · Using jQuery · Applying Styles · Using Task Runners · Responsive Design

DAY 3 Advanced Features and Techniques

08

Using REST Services (Web API) and Entity Framework Core

TOPICS

- Creating Web API Services
- Web API Controllers
- Implementing Controller Actions
- Configuring and Injecting HttpClient
- Implementing GET, PUT, POST, and DELETE
- Introduction to Entity Framework Core
- Migrations and Database Creation
- Adding Migrations

09

Optimizing Razor Applications for Performance

TOPICS

Performance Tuning Techniques · Caching Strategies · Minimizing Page Load Time

10

Razor Class Libraries

TOPICS

Creating a Razor Class Library · Using Components from a Library · Routing to Pages in a Library

DAY 4 Performance Optimization and Security, Real-World Applications, and Deployment

11

Testing and Troubleshooting

TOPICS

Testing MVC Applications · Implementing an Exception Handling Strategy · Logging MVC Applications · Debugging Razor Code · Logging and Monitoring

12

Securing MVC-Based Apps Using Razor

TOPICS

- Dealing with Common Security Threats in Web Applications
- Authentication and Authorization
- Configuring Authorization
- Securing Pages and Components

13

Hosting and Deployment

TOPICS

Deployment to Microsoft Azure · Microsoft Azure Fundamentals · Preparing for Deployment · Configuring the Hosting Environment · Monitoring and Maintaining Applications

DAY 5 Implementing Microservices

14

The Emergence of Microservices Architecture

TOPICS

- Explore the ideal software development practice
- Learn how a fine-grained Service-Oriented Architecture (SOA) can help to achieve the ideal
- Learn how Microservices attempts to achieve the ideal
- Understanding Microservices vs. Monolithic Architecture

15

Microservice Design Principles

TOPICS

Designing small microservices · Designing independent microservices · Designing resilient microservices

16

Developing and Securing Microservices

TOPICS

- Setting Up a Microservices Solution in Visual Studio
- Creating ASP.NET Core Microservices

SECURITY

- Authentication and Authorization

17

Monitoring, Logging, and Testing

TESTING MICROSERVICES

Unit Testing · Integration Testing, and · Contract Testing

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

Ready to Get Started?

Talk to a learning advisor about schedules, group training and customised delivery.

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