KOENIG SOLUTIONS · COURSE OUTLINE

Full Stack: Laravel Eloquent & React with Redux

Learn to build full-stack applications with Laravel Eloquent for the backend and React with Redux for the frontend.

21
MODULES

74
TOPICS

COURSE OVERVIEW

This course covers backend development with Laravel, starting from MVC architecture, routing, controllers, views and Blade templating, through to database operations with Eloquent ORM, authentication and authorization, validation, RESTful APIs, and middleware and service providers. It then moves to frontend development with React.js, covering JSX and components, event and form handling, conditional rendering and lists, and React Router. Finally, it addresses state management with Redux, including actions, reducers and the store, middleware and asynchronous actions, connecting React components to Redux, testing and debugging, and deployment strategies.

WHO THIS COURSE IS FOR

Backend Developers | **Frontend Developers** | **Full Stack Developers** | **Web Developers** | **API Developers**

LEARNING OBJECTIVES

- Explain MVC architecture and its components
- Configure Laravel routing, controllers and middleware
- Build views using Blade templating syntax
- Implement CRUD operations and relationships with Eloquent ORM
- Apply authentication and authorization using Gates and Policies
- Develop RESTful APIs with resource transformations
- Build React components using JSX, props and state
- Implement state management with Redux actions and reducers

COURSE SYLLABUS

21 Modules, 74 Topics

PART 1 Backend with Laravel and MVC Architecture

01
Introduction to Laravel

TOPICS

What is Laravel? · Features and advantages of Laravel · Laravel ecosystem and community support

02
Understanding MVC Architecture

TOPICS

What is MVC? · Model, View, Controller components · Separation of concerns · Benefits of MVC in web development

03
Getting Started with Laravel

TOPICS

Installing Laravel · Laravel directory structure · Artisan command-line interface

04
Routing and Controllers

TOPICS

Basic routing · Route parameters · Controller structure and creation · Middleware for request handling

05
Views and Blade Templating

TOPICS

Creating views · Blade templating syntax · Passing data to views · Blade directives and includes

06
Database Operations with Eloquent ORM

TOPICS

Introduction to Eloquent ORM · Model creation and conventions · CRUD operations with Eloquent · Relationships in Eloquent

07
Authentication and Authorization

TOPICS

Setting up authentication · User registration and login · Authorization with Gates and Policies · Authentication scaffolding

08
Validation and Error Handling

TOPICS

Form validation · Custom validation rules · Error handling and error messages · Form request validation

09

RESTful APIs

TOPICS

Introduction to RESTful APIs · Creating API routes · Building API controllers · API resource transformations

10

Middleware and Service Providers

TOPICS

Understanding middleware · Creating custom middleware · Service providers and dependency injection · Registering service providers

PART 2

Mastering Frontend with React.js & Redux

01

Introduction to React.js

TOPICS

What is React.js? · Benefits of using React.js · React.js ecosystem

02

Setting Up React.js Environment

TOPICS

Installing Node.js and npm · Creating a new React.js project · Project structure

03

JSX and Components

TOPICS

Understanding JSX syntax · Creating functional and class components · Component lifecycle methods · Props and state

04

Handling Events and Forms

TOPICS

Event handling in React.js · Form handling and controlled components · Handling user input

05

Conditional Rendering and Lists

TOPICS

Conditional rendering in React.js · Rendering lists with map() · Keys in lists and their importance

06

React Router

TOPICS

Introduction to React Router · Setting up routes in React.js · Nested routes and route parameters · Programmatic navigation

07

State Management with Redux

TOPICS

Introduction to Redux · Three principles of Redux · Setting up Redux in a React.js application · Actions, reducers, and the store

08

Advanced Redux Concepts

TOPICS

Middleware in Redux · Asynchronous actions with Redux Thunk · Redux DevTools for debugging

09

Using Redux with React

TOPICS

Connecting React components to Redux store · mapStateToProps and mapDispatchToProps · Selector functions for data retrieval

10

Testing and Debugging

TOPICS

Testing React.js components · Debugging React.js applications · Using React Developer Tools

11

Deployment Strategies

TOPICS

Building React.js for production · Deployment options · Continuous integration and deployment (CI/CD)

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.

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