

React + TypeScript: Router & Redux

Learn to build React applications with TypeScript, covering routing, common patterns, forms, Redux state and RESTful APIs.

8

MODULES

44

TOPICS

COURSE OVERVIEW

This course covers TypeScript basics, including types, interfaces and modules, before applying them to building React class and function components. It then covers routing with React Router, including route parameters, nested routes and lazy loading, followed by advanced TypeScript types such as unions, guards and generics. Common component patterns, form handling and validation are covered next, followed by state management with Redux and the useReducer hook. The course closes with interacting with RESTful APIs using fetch and axios.

WHO THIS COURSE IS FOR

Front-End Developers

React Developers

TypeScript Developers

Web Developers

UI Engineers

LEARNING OBJECTIVES

- Explain the benefits and basic types of TypeScript
- Build class and function components in React with TypeScript
- Configure routing with React Router, including nested and lazy routes
- Apply advanced types such as unions, type guards and generics
- Compare common component patterns such as higher-order components
- Implement forms with validation and submission handling
- Manage application state using Redux and useReducer
- Interact with RESTful APIs using fetch and axios

8 Modules, 44 Topics

01

Typescript Basics

TOPICS

Understanding the benefits of Typescript · Understanding Basic Types · Creating interface, type aliases and classes · Structuring code into modules · Configuring compilation · Tuples · The unknown type

02

Getting Started with React and Typescript

TOPICS

Creating a React and Typescript Project · Creating a class component · Handling class component Event · Class component States · Class Component Lifecycle methods · Creating a function component

03

Routing with React Router

TOPICS

- Installing React router with routing
- Declaring routes
- Creating navigation
- Route Parameters
- Handling Not found routes
- Implementing Page redirects
- Query Parameter
- Router Prompts
- Nested Routes
- Lazy loading routes

04

Advance Types

TOPICS

Union Types · Type Guards · Generics

05

Common Pattern

TOPICS

Container and presentational components · Compound components · Render props pattern · Higher-order components

06

Working with Forms

TOPICS

- Creating a form with control component
- Reducing boilerplate code with generic components
- Validating forms
- Form submission

07

React Redux

TOPICS

Principles and Key concepts · Installing Redux ·
Creating actions · Creating a store · Connect our react
app to the store · Managing state with useReducer

08

Interacting with RESTful APIs

TOPICS

Writing asynchronous code · Using fetch · Using
axios with class component · Using axios with
function component

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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