# React with Typescript

## • Typescript Basics

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

## • Getting started with React and typescript

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

#### • Routing with React Router

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

#### • Advance Types

- Union Types
- Type Guards
- o Generics

#### • Common Pattern

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

## • Working with Forms

- o Creating a form with control component
- o Reducing boilerplate code with generic components
- $\circ \quad \text{Validating forms}$
- $\circ$  Form submission

### • React Redux

- o Principles and Key concepts
- o Installing Redux
- $\circ \quad \text{Creating actions} \quad$
- $\circ \quad \text{Creating a store} \\$
- Connect our react app to the store
- o Managing state with useReducer

## • Interacting with RESTful APIs

- Writing asynchronous code
- Using fetch
- o Using axios with class component
- o Using axios with function component