### **Day 1. Basics of React**

* **What is Component**
* **Component Syntax**
* **Creating First Component**
* **Components Challenges**
* **Multiple Components**
* **Multiple Components Challenge**

### **Day 2. JSX in React**

* **What is JSX**
* **Writing JSX**
* **JSX Challenges**
* **JSX Rules**
* **JSX Rules Challenge**
* **Expressions in JSX**
* **Embedding Dynamic Content**
* **Embedding Dynamic Content Challenge**
* **Lists in React.js**
* **Rendering Lists of Data**
* **Rendering Lists of Data Challenges**

### **Day 3. Props in React**

* **What are Props in React.js**
* **Props in Action**
* **Props Challenges**
* **Children Props**

### **Day 4. Conditional Rendering**

* **What is Conditional Rendering in React**
* **Conditional Rendering in Action**
* **Conditional Rendering Challenges**

### **Day5. Styling in React**

* **Let’s Talk About Styling**
* **Styling Challenges**

### **Day 6. Events and State in React**

* **What are Events in React.js**
* **State & Hooks Introduction**
* **State in Action**
* **Passing Function to useState**
* **useState Challenges**

### **Day7. React Portals**

* **What is React Portal**
* **React Portal in Action**

### **Day8. Keys in React**

* **Advanced Keys**

### **Day9. useEffect Hook**

* **What is useEffect**
* **useEffect in Action**
* **useEffect Challenges**

### **Day 10. Prop Drilling and Context API**

* **What is Prop Drilling**
* **Prop Drilling in Action**
* **What is Context API**
* **Context API in Action**
* **What is useContext Hook**
* **useContext Challenge**

### **Day 11. useReducer Hook**

* **What is useReducer**
* **useReducer in Action**
* **useReducer Hook Challenges**

### **Day 12. useRef Hook**

* **What is useRef**
* **useRef in Action**
* **useRef Challenges**

### **Day13. Custom Hooks**

* **Custom Hooks Introduction**
* **Custom Hooks in Action**

### **Day14. useId Hook**

* **What is useId**
* **useId in Action**

### **Day 15. Beginner Projects**

1. **Beginner Project 1**
2. **Beginner Project 2**
3. **Beginner Project 3**
4. **Beginner Project 4**
5. **Beginner Project 5**
6. **Beginner Project 6**
7. **Beginner Project 7**
8. **Beginner Project 8**
9. **Beginner Project 9**
10. **Beginner Project 10**

### **Day 16. Core TypeScript Concepts**

* Annotations In Depth
* Type Inference
* any Type

### **Day 17. Functions in TypeScript**

* Function Parameter Annotations
* Default Params Values
* Function Return Annotations
* Void Functions
* never Keyword In Depth

### **Day 18. Data Structures in TypeScript**

* Array Types In Depth
* Multi-Dimensional Arrays
* Objects In Depth

### **Day 19. Advanced Type Features**

* Type Aliases
* Optional Properties
* Readonly Property
* Intersection Types
* Union Types
* Literal Types
* Tuples
* Enums

### **Day 20. Object-Oriented Programming (OOP)**

* OOP Concepts
* Interfaces

### **Day 21. Generics and Advanced Features**

* Generics
* Type Narrowing

### **Day 22. Environment Setup and Integrations**

* Amazing Setup for TypeScript
* Declaration Files
* TypeScript with Axios
* TypeScript with Express

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### **Day 23. React with TypeScript**

* **React with TypeScript Setup**
* **Types for Props**
* **Types for Props Challenges**
* **Reusable Types for Components**
* **Reusable Types for Components Challenge**
* **useState Types**
* **useState Types Challenge**
* **useRef, Forms, Events Types**
* **useRef, Forms, Events Types Challenges**
* **Types for Context API**
* **Types for useReducer**
* **Types for useReducer Challenges**
* **Types for useEffect**
* **Types for useEffect Challenge**

### **Day 24. React with CSS Frameworks**

* **React with TailwindCSS**
* **React with DaisyUI**
* **React with Radix UI**
* **React with ShadcnUI**

### **Day 25. React Hook Forms**

* **React Hook Form Setup**
* **React Hook Form Basics**
* **React Hook Form Advanced Project**

### **Day 26. React 19 Features**

* **Welcome to React 19**
* **React 19 Setup**
* **What is USE in React 19**
* **USE for Fetching Data**
* **USE with Context**
* **React 19 Actions**
* **Let’s Write Some Actions**
* **useFormStatus Hook in React 19**
* **useFormStatus in Action**
* **useActionState Hook in React 19**
* **useActionState Hook in Action**
* **useTransition Hook in React 19**

### **Day 27. React with TypeScript Projects**

1. **React with TypeScript Project 1**
2. **React with TypeScript Project 2**
3. **React with TypeScript Project 3**
4. **React with TypeScript Project 4**

### **Day 28. Framer Motion Overview**

* **What is Framer Motion**
* **Framer vs Framer Motion**
* **Framer Motion vs CSS Animations: Pros & Cons**
* **Framer vs Framer Motion in Action**
* **Course Setup**

### **Day 29. Core Animations**

* **Basic Animations**
* **Motion Object in Depth**
* **Transformations in Depth**
* **Transitions in Depth**

### **Day 30. Keyframes**

* **Keyframes in Depth**
* **Keyframes Example 1**
* **Keyframes Example 2**

### **Day 31. Variants and Gestures**

* **Variants in Depth**
* **Building Flipping Card Animation**
* **Gesture Animations**
* **Building Animated Card Animation**
* **Building Animated Gallery Animation**
* **Variants in Gesture Animations**

### **Day 32. Stagger Animations**

* **Stagger Animations in Depth**

### **Day 33. Hooks in Framer Motion**

* **useMotionValue Hook**
* **Building Custom Range Slider Using useMotionValue**
* **useSpring Hook**
* **useTransform Hook in Depth**

### **Day 34. Scroll-Based Animations**

* **Scroll Trigger vs Scroll Driven Animations**
* **whileInView Prop in Depth**
* **useScroll Hook in Depth**
* **useScroll Hook Example 1**
* **useScroll Hook Example 2**

### **Day 35. Day Basic Transition Animations**

* **Basic Transitions**
* **Building Vertical Movement Animation**
* **Spinning Icon**
* **Skewed Transitions Animation**
* **Combined Transformation**
* **Sequential Transformation**
* **Simple Fade/Out Animation**

### **Day 36.Form and Modal Animations**

* **Animated Form Animation**
* **Modal With Transitions**

### **Day 37. Intermediate Animations**

* **Animated Accordion**
* **Animated Notification Toast**
* **Bouncing Ball Animation**
* **Pulsating Effect**
* **Color Change Square**
* **Sliding Text Animation**
* **Zigzag Animation**
* **Wave Effect Animation**
* **Background Color Changer Animation**
* **Fade Component**

### **Day 38. Advanced Animations**

* **Navigation Menu With Slide Animation**
* **Tooltip with Variants**
* **Toggle Switch Animation**
* **Swipeable Card Animation**
* **Draggable Box Animation**
* **Rotate on Drag**
* **Tap to Change Color**
* **Long Press to Change Size**
* **Gesture-Based Image Gallery**
* **Staggered List Animation**
* **Staggered Image Gallery**
* **Staggered Button Press**
* **Staggered Grid Layout**
* **Staggered Text Reveal**
* **Hover Linked Scale**
* **Spring Animated Position**
* **Dynamic Rotation**
* **Converting to useSpring**
* **Staggered Fade and Slide-In Animation**
* **Card Flip Animation**
* **Complex Transition Animation**
* **Interactive Hover In View Animation**

### **Day 39. Projects**

* **Projects Setup**
* **Scroll Indicator**
* **Loader**
* **Draggable Card**
* **Carousel**
* **Advanced Sidebar**
* **Scroll Carousel**
* **Sticky Navigation**
* **Progress Steps**

### **Day 40. State Management with Zustand**

* **What is Zustand**
* **Zustand Setup**
* **Store in Action**
* **Accessing Data From Store**

### **Day 41. Project-Based Animations**

1. **Recipe Book**
2. **Expense Tracker**
3. **Password Generator**
4. **Seafood Recipes**
5. **Form Builder**
6. **Todo List**
7. **Advanced Notes Project**
8. **Advanced Lists Project**
9. **Advanced Watch Store Project**

### **Day 42. Redux Toolkit**

* **Redux Toolkit**
* **Redux Toolkit Query (RTK Query)**

### **Day 43. Introduction to Design Patterns**

* **Overview of what design patterns are and why they're important.**
* **Setting up the environment for working with design patterns.**

### **Day 44. Component-Based Design Patterns**

* **Layout-based design patterns, including Split Screen and List of Data.**
* **Challenges to practice implementing these patterns.**
* **Modal design pattern overview and implementation.**

### **Day 45. Container Component Design Pattern**

* **Theory behind container components and their advantages.**
* **Practical examples of implementing container components.**
* **Refactoring existing code to improve maintainability.**
* **Challenges to apply the container component pattern.**

### **Day 46. Controlled vs Uncontrolled Components**

* **Theoretical comparison of controlled vs uncontrolled components.**
* **Implementation of both patterns in real-world scenarios.**
* **Challenges to practice this concept.**

### **Day 47. Higher-Order Components (HOC)**

* **Understanding higher-order components and their use cases.**
* **Practical examples of implementing HOCs.**
* **Challenges to solidify learning.**

### **Day 48. Custom Hooks**

* **Introduction to custom hooks and their benefits.**
* **Building various custom hooks like useFetch, useForm, useLocalStorage, and useModal.**
* **Challenges to apply custom hooks in practical scenarios.**

### **Day 49. Factory Design Pattern**

* **Explanation of the factory design pattern.**
* **Examples demonstrating its usage in different contexts.**
* **Challenges to practice building factory patterns.**

### **Day 50. Compound Component Design Pattern**

* **Understanding the compound component pattern and when to use it.**
* **Implementation in practical scenarios.**
* **Challenges for applying the compound component pattern.**

### **Day 51. Slots Design Pattern**

* **Comprehensive guide to the slots design pattern, its theory, and application.**

### **Day 52.Render Props Design Pattern**

* **Explanation and implementation of the render props design pattern.**
* **Challenges to practice using this pattern.**

### **Day 53. Tanstack Query**

* **Introduction to Tanstack Query and its setup.**
* **Exploring core concepts like deduplication, stale vs fresh data, refetch intervals, and more.**
* **Using key hooks like useQuery, useQueries, and useMutation.**
* **Handling advanced topics like pagination with Tanstack Query.**

### **Day 54. Testing**

* **Overview of automated testing, its types, and frameworks.**
* **Setting up a testing environment and writing basic tests.**
* **Advanced testing techniques like the AAA pattern, parameterized testing, and boundary testing.**
* **Writing tests for various utilities like math, strings, arrays, and objects.**
* **Challenges for practicing testing concepts.**

### **Day 55. Test-Driven Development (TDD)**

* **Theory and practical implementation of TDD.**

### **Day 56. Testing Strategies**

* **Understanding matchers, positive/negative testing, and boundary testing.**
* **Parameterized testing and testing asynchronous code.**

### **Day 57. React Testing**

* **Setting up testing for React applications.**
* **Writing tests for components with props and lists.**
* **Using tools like getByRole and screen object methods.**
* **Exploring various query methods (get, find, query) for React testing.**

**Now You are a Frontend Developer and you are able to :**

1. **Build Any UI: Create modern, interactive, and responsive user interfaces for web apps.**
2. **Master React & TypeScript: Write scalable, maintainable, and bug-free code with advanced concepts.**
3. **Handle State: Use tools like Redux Toolkit and Zustand for managing complex app states.**
4. **Add Animations: Use Framer Motion to create professional animations and interactions.**
5. **Test Applications: Ensure app reliability with unit, integration, and React testing.**
6. **Follow Best Practices: Apply design patterns and optimize for real-world projects.**
7. **Be Job-Ready: You'll be qualified to work as a frontend developer or freelancer.**