

React.js 30 Days Roadmap & Free Learning Resource

Days 1-7: Introduction and Fundamentals

Day 1: Introduction to React.js

- What is React.js?
- Setting up a development environment
- Creating a basic React app

Day 2: JSX and Components

- Understanding JSX
- Creating functional components
- Using props to pass data

Day 3: State and Lifecycle

- Component state
- Lifecycle methods (componentDidMount, componentDidUpdate, etc.)
- Updating and rendering based on state changes

Day 4: Handling Events

- Adding event handlers
- Updating state with events
- Conditional rendering

Day 5: Lists and Keys

- Rendering lists of components

- Adding unique keys to components
- Handling list updates efficiently

Day 6: Forms and Controlled Components

- Creating forms in React
- Handling form input and validation
- Controlled components

Day 7: Conditional Rendering

- Conditional rendering with if statements
- Using the && operator and ternary operator
- Conditional rendering with logical AND (&&) and logical OR (||)

Days 8-14: Advanced React Concepts

Day 8: Styling in React

- Inline styles in React
- Using CSS classes and libraries
- CSS-in-JS solutions

Day 9: React Router

- Setting up React Router
- Navigating between routes
- Passing data through routes

Day 10: Context API and State Management

- Introduction to the Context API

- Creating and consuming context
- Global state management with context

Day 11: Redux for State Management

- What is Redux?
- Actions, reducers, and the store
- Integrating Redux into a React application

Day 12: React Hooks (useState, useEffect, etc.)

- Introduction to React Hooks
- useState, useEffect, and other commonly used hooks
- Refactoring class components to functional components with hooks

Day 13: Error Handling and Debugging

- Error boundaries
- Debugging React applications
- Error handling best practices

Day 14: Building and Optimizing for Production

- Production builds and optimizations
- Code splitting
- Performance best practices

Days 15-21: Working with External Data and APIs

Day 15: Fetching Data from an API

- Making API requests in React

- Handling API responses
- Async/await in React

Day 16: Forms and Form Libraries

- Working with form libraries like Formik or React Hook Form
- Form validation and error handling

Day 17: Authentication and User Sessions

- Implementing user authentication
- Handling user sessions and tokens
- Securing routes

Day 18: State Management with Redux Toolkit

- Introduction to Redux Toolkit
- Creating slices
- Simplified Redux configuration

Day 19: Routing in Depth

- Nested routing with React Router
- Route guards and authentication
- Advanced route configuration

Day 20: Performance Optimization

- Memoization and useMemo
- React.memo for optimizing components
- Virtualization and large lists

Day 21: Real-time Data with WebSockets

- WebSockets for real-time communication
- Implementing chat or notifications

Days 22-30: Building and Deployment

Day 22: Building a Full-Stack App

- Integrating React with a backend (e.g., Node.js, Express, or a serverless platform)
- Implementing RESTful or GraphQL APIs

Day 23: Testing in React

- Testing React components using tools like Jest and React Testing Library
- Writing unit tests and integration tests

Day 24: Deployment and Hosting

- Preparing your React app for production
- Deploying to platforms like Netlify, Vercel, or AWS

Day 25-30: Final Project

- Plan, design, and build a complete React project of your choice, incorporating various concepts and tools you've learned during the previous days.

This roadmap provides a comprehensive overview of React.js, from the fundamentals to more advanced topics.