

■ React.js Complete Roadmap (Basics to Advanced)

1. React Basics

- What is React?
- Why React?
- Single Page Applications (SPA)
- JSX (JavaScript XML)
- Functional Components
- Props (data passing)
- useState Hook
- Event Handling
- List Rendering (.map)
- Conditional Rendering (ternary, &&)
- Forms (controlled/uncontrolled)

2. Intermediate React

- useEffect Hook
- Lifting State Up
- Component Communication
- React Router (react-router-dom)
- Route Parameters and Query Params
- Controlled Forms & Form Validation
- Basic Folder Structure

3. React with APIs & State

- Fetching data with fetch/axios
- Handling Loading & Error states
- Global State using Context API
- Global State using Redux Toolkit (optional)
- LocalStorage usage
- Data Sync with useEffect

4. Advanced React

- useRef Hook
- Custom Hooks
- useMemo and useCallback
- Code Splitting with React.lazy() & Suspense
- Error Boundaries
- React Performance Optimization

5. Integration & Real-World Tools

- Axios + REST API Integration
- JWT Authentication + Protected Routes

- File Upload with React (image upload)
- React Query (data fetching & caching)
- Form Libraries (react-hook-form / Formik)
- Chart Libraries (Chart.js / ApexCharts)

6. Testing & Deployment

- React Testing Library (RTL)
- Unit Testing with Jest
- Environment Variables (.env)
- Deploying React App on Vercel/Netlify
- Basic CI/CD Concepts

7. Bonus Topics (Projects & Patterns)

- E-commerce UI
- Inventory Dashboard with Filters & Charts
- Login/Auth System with Dashboard
- User Directory with Pagination & Search
- Dark/Light Mode Toggle
- Responsive Design with TailwindCSS
- Pagination, Filtering, Sorting Patterns

8. Optional / Expert Topics

- React + Redux Toolkit (Advanced State)
- TypeScript with React
- React Native Basics
- React DevTools and Profiler
- Server Components (Next.js 14+)
- React with Websockets (Socket.IO)