

course SD-FER-001 React

Day	Subject	Topics to be Covered
Day 1	Introduction to HTML (Part 1)	Basic HTML structure, Doctype, Meta tags, HTML elements, HTML attributes, HTML comments
Day 2	Introduction to HTML (Part 2)	Introduction to style tags, Header, Span, Paragraph, HTML ID, Tags
Day 3	Formatting HTML Page (Part 1)	Text formatting, Adding Web links and images
Day 4	Formatting HTML Page (Part 2)	Inline and external styling
Day 5	Creating Tables and Forms (Part 1)	Introduction to tables and forms, use cases of tables and forms
Day 6	Creating Tables and Forms (Part 2)	Table implementation, <td>, <th>, <td> tags, integration of input fields in forms, collecting data on form submission
Day 7	Create a Simple Web Page	Creating a simple web page, implementation of required tags and styling
Day 8	Introduction of React (Part 1)	Advantages of using React, client-server architecture, single page apps
Day 9	Introduction of React (Part 2)	Examples of whole app reloading vs single component render, re-renderings
Day 10	Environment Setup	NPM vs NPX vs Yarn, installation of dependencies and node modules
Day 11	Understanding Real and Virtual DOM	Introduction to DOM, working and benefits of virtual DOM
Day 12	Introduction to Event Loop	Understanding event loop mechanism
Day 13	JavaScript (ES6) Basics (Part 1)	Let, Const, Var keywords, their scopes with examples
Day 14	JavaScript (ES6) Basics (Part 2)	Functions, Arrow functions, Pass by value and reference, parameters and arguments passing with examples

Day 15	JavaScript (ES6) Basics (Part 3)	Spread operator, use cases and comparison with concat with examples
Day 16	JavaScript (ES6) Basics (Part 4)	For/of, Map Objects, Promises
Day 17	JavaScript (ES6) Basics (Part 5)	Promises, String.includes(), String.startsWith(), String.endsWith(), Object entries, Array.from()
Day 18	Create Your First React Application (Part 1)	Creating functional components, introduction to JSX
Day 19	Create Your First React Application (Part 2)	Introduction to folder structure, package.json, index.html, App.js, global CSS
Day 20	Understanding Props and State (Part 1)	What are props? How to pass data with props?
Day 21	Understanding Props and State (Part 2)	What is state? How to update a component's state?
Day 22	Understanding Props and State (Part 3)	State changes impact, using state in every component
Day 23	Event Handling in React (Part 1)	Introduction to events and event handlers, Mouse events (onClick, onDrag)
Day 24	Event Handling in React (Part 2)	Keyboard events (onKeyDown, onKeyPress, onKeyUp), Focus events (onFocus, onBlur)
Day 25	Destructuring in JavaScript	Introduction to destructuring techniques
Day 26	Conditional Rendering in React	Introduction to conditional rendering with examples
Day 27	Lists and Keys in React	Introduction to lists and keys with examples
Day 28	Forms and Controlled Components (Part 1)	Introduction to controlled and uncontrolled components, DOM and useState handling, understanding of component re-rendering using useState
Day 29	Forms and Controlled Components (Part 2)	Data flow and form handling using useState with examples

Day 30	Forms and Controlled Components (Part 3)	Field validation, error messages, implementation of regex for validation using useState
Day 31	Forms and Controlled Components (Part 4)	Recap on HTML forms, onSubmit event handling, validation messages
Day 32	Forms and Controlled Components (Part 5)	Form handling using React Hook Form library
Day 33	Component Lifecycle (Part 1)	Introduction to component lifecycle: Initialization, Mounting, Updating, Unmounting
Day 34	Logical Operators in JSX	Implementation of logical operators in JSX components
Day 35	Introduction to Hooks (Part 1)	What is hook, introduction to useState() hook with examples
Day 36	Introduction to Hooks (Part 2)	Introduction to useEffect() hook, execution steps, dependency, implementation with examples
Day 37	Introduction to Hooks (Part 3)	useRef() implementation, elements access levels with examples
Day 38	Introduction to Hooks (Part 4)	useCallback(), useMemo() implementation, resolving re-renders using these hooks
Day 39	Introduction to Hooks (Part 5)	Introduction to useContext(), implementation of global provider on routes with examples
Day 40	Custom Hooks in React	Creating custom hooks, implementation with examples, passing props and its handling
Day 41	React Router Dom (Part 1)	Introduction to React Router Dom library, installation, routing, implementation with simple examples
Day 42	React Router Dom (Part 2)	Implementation of nav bar with route switching, React Router API: <Router>, <Link>, <Route>
Day 43	React Router Dom (Part 3)	Component switching, dynamic variables passing using useParams, states, nested routes, setting default route, with examples

Day 44	React Context API (Part 1)	Introduction to React Context, components and props in react, prop drilling
Day 45	React Context API (Part 2)	Use cases of React Context API, Redux vs. React Context API, React Context with functional components
Day 46	Working with APIs (Part 1)	Introduction to APIs, understanding API workflow with client-server communication, introduction to AXIOS, API endpoints
Day 47	Working with APIs (Part 2)	Implementation of CRUD operations with 3rd party dummy APIs, handling error messages, understanding then(), catch() cases
Day 48	Working with APIs (Part 3)	Promises, implementation of resolve(), reject(), handling API response data and displaying contents in UI, implementation of loading states
Day 49	Async/Await in JavaScript	Introduction to async/await keywords, implementation with API calls
Day 50	Try-Catch Statements in JavaScript	Working with try, catch, finally, throw blocks, error handling

Day 51	Error Boundaries in React	Introduction to error boundaries, how to handle errors using Error Boundaries in React
Day 52	Higher-Order Components in React	Understanding Higher-Order Components (HOCs), use cases of HOCs, implementation with examples
Day 53	Rendering Optimization (Part 1)	Understanding of unnecessary rendering, memo() hook, useMemo() and useCallback() hooks with examples
Day 54	Rendering Optimization (Part 2)	Code splitting, lazy loading implementation with examples
Day 55	React Suspense and Concurrent Mode (Part 1)	Introduction to React Suspense and Concurrent mode, use cases and benefits
Day 56	React Suspense and Concurrent Mode (Part 2)	Implementing fallbacks and suspense with lazy loaded components

Day 57	Deployment (Part 1)	Introduction to Git, GitHub, commands of Git, pushing local repository to GitHub
Day 58	Deployment (Part 2)	Introduction to Heroku and Netlify, deployment process on these platforms, dealing with common errors during deployment
Day 59	Introduction to Redux (Part 1)	Why Redux, basic concepts of Redux, understanding the flow of Redux
Day 60	Introduction to Redux (Part 2)	Actions, Reducers, Store in Redux
Day 61	Introduction to Redux (Part 3)	Middleware in Redux, Thunk Middleware, API calls with Thunk
Day 62	Redux with React	Introduction to react-redux library, how to connect Redux with a React application
Day 63	Testing in React (Part 1)	Introduction to Jest, installation of Jest, understanding how Jest works, writing simple tests with Jest
Day 64	Testing in React (Part 2)	Introduction to Enzyme, installation of Enzyme, shallow rendering, full rendering, snapshot testing
Day 65	Testing in React (Part 3)	Mocking in Jest, testing async code, running tests in CI/CD
Day 66	Review and Q&A	Recap of the entire course, answering questions, providing resources for further learning