



Introduction to React.js

What is React?

- ▶ React is a JavaScript library for building user interfaces.
- ▶ Developed and maintained by Facebook (now Meta).
- ▶ Used to create fast, interactive, and scalable front-end applications.
- ▶ Focuses on component-based architecture.

React vs React.js

- ▶ React and React.js are the same – React.js is the official name.
- ▶ Commonly referred to as React.
- ▶ It is not a framework, but a library.
- ▶ Often combined with other tools to create full applications.

History of React.js

- ▶ Created by Jordan Walke, a software engineer at Facebook.
- ▶ First deployed on Facebook's News Feed in 2011.
- ▶ Open-sourced in May 2013.
- ▶ React Native (for mobile apps) was introduced in 2015.
- ▶ Has become one of the most popular front-end libraries today.

Benefits of React.js

- ▶ Component-based architecture.
- ▶ Virtual DOM improves performance.
- ▶ Reusable components save development time.
- ▶ Strong community support.
- ▶ Easy to integrate with other frameworks.
- ▶ SEO-friendly compared to other libraries.

Features of React.js

- ▶ JSX (JavaScript XML) – allows HTML in JavaScript.
- ▶ Virtual DOM – efficient UI updates.
- ▶ One-way data binding.
- ▶ Component-based structure.
- ▶ Large ecosystem of tools and libraries.
- ▶ Strong developer community.

Why Need Node.js Before React.js Installation?

- ▶ Node.js provides the runtime to execute JavaScript outside the browser.
- ▶ Required for React development tools (npm or yarn).
- ▶ Helps in managing dependencies and running local development servers.
- ▶ React itself does not require Node.js, but development setup does.

React.js Installation (Step by Step)

- ▶ 1. Install Node.js and npm (Node Package Manager).
- ▶ 2. Open terminal/command prompt.
- ▶ 3. Run: `npx create-react-app my-app`
- ▶ 4. Navigate to project folder: `cd my-app`
- ▶ 5. Start development server: `npm start`
- ▶ 6. Open browser at `http://localhost:3000`

First Hello World Program in React.js

- ▶ Inside App.js file:
 - ▶ `function App() {`
 - ▶ `return (`
 - ▶ `<div>`
 - ▶ `<h1>Hello World!</h1>`
 - ▶ `</div>`
 - ▶ `);`
 - ▶ `}`
- ▶ `export default App;`