

History of React

- **Created by:** Facebook
- **Initial Release:** 2013
- **Original Purpose:** To improve Facebook's newsfeed performance
- **Current Usage:** Widely adopted for building user interfaces, particularly single-page applications

What is React?

- React is a JavaScript library for building user interfaces.
- It's used for creating reusable UI components.
- React is maintained by Facebook and is widely used in the industry.

Key Features and Benefits

- **Component-Based:** Build encapsulated components that manage their own state
- **Declarative:** Describe what you want, and React will handle the updates
- **Reusable Components:** Write once, use anywhere
- **Large Ecosystem:** Many libraries and tools available
- **JSX:** A syntax extension for JavaScript that allows you to write HTML-like code in your JavaScript files.
- **State:** The data that changes within a component.
- **Props:** Short for "properties", props are immutable values passed from a parent component to a child component.
- **Virtual DOM:** A lightweight in-memory representation of the real DOM, used for efficient rendering.

Setting up a Development Environment

1. **Node.js and npm:**
 - 1.1. **Download:** [Node.js Download](#)
 - 1.2. Ensure Node.js and npm are installed
2. Two method to create react app:
 - 2.1. **Create React App:**

Run command in terminal **npx create-react-app my-app**

Navigate to the project folder: **cd my-app**

Start Development Server:

Run **npm start**

Open `http://localhost:3000` in a browser

OR

2.2. Using Vite:

Run **npm create vite@latest**

Enter project name i.e my-app

Navigate to the project folder: `cd my-app`

Install dependencies: **npm install**

Start Development Server:

Run **npm run dev**

Open `http://localhost:5173` in a browser