

React Basics – Learning Document

React is a JavaScript library used for building user interfaces, especially single-page applications. It allows developers to create reusable UI components.

Key Concepts of React:

1. **Components:** Components are the building blocks of a React application. They can be functional or class-based and return UI elements.
2. **JSX:** JSX stands for JavaScript XML. It allows developers to write HTML-like code inside JavaScript.
3. **Props:** Props are short for properties. They are used to pass data from one component to another.
4. **State:** State is used to store data that can change over time within a component.
5. **Hooks:** Hooks like `useState` and `useEffect` allow functional components to manage state and lifecycle methods.
6. **Virtual DOM:** React uses a virtual DOM to improve performance by minimizing direct DOM manipulation.

Example:

```
function Hello() {  
  return <h1>Hello, React!</h1>  
}
```

React applications are commonly created using tools like Create React App or Vite.

React is maintained by Meta and has a large ecosystem and community support.