

## **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.