

## React Basics – Introduction

React is a popular JavaScript library used for building user interfaces, especially single-page applications.

React is based on **components**.

A component is a reusable piece of UI that controls its own logic and rendering.

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## Why React?

- Component-based architecture
  - Fast rendering using Virtual DOM
  - Easy state management
  - Strong community support
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## JSX

JSX is a syntax extension for JavaScript.

It allows writing HTML-like code inside JavaScript.

Example:

```
function App() {  
  return <h1>Hello React</h1>;  
}
```

## Props

Props are inputs passed to components.

They allow components to be dynamic and reusable.

Example:

```
function Welcome(props) {
```

```
    return <h2>Hello {props.name}</h2>;  
  }  
}
```

## State

State is used to store data that can change over time inside a component.

Example:

```
const [count, setCount] = useState(0);
```

## Conclusion

React makes building interactive user interfaces easier by breaking the UI into small reusable components and managing data efficiently.