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# Reactjs workshop



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- Web Developer
- AI enthusiast



# Plan and goals :

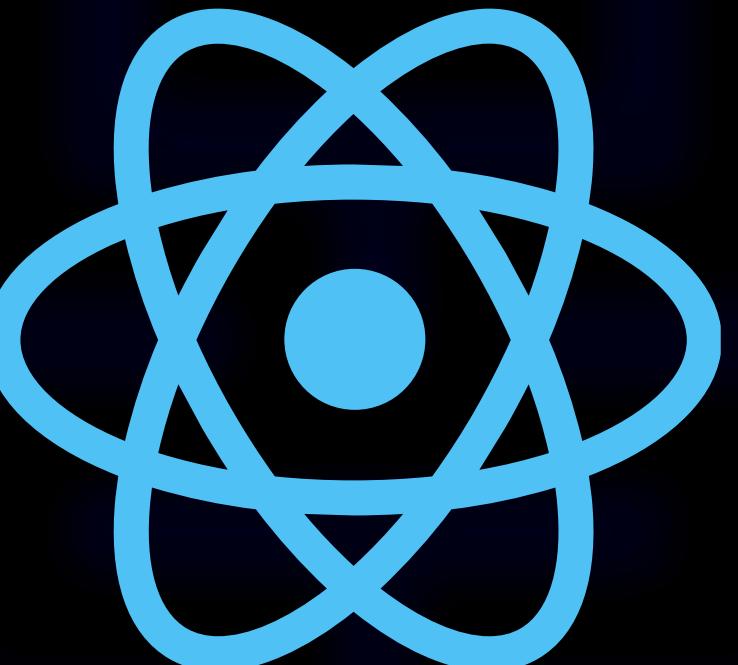
- What is ReactJS
- Why you should learn reactjs
- Get Started with react
- Props
- React hooks
- Event Listeners
- Routing in react
- Fetching API
- Mapping a list

# What is ReactJS:

Open source library for building User Interfaces

It is not a Framework

Component based architecture



# Component Based Architecture:



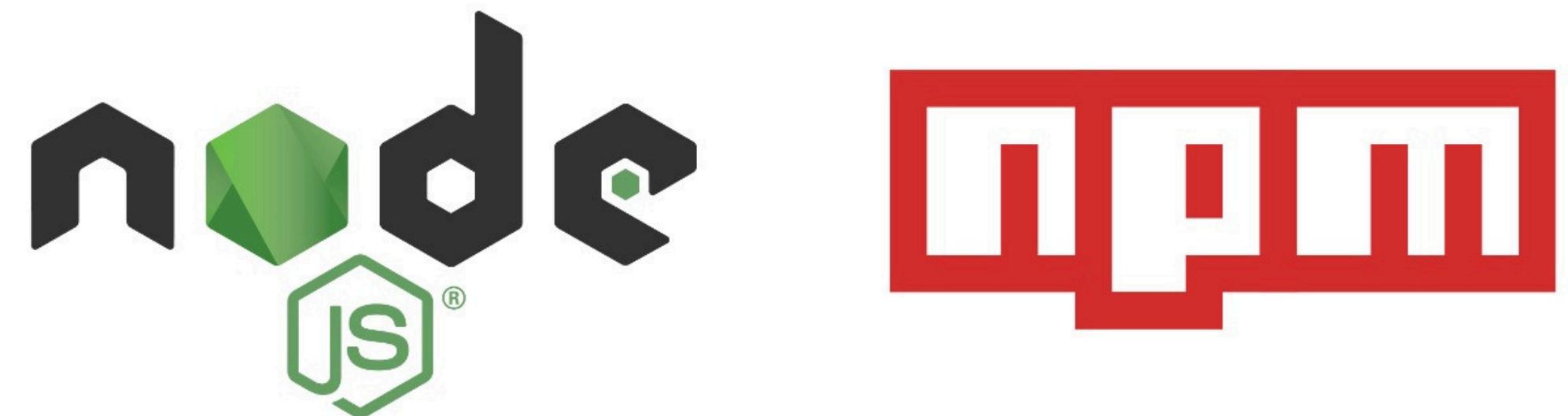
# Why learn React :

- Created and maintained by Facebook
- Huge supportive communities
- In demand Skill
- Simple and direct learning curve

# What you need ?

- prior knowledge in HTML CSS JAVASCRIPT (ES6)
- Nodejs installed in your machines
- Text Editor (VSCode)

# NPM (Node Package manager)



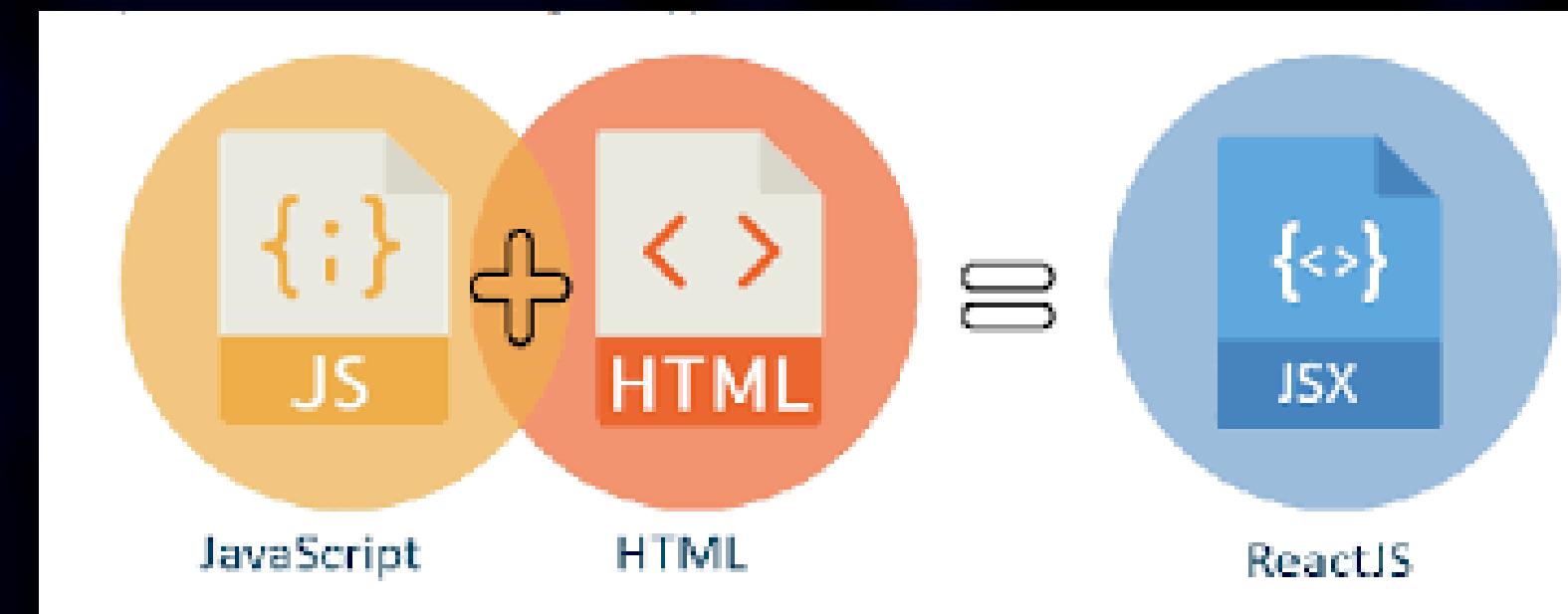
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# JSX (JavaScript XML) :

- Write XML like code for elements and components JSX tag has name , attributs and children JSX makes your react code
- simpler and elegant JSX ultimately transpiles to pure javascript code understood by the browser



# Create React APP:

- to create a reactjs app you need to run these commands :

```
$npx create-react-app my-app  
$cd my-app  
$npm start
```

# Create React APP:

=>However this method is too slow  
better alternative is ...=>

# Vite:



is a build tool that aims to provide a faster and leaner development experience for modern web projects.

We can create our app using this command :

```
$ npm create vite@latest
```

```
$ npm install
```

# Component Based Architecture:



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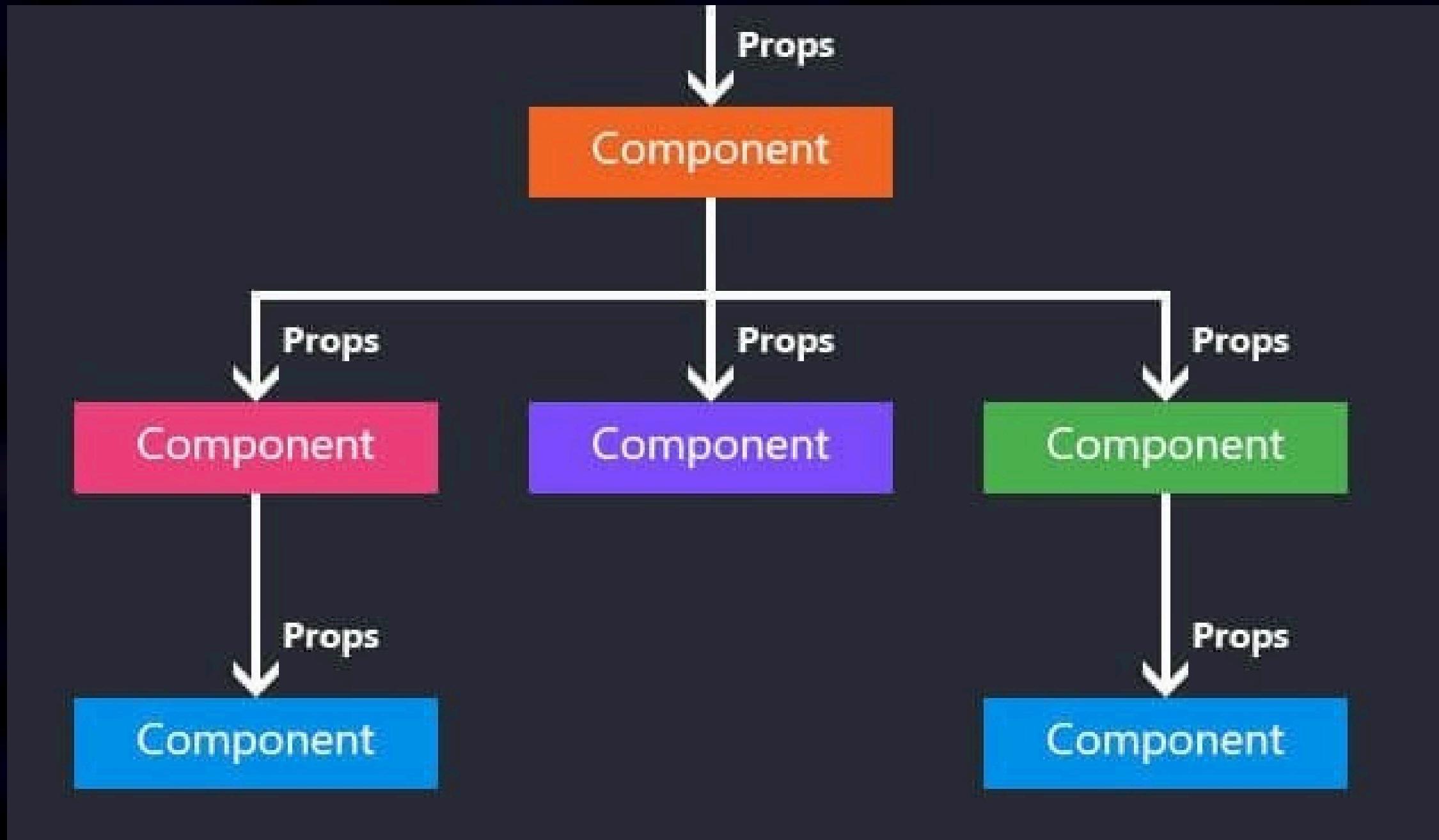
# Props

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# Props

used to pass data from a parent component to a child component.

Props allow components to be dynamic and reusable



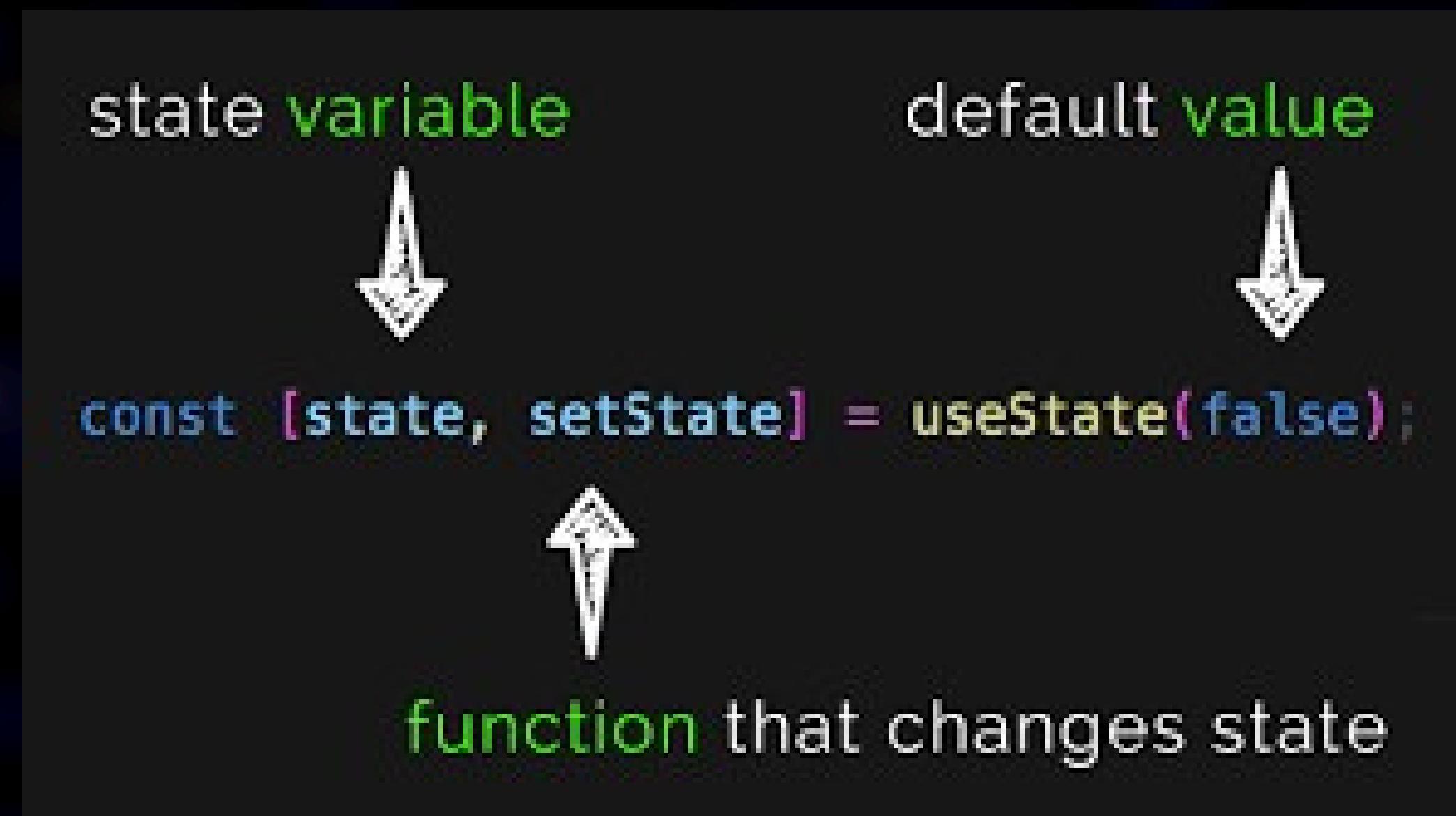
# React Hooks

- Hooks are functions that let you use state and other React features in functional components Introduced in React 16.8
- State is a built-in object in React that allows components to create and manage their own data

# React Hooks

# 1. useState hook:

- The useState hook allows you to add state to functional components.



## 2. useEffect:

- The useEffect hook lets you perform side effects in functional components, such as fetching data or directly interacting with the DOM.

```
useEffect(() => {  
  console.log('all the time');  
}); ← first render AND update
```

```
useEffect(() => {  
  console.log('only once');  
}, []); ← first render ONLY
```

```
useEffect(() => {  
  console.log(`on ${variable} update`);  
}, [variable]); ← update ONLY
```

There are other hooks like:

- useContext
- useReducer
- useLayoutEffect
- useMemo ...





# Event Listeners





Event listeners in React are used to handle events triggered by user interactions, such as clicks, key presses, form submissions...





- OnClick
- OnSubmit
- OnChange
- ...



# Routing

- React Router is a standard library for routing in React.
- It enables the navigation among views of various components in a React application, allows changing the browser URL, and keeps UI in sync with the URL



# Get started with react router dom

- Install react-router-dom using npm:

```
$npm install react-router-dom
```



# Basic Components of React Router

- **BrowserRouter**: A router implementation to keep your UI in sync with the URL.
- **Routes**: A collection of Route components that define how paths match to components.
- **Route**: A component that renders some UI when its path matches the current URL.
- **Link**: A component used to create navigational links.



# Fetching API data

- React provides several ways to fetch data from an API, including the Fetch API and Axios.
- The Fetch API is a built-in JavaScript API for making HTTP requests.





# Fetching API data

- Axios is a popular HTTP client library that simplifies the process of making HTTP requests.

```
$npm install axios
```



# Mapping in React:

- Mapping is a common technique used to render lists of data in React. It involves iterating over an array and returning a new array of JSX elements. This is typically done using the map method.

Thank you for  
attending

