

## REACT INTRODUCTION

# What's in it for you?



What is React?



Why React?



Features of React



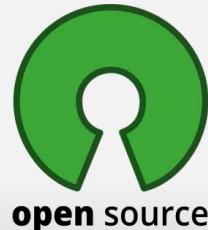
React Pre-requisites



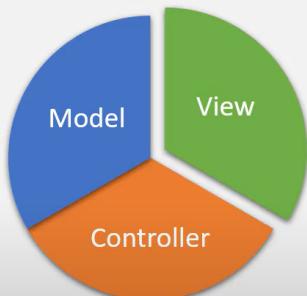
Industry Trends



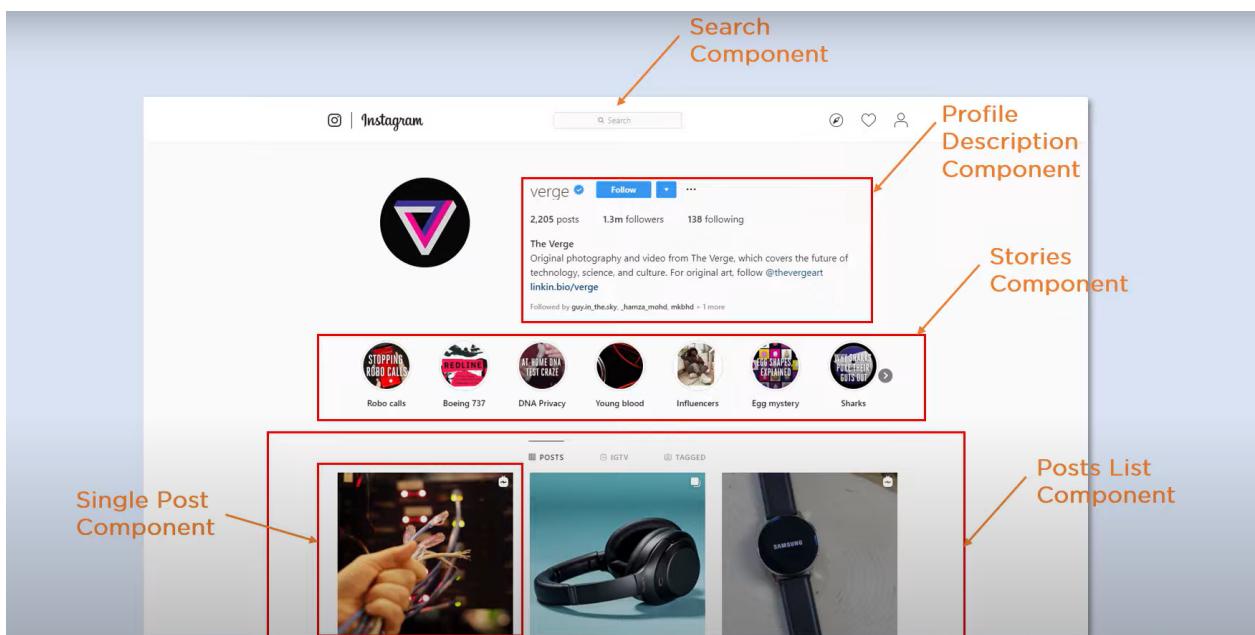
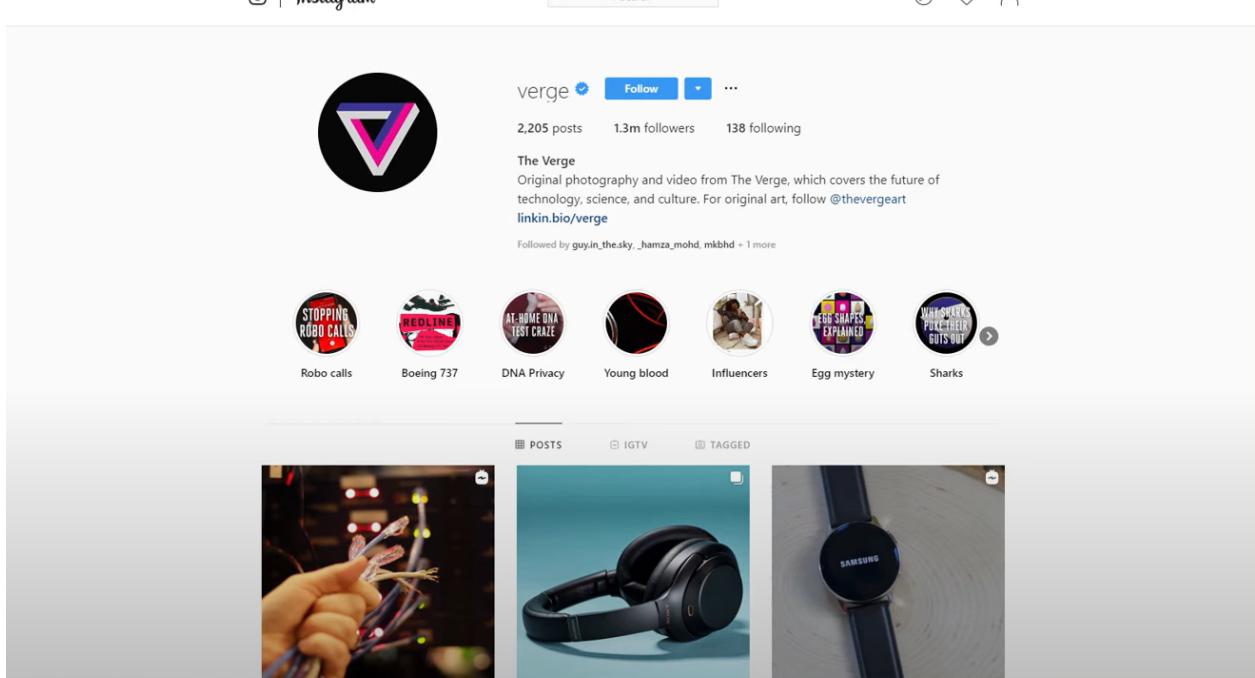
- React is a JavaScript library for building fast and interactive user interfaces for the web as well as mobile applications
- It is an open-source, reusable component-based front-end library
- In a model-view-controller architecture, React is the 'View', which is responsible for how the application looks and feels



- React is a JavaScript library for building fast and interactive user interfaces for the web as well as mobile applications
- It is an open-source, reusable component-based front-end library
- In a model view controller architecture, React is the 'View' which is responsible for how the application looks and feels



- React is a JavaScript library for building fast and interactive user interfaces for the web as well as mobile applications
- It is an open-source, reusable component-based front-end library
- In a model view controller architecture, React is the 'View' which is responsible for how the app looks and feels





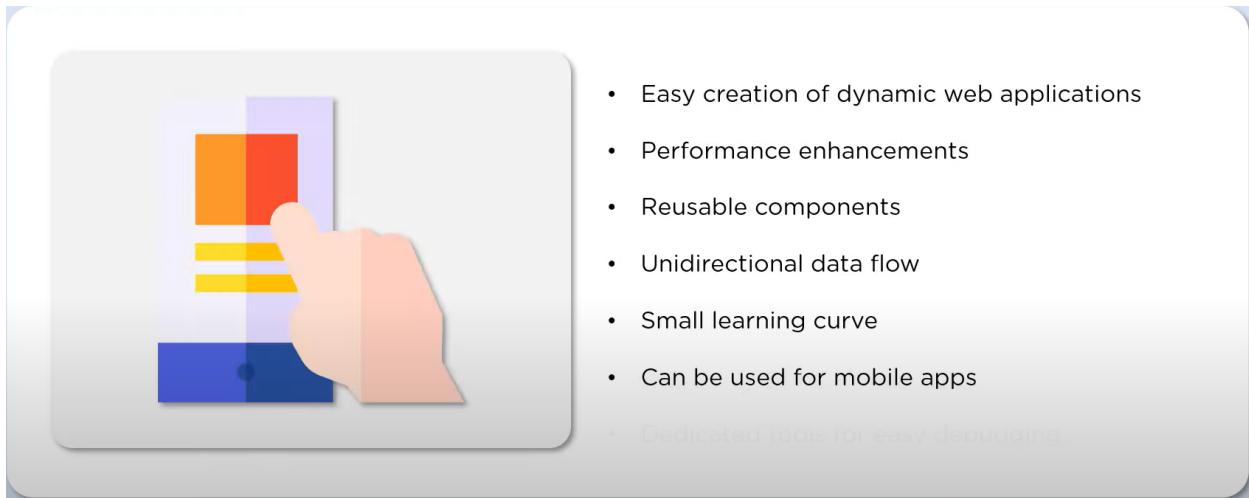
## Why React?



- Easy creation of dynamic web applications
- Performance enhancements
  - Reusable Components
  - Unidirectional data flow
  - Small learning curve
  - Can be used in Mobile apps
  - Dedicated tools for easy debugging



- Easy creation of dynamic web applications
- Performance enhancements
- Reusable components
  - Unidirectional data flow
  - Small learning curve
  - Can be used in Mobile apps
  - Dedicated tools for easy debugging

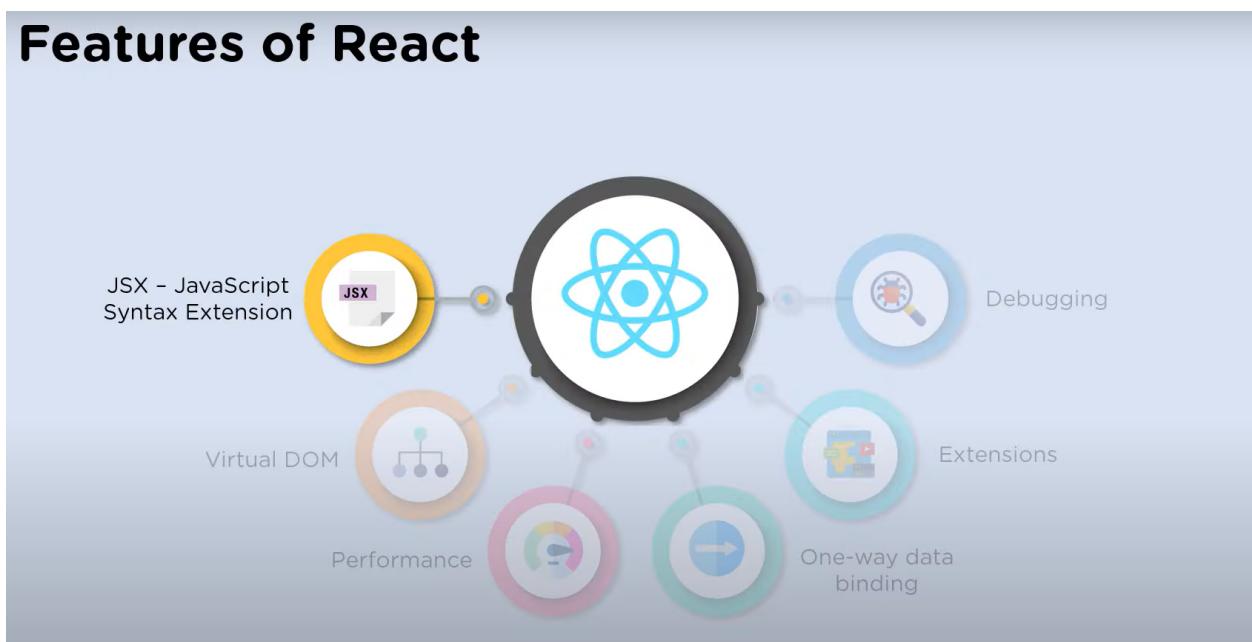


- Easy creation of dynamic web applications
  - Performance enhancements
  - Reusable components
  - Unidirectional data flow
  - Small learning curve
  - Can be used for mobile apps
- Dedicated tools for easy debugging



## Features of React

## Features of React



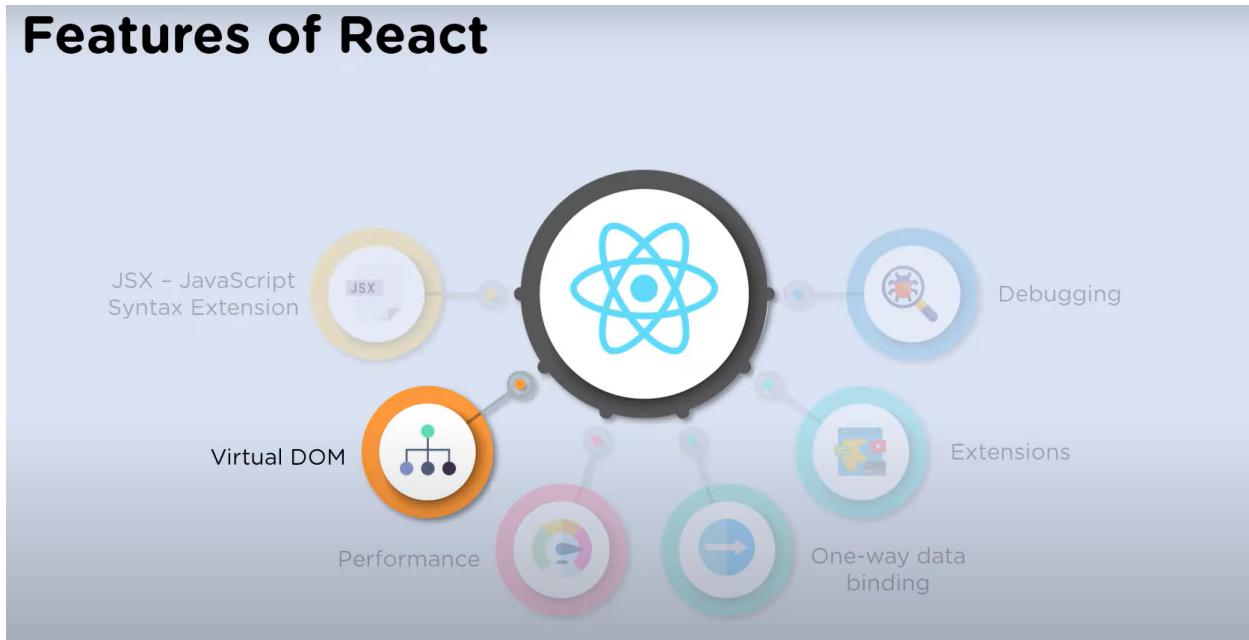
# HTML

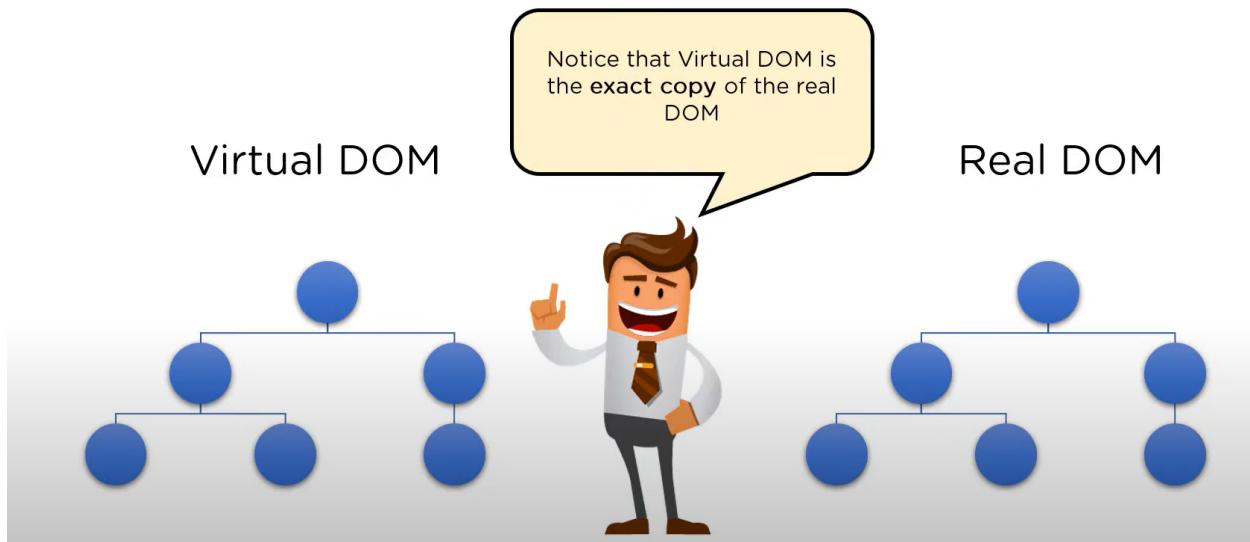
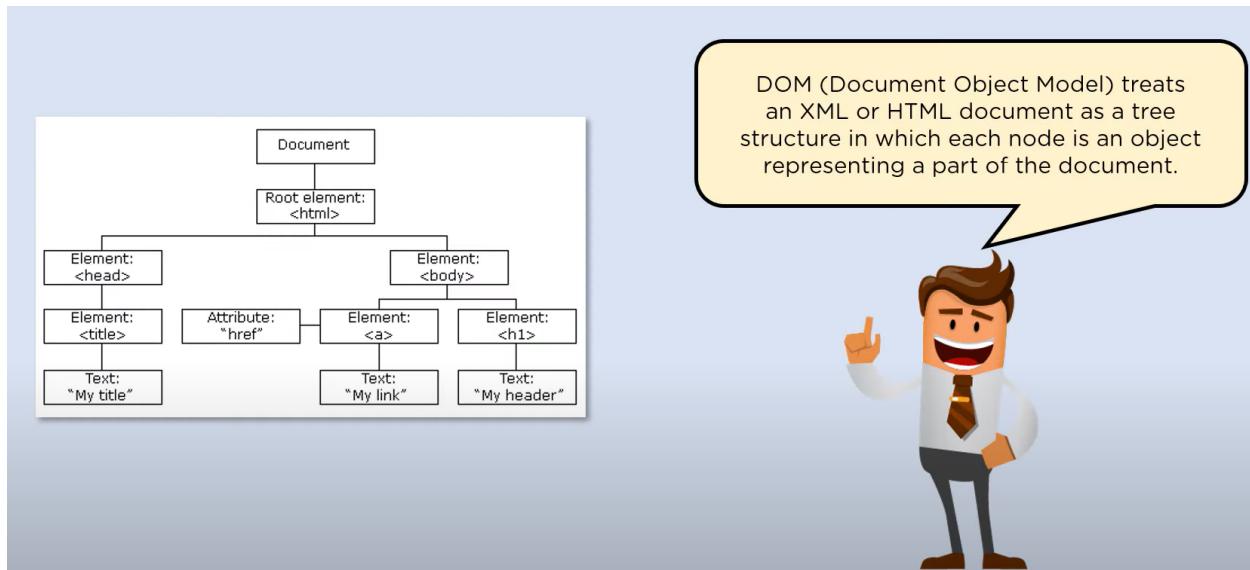
```
const simple = <h1>Hello World!</h1>;
```

## JavaScript

## JavaScript

### Features of React

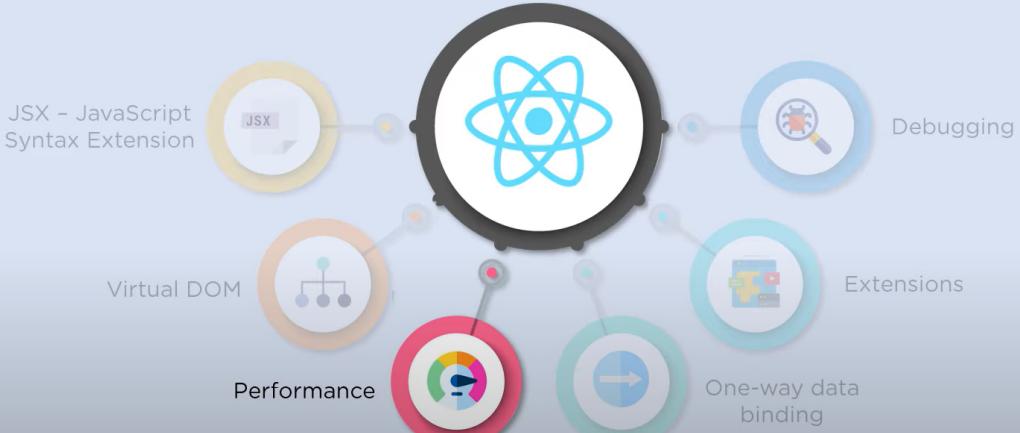




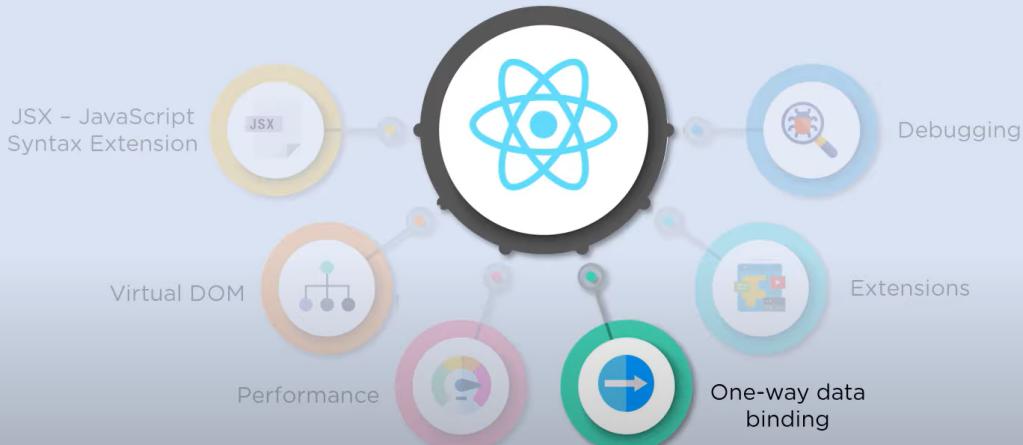
- React keeps a lightweight representation of the Real DOM in the memory, and that is known as the Virtual DOM
- Manipulating Real DOM is much slower than manipulating virtual DOM, because nothing gets drawn onscreen
- When the state of an object changes, Virtual DOM changes only that object in the real DOM instead of updating all the objects

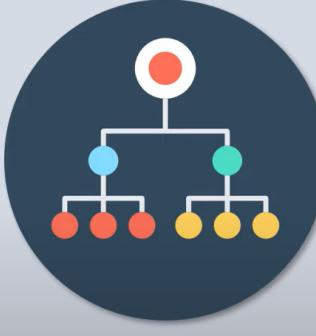


## Features of React



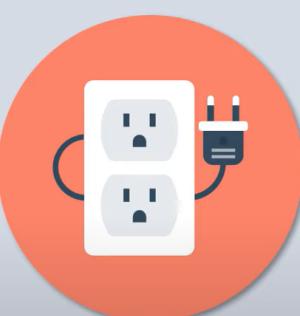
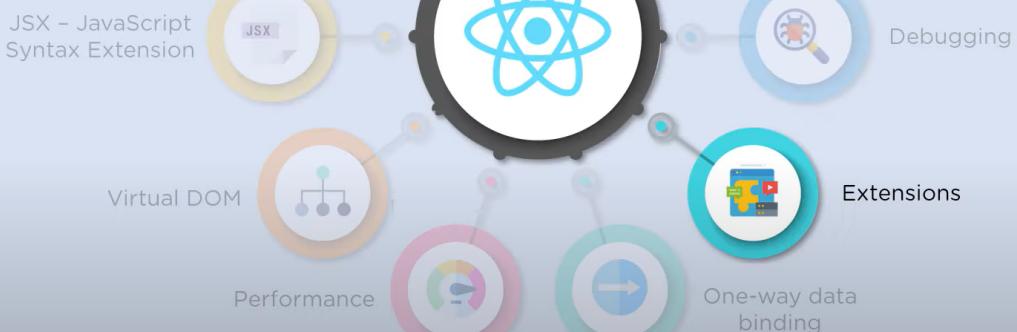
## Features of React





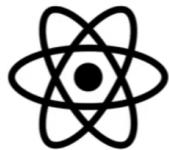
- React's one-way data binding keeps everything modular and fast
- A unidirectional data flow means that when designing a React app you often nest child components within parent components

## Features of React

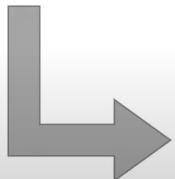


- React goes beyond simple UI and has many extensions for complete application architecture support
- It provides server-side rendering
- Supports mobile app development
- Extended with Flux and Redux, among others

## React Extensions - React Native



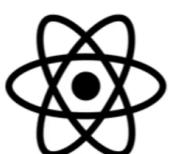
**React Native**



A React Native app is a  
REAL mobile app and NOT  
just a web app running on  
mobile!



## React Extensions - React Native



**React Native**



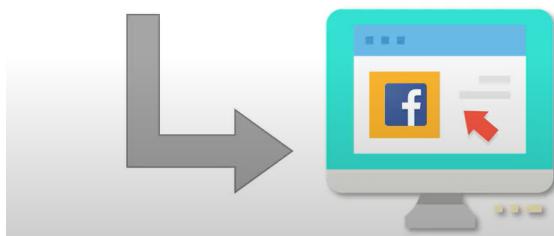
Thousands of apps are using  
React Native, from  
established Fortune 500  
companies to hot new  
startups!



## React Extensions - Flux



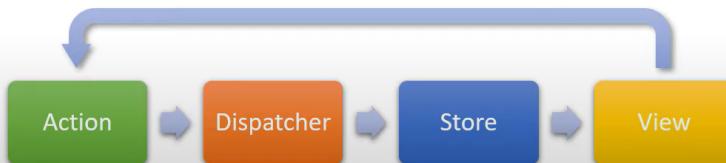
Flux is the application architecture that Facebook uses for building web applications



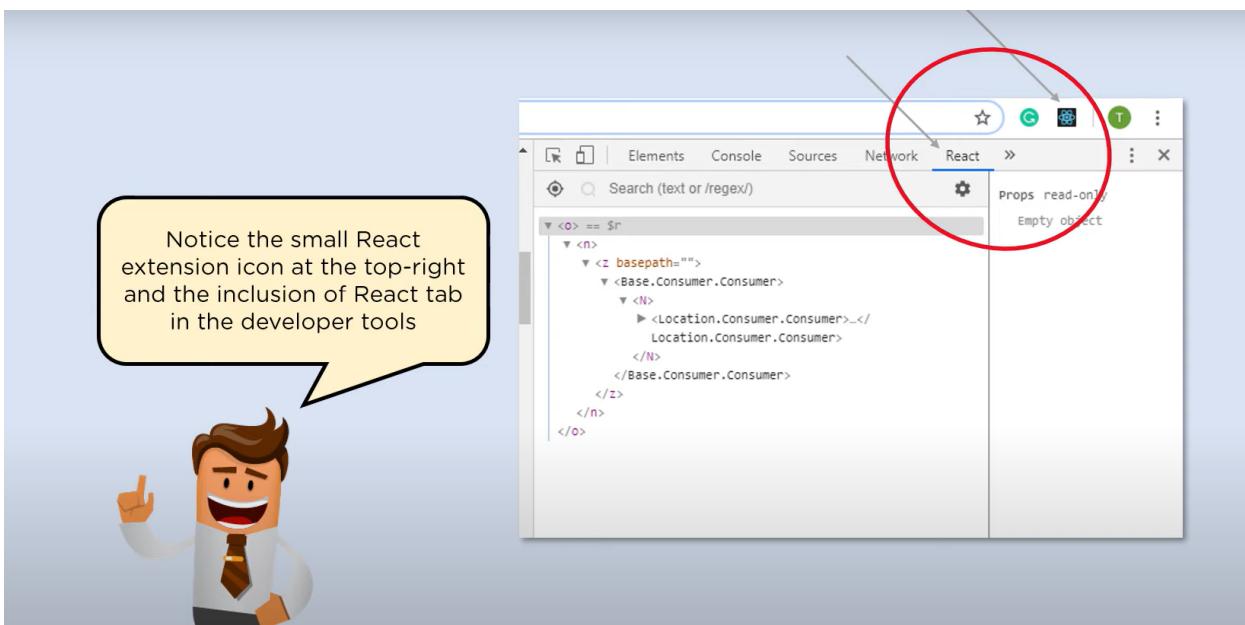
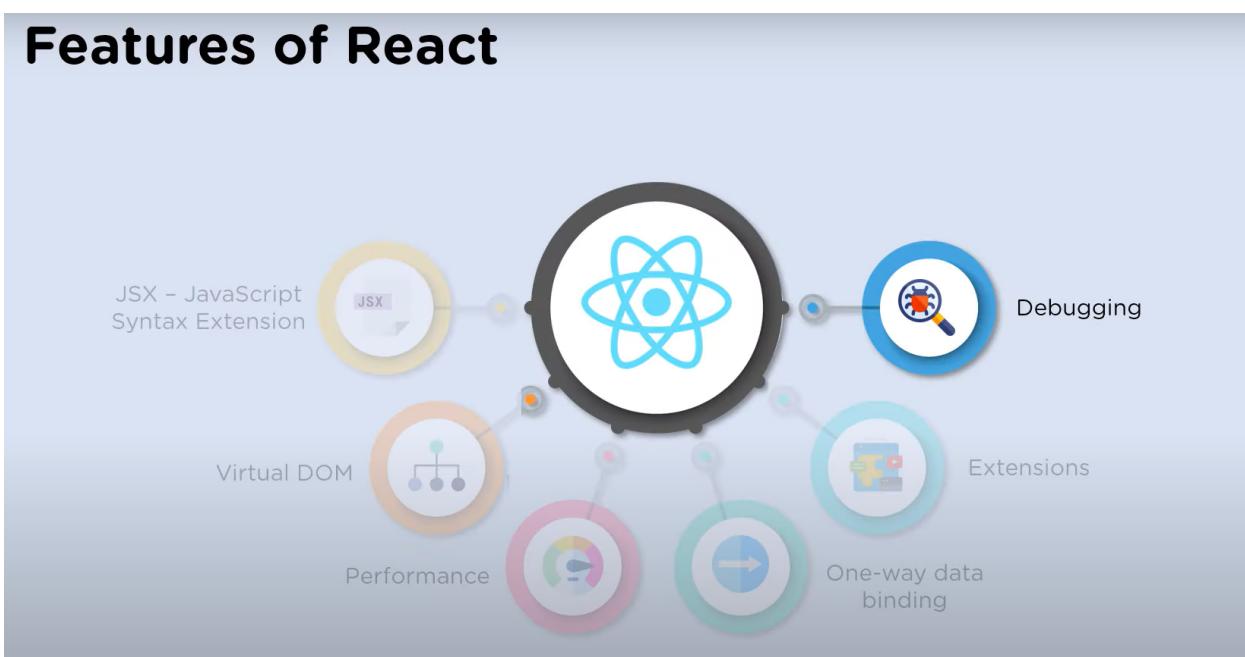
## React Extensions - Flux



Flux implements unidirectional flow which makes it easier to deduce what's going on



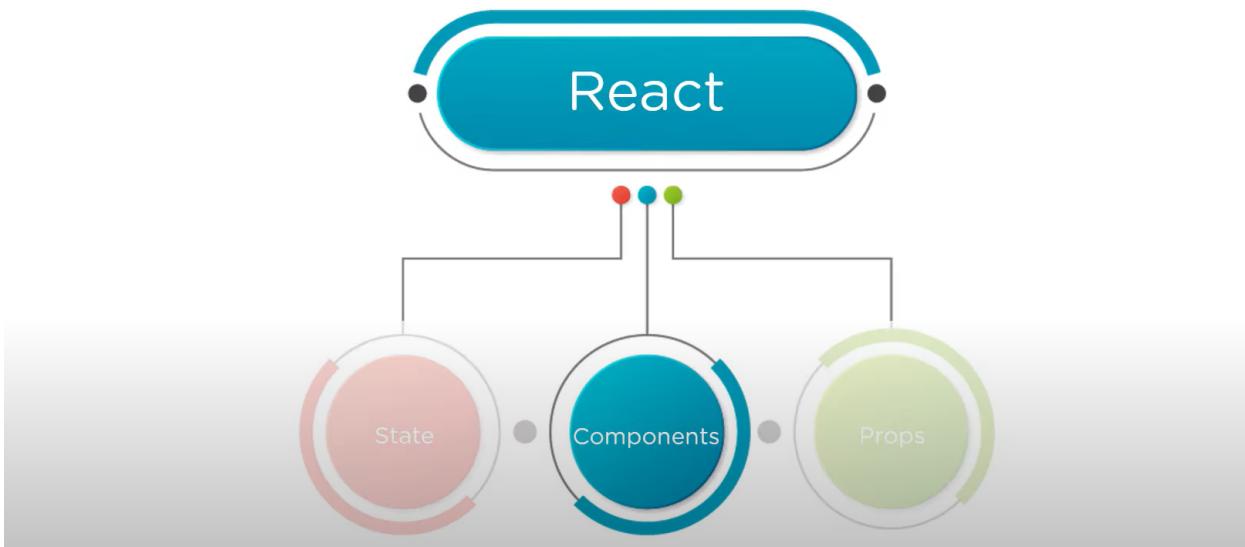
# Features of React

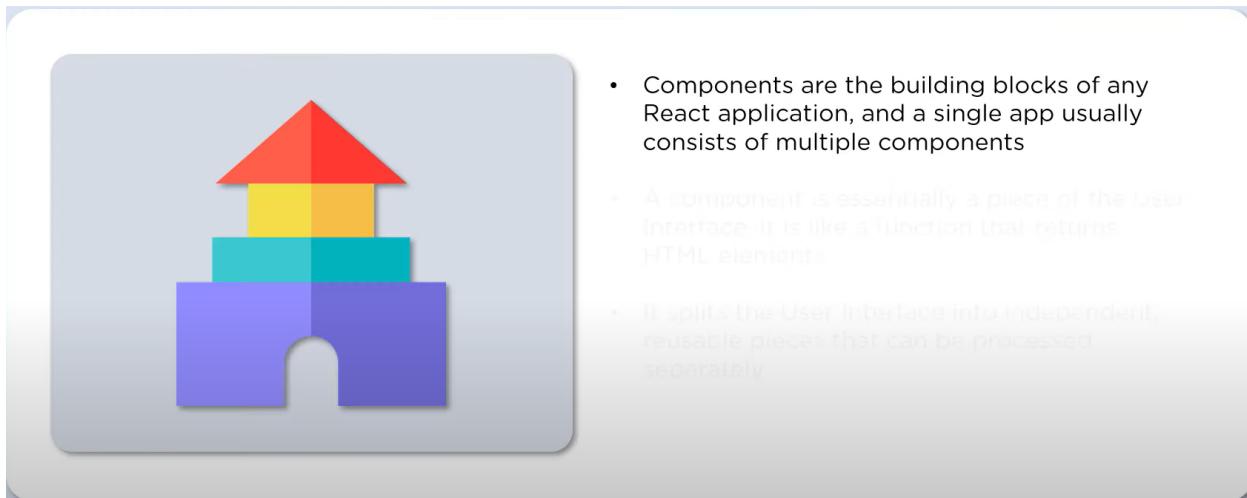




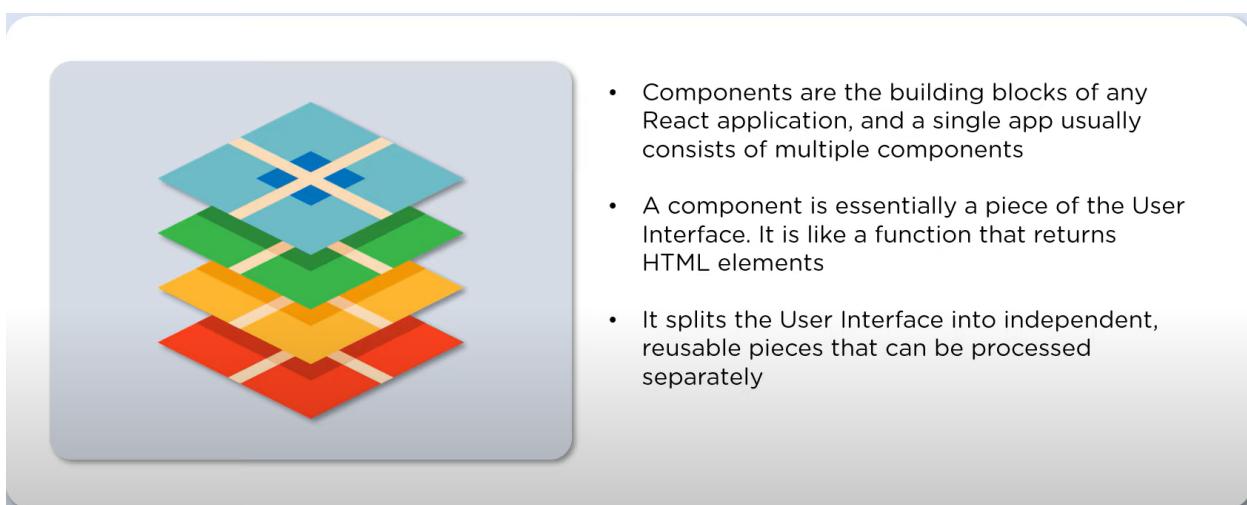
## Components, State & Props

### Components, State & Props



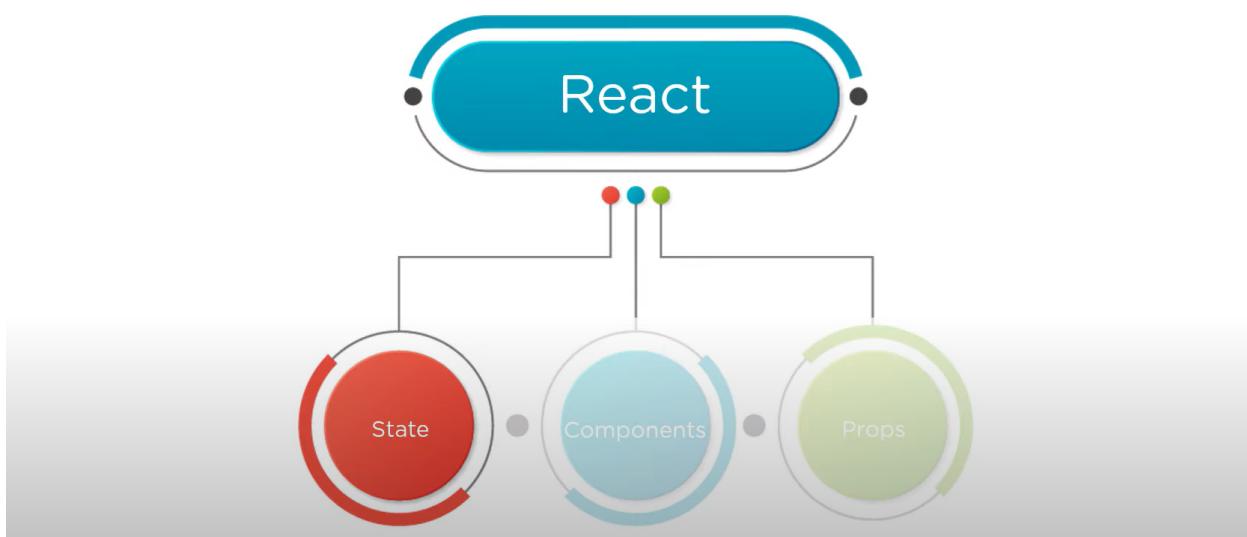


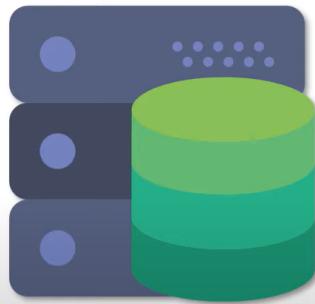
- Components are the building blocks of any React application, and a single app usually consists of multiple components
- A component is essentially a piece of the User Interface. It is like a function that returns HTML elements
- It splits the User Interface into independent, reusable pieces that can be processed separately



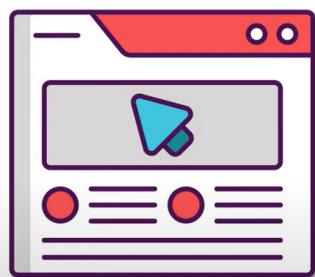
- Components are the building blocks of any React application, and a single app usually consists of multiple components
- A component is essentially a piece of the User Interface. It is like a function that returns HTML elements
- It splits the User Interface into independent, reusable pieces that can be processed separately

## Components, State & Props



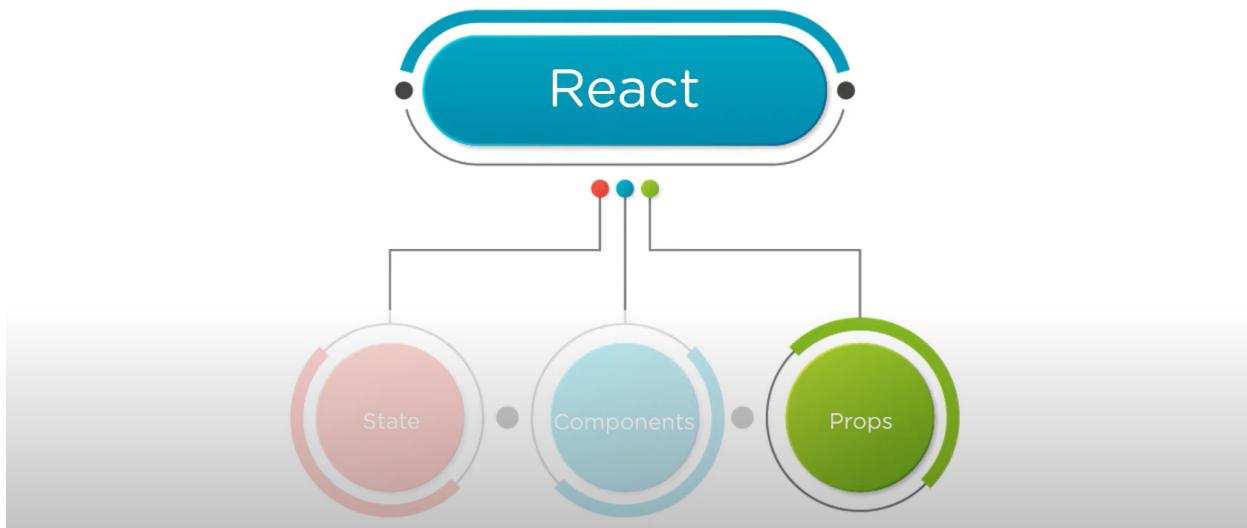


- State of a component is an object that holds some data
- This data influences the output of a component



- State of a component is an object that holds some data
- This data influences the output of a component

## Components, State & Props



- Props is short for properties, that allow us to pass arguments or data to components
- Props are passed to components in the way similar to that of HTML-tag attributes



### App.js

```
import React from 'react';
class App extends React.Component {
  render() {
    return (
      <div>
        <h1>{this.props.carProp}</h1>
        <h2>{this.props.bikeProp}</h2>
      </div>
    );
  }
}
```

This is how we access the properties passed to a component



### Main.js

```
import React from 'react';
import ReactDOM from 'react-dom';
import App from './App.jsx';

ReactDOM.render(<App carProp = "1600 cc" bikeProp = "150cc"/>,
  document.getElementById('app'));

export default App;
```



## React Pre-requisites



- You should be familiar with programming concepts like functions, objects, arrays, and to a lesser extent, classes
- You should have basic knowledge of JavaScript
- You should have some familiarity with HTML



## Industry Trends

The screenshot shows the PayScale homepage with the following details:

- PayScale logo
- Navigation links: For You, For Your Business, Compensation Research
- Sub-navigation: Jobs, Companies, Degrees
- Breadcrumb: India / Skill/Specialty / React.js Salary
- Main title: Average Salary for Skill: React.js
- Salary value: Rs 725K
- Links: Avg. Salary, Show Hourly Rate

A yellow speech bubble contains the text: "The average salary for a React developer in India is ₹7,25,000 per year!" A cartoon character of a smiling man in a suit is pointing upwards.

