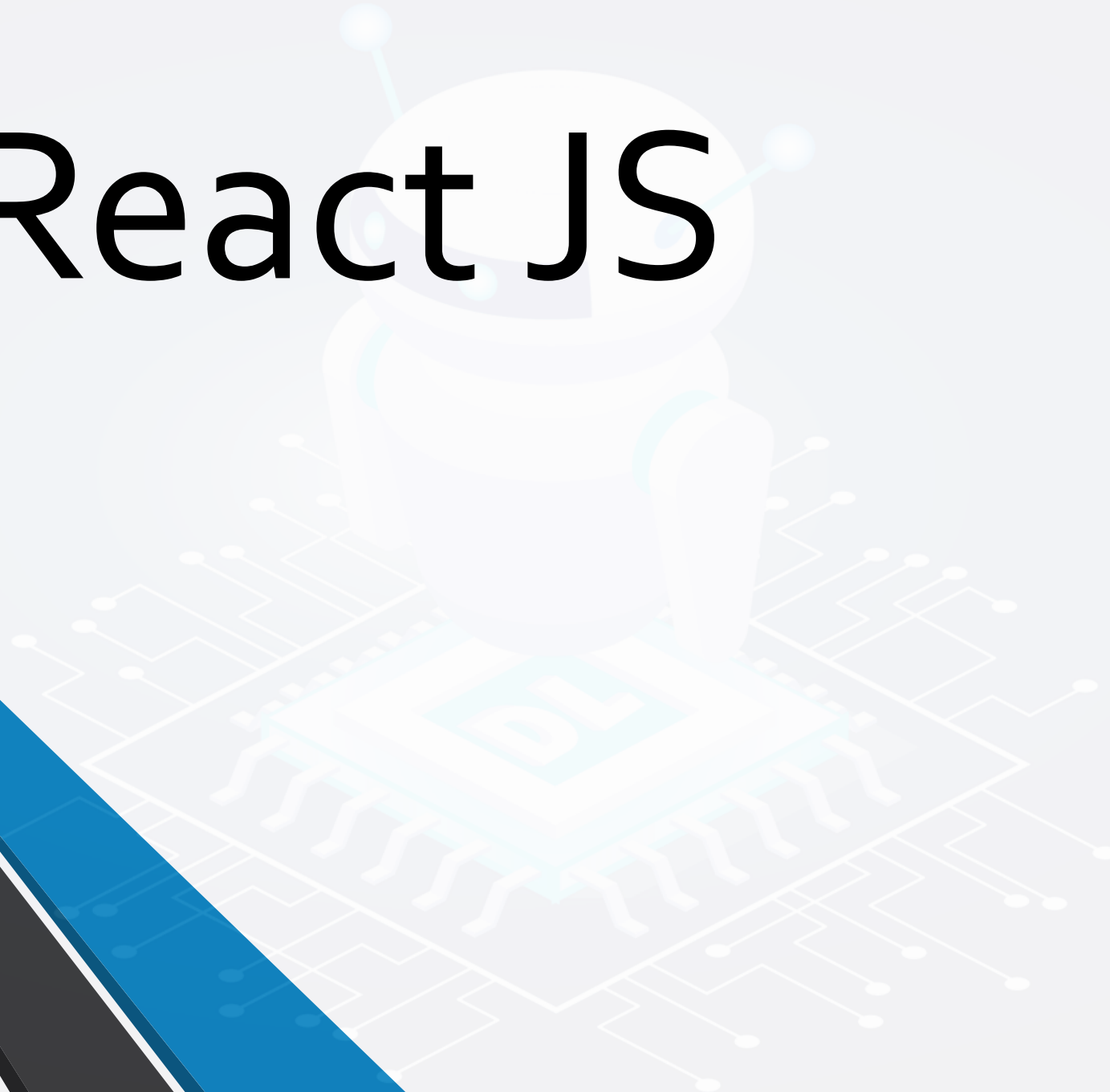
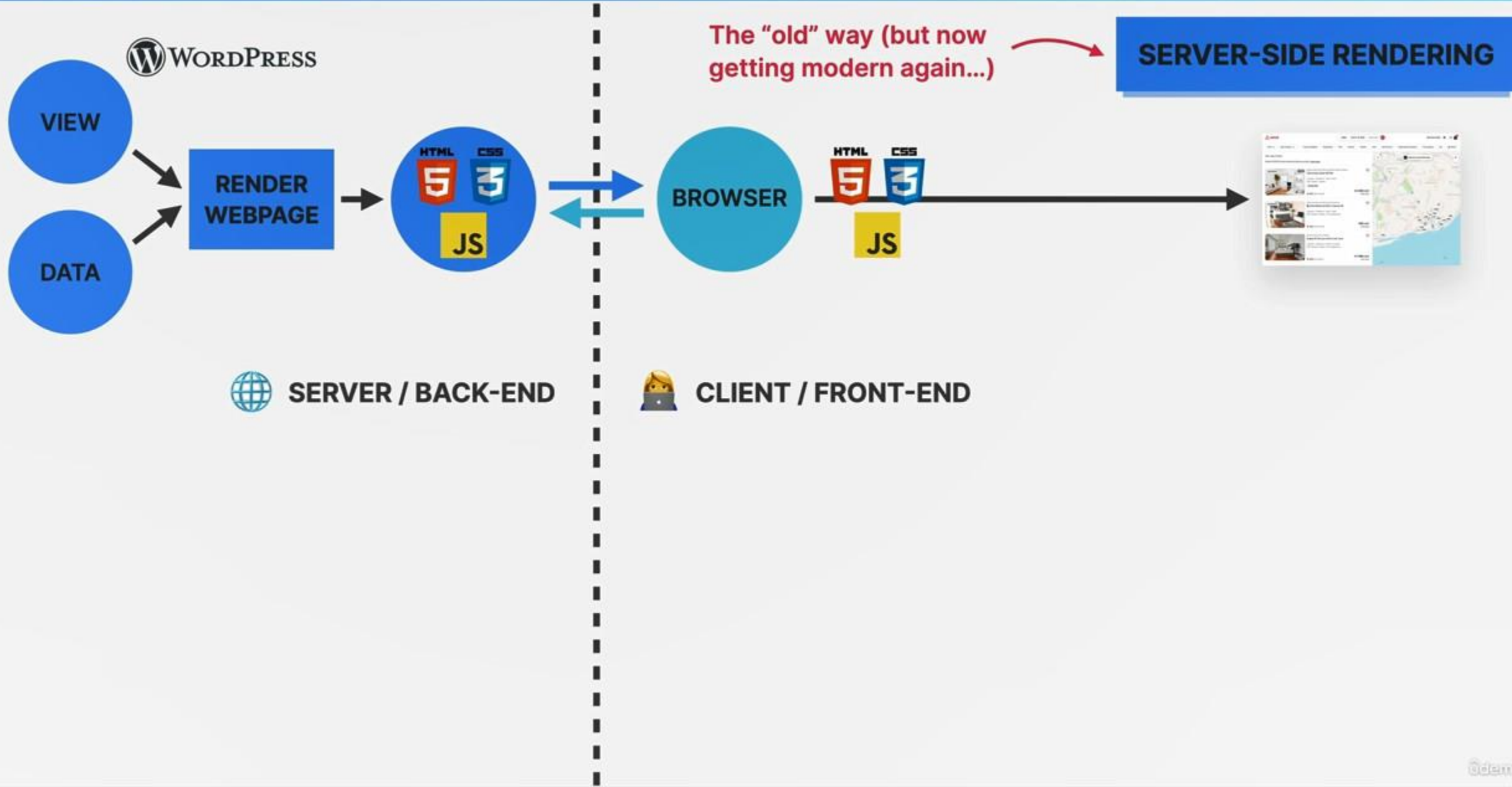


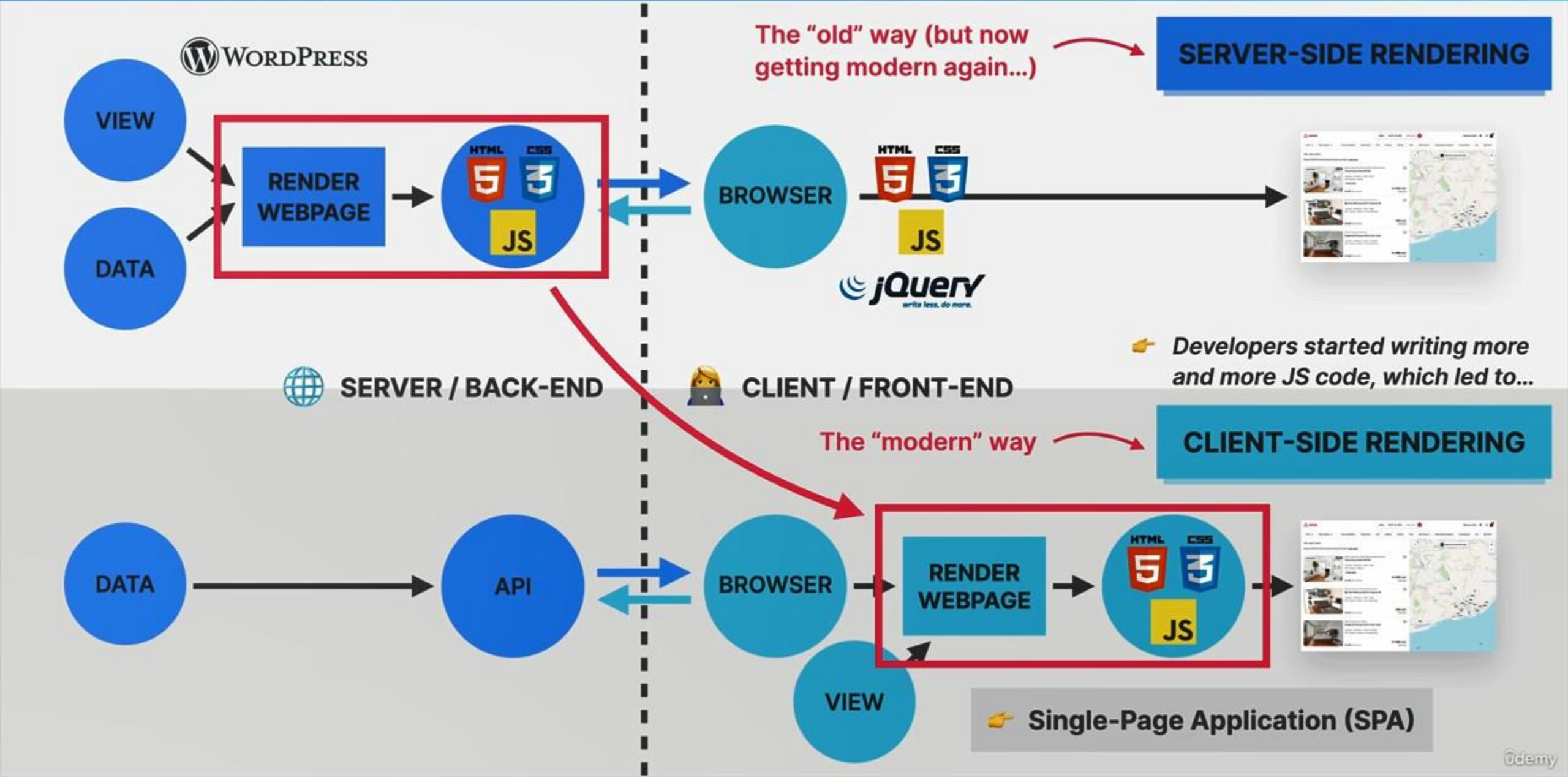
# React JS



# THE RISE OF SINGLE-PAGE APPLICATIONS



## THE RISE OF SINGLE-PAGE APPLICATIONS



# WHY DO FRONT-END FRAMEWORKS EXIST?

1

JavaScript front-end frameworks exist because...

KEEPING A USER INTERFACE IN SYNC WITH DATA  
IS REALLY HARD AND A LOT OF WORK



Front-end frameworks **solve this problem** and take hard work away from developers 🎉



Different approaches, same goal

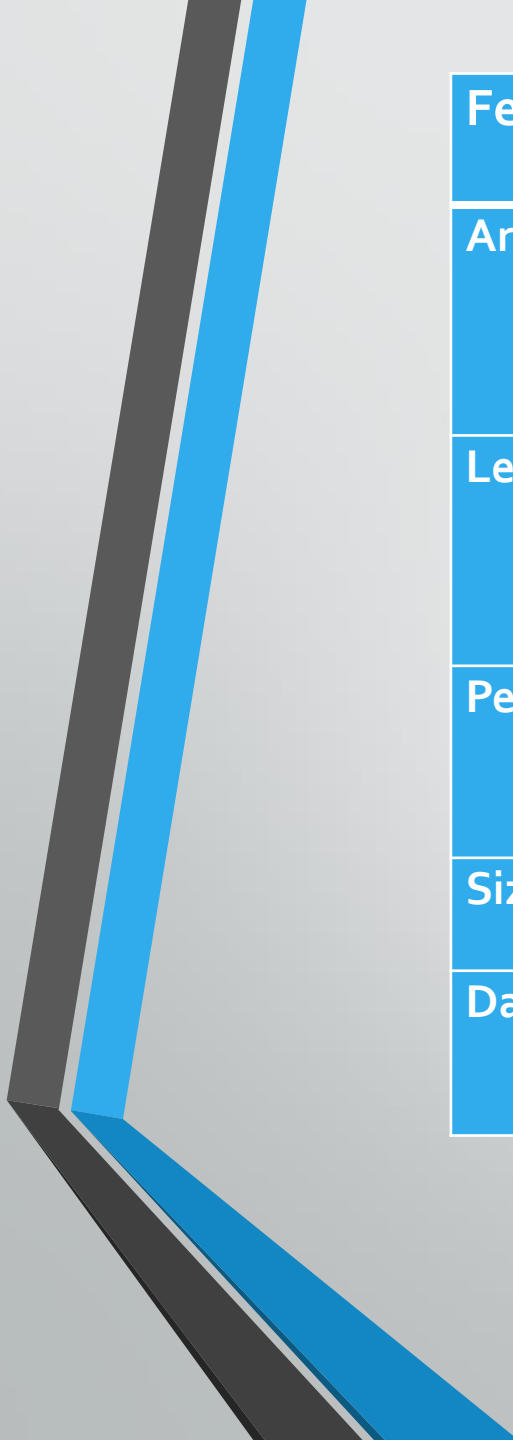
2

They enforce a “**correct**” way of structuring and writing code (therefore contributing to solving the problem of “spaghetti code” 🤖)

3

They give developers and teams a **consistent** way of building front-end applications



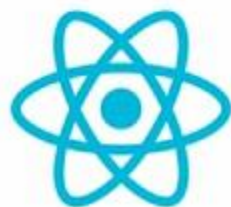


Features	AngularJS	ReactJS	VueJS
Architecture	Full-featured MVC framework	Component-based library	Component-based library
Learning Curve	Steeper learning curve for beginners	Relatively easier to learn	Easier to learn
Performance	Can be slower due to two-way data binding	Optimized with the use of Virtual DOM	Optimized with the use of Virtual DOM
Size	Larger file size	Smaller file	Smaller file
Data Binding	Two-way data binding	One-way data binding	Two-way data binding

# WHAT IS REACT?

## REACT

EXTREMELY POPULAR, DECLARATIVE,  
COMPONENT-BASED, STATE-DRIVEN **JAVASCRIPT**  
**LIBRARY FOR BUILDING USER INTERFACES,**  
CREATED BY FACEBOOK 🤔 🍷 😂



# REACT IS BASED ON COMPONENTS

Based on components

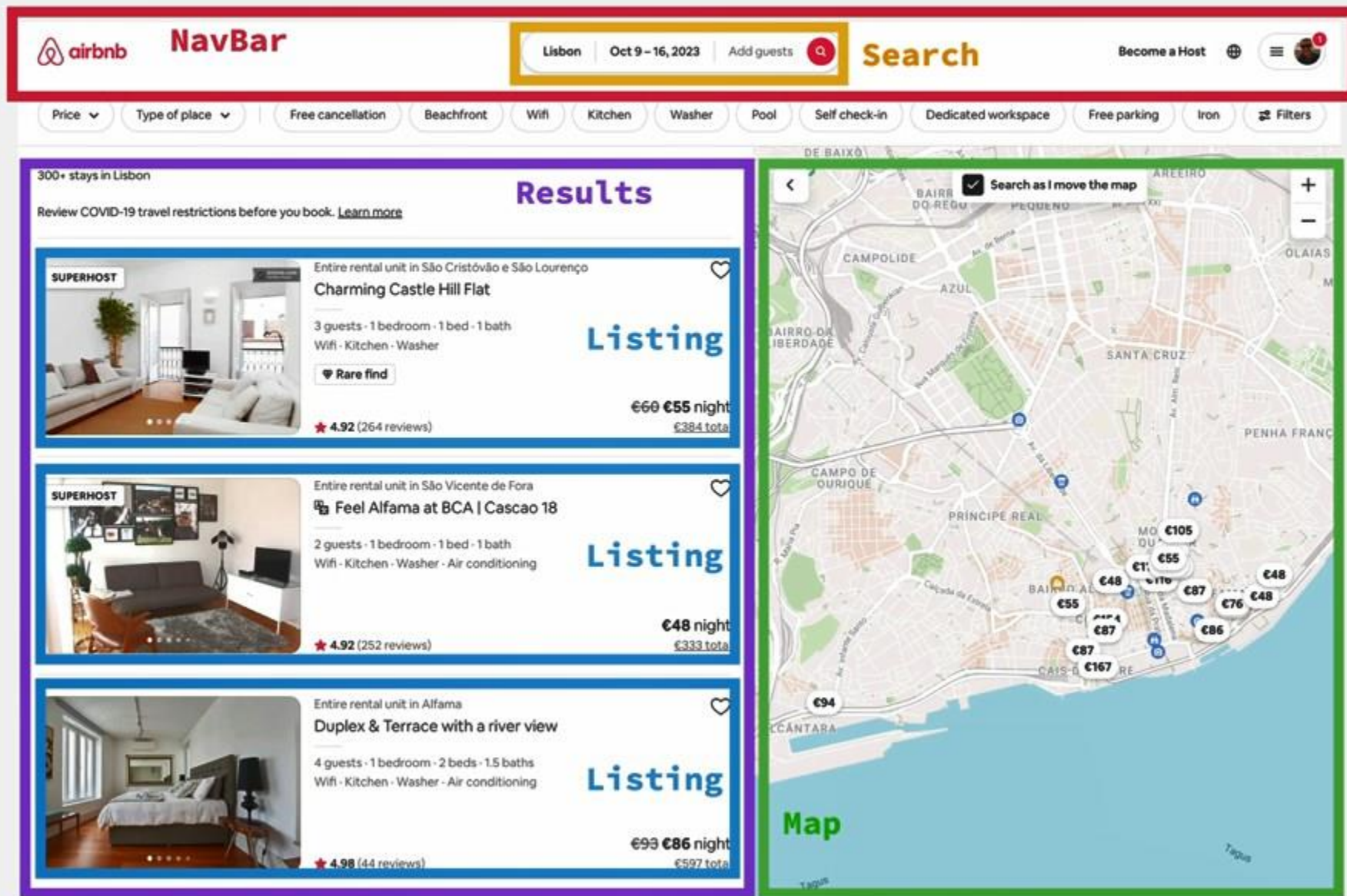
Declarative

State-driven

JavaScript library

Extremely popular

Created by facebook



# REACT IS DECLARATIVE

## Based on components

## Declarative

## State-driven

## JavaScript library

## Extremely popular

Created by facebook

- 👉 We **describe** how components look like and how they work using a **declarative syntax called JSX**
- 👉 **Declarative**: telling React what a component should look like, **based on current data/state**
- 👉 React is **abstraction** away from DOM: we **never touch the DOM**
- 👉 **JSX**: a syntax that **combines** **HTML** **CSS** **JavaScript** as well as **referencing other components**

## JSX returned from a component

```
return (
  <main>
    <NavBar>
      <h1 style={ { fontSize: '3.2rem' } }>AirBnB</h1>
      <Search />
      <a ref='#'>Become a host</a>
    </NavBar>
    <Results>
      <p style={ { fontSize: '1.6rem', margin: '1.2rem' } }>
        {numListings} stays in Lisbon
      </p>
      <Listing listing={listings[0]} />
      <Listing listing={listings[1]} />
      <Listing listing={listings[2]} />
    </Results>
    <Map listings={listings} onClick={moveMap} />
  </main>
);
```



# REACT IS STATE-DRIVEN

Based on components

Declarative

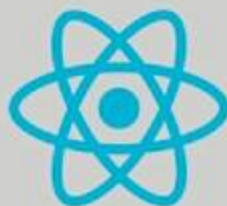
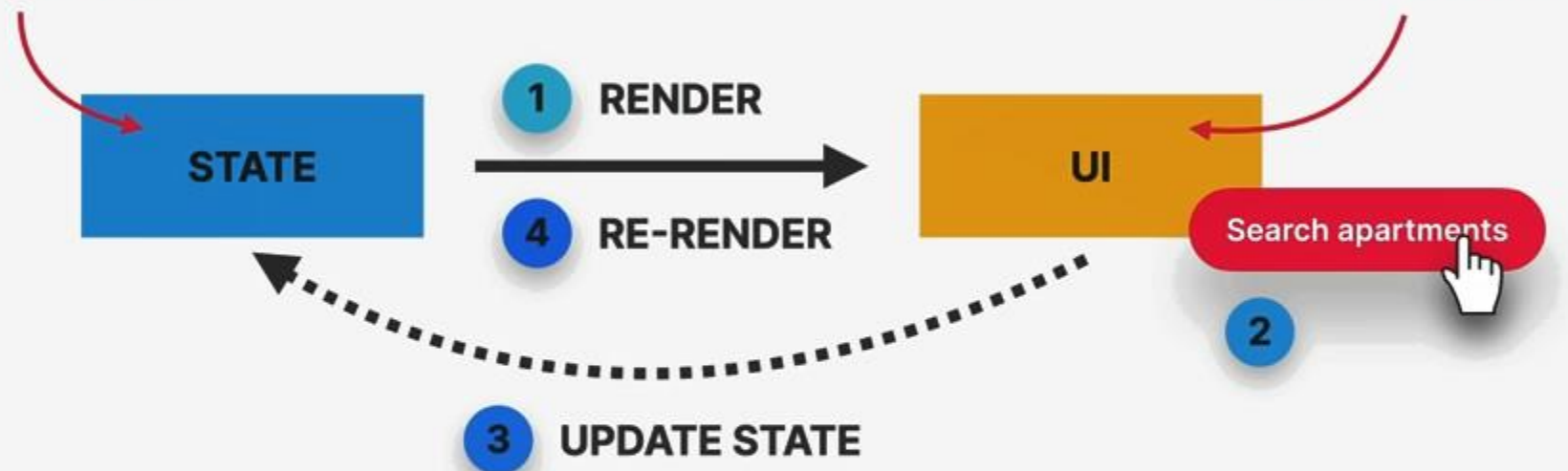
State-driven

JavaScript library

Extremely popular

Created by facebook

Example: array  
of apartments



**REACT** *REACTS* TO STATE CHANGES  
BY RE-RENDERING THE UI

# REACT IS A JAVASCRIPT LIBRARY

Based on components

Declarative

State-driven

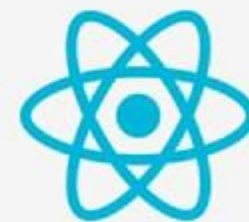
JavaScript library

Extremely popular

Created by facebook



Is React a **library** or a framework?



Because React is only the "view" layer. We need to pick multiple external libraries to build a complete application

NEXT.js

Remix

Complete frameworks built on top of React

# REACT IS EXTREMELY POPULAR

Based on components

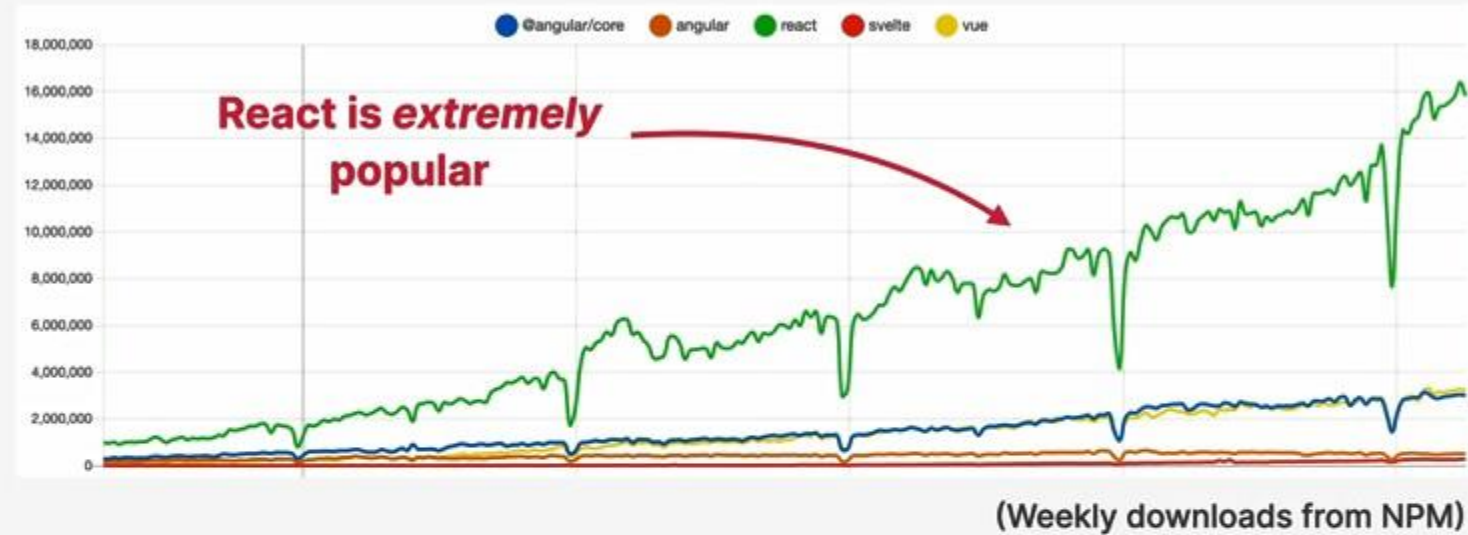
Declarative

State-driven

JavaScript library

Extremely popular

Created by facebook



✓ Many large companies have adopted React



✓ Huge job market with high demand for React developers 🤖

✓ Large and vibrant React developer community

✓ Gigantic third-party library ecosystem

# REACT WAS CREATED BY FACEBOOK

Based on components

Declarative

State-driven

JavaScript library

Extremely popular

Created by facebook



- 👉 React was created in **2011** by Jordan Walke, an engineer working at Facebook at the time
- 👉 React was open-sourced in **2013**, and has since then completely transformed front-end web development

facebook

Meta