



REACTJS

ANEKO ACADEMY

What is React

React is a Javascript Library for building user interface.

React makes building complex interactive and reactive user interface simpler

Mobile apps and desktop apps feel very “reactive”: Things happen instantly you don’t wait for new page to load or actions to start.

Traditionally in web apps you click a link and wait for new page to load. you click a button and wait for some action to complete

**React is a Declarative,
Component-Based,
JavaScript library for
building user interfaces.**

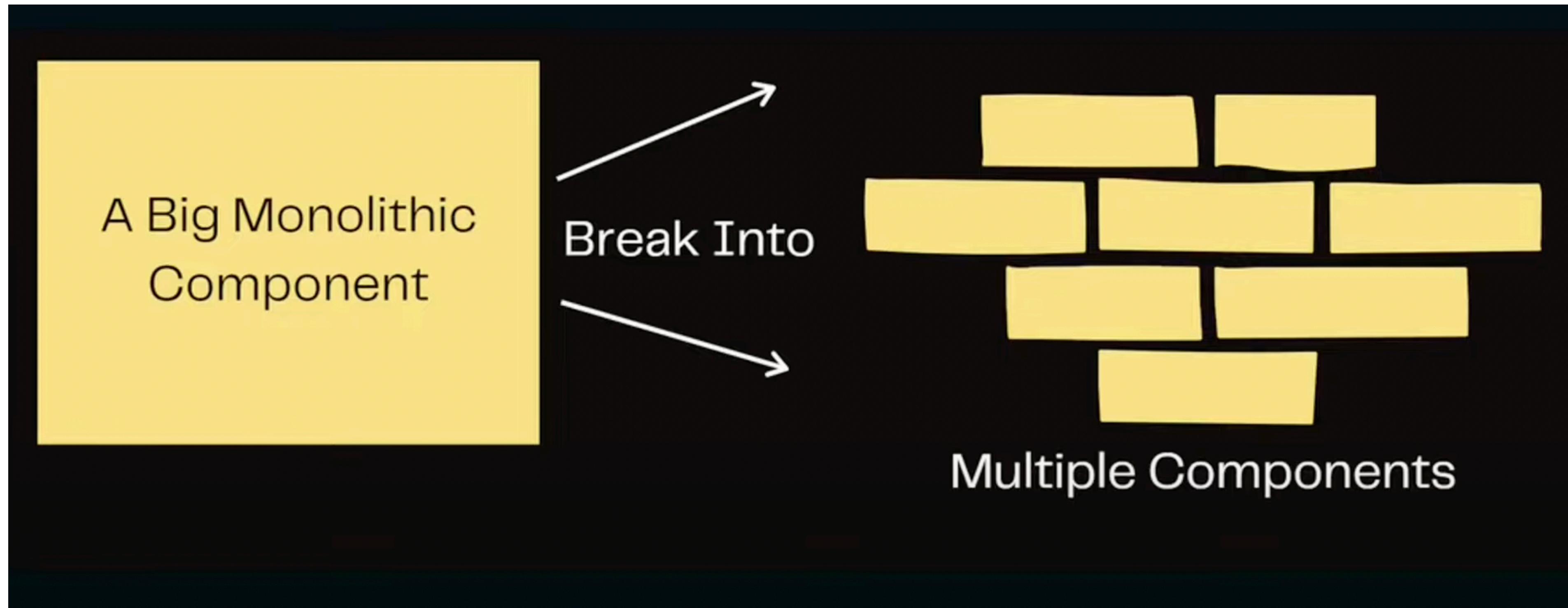
REACTJS - BEHIND THE SCENCE

```
function tellWhyReact() {  
    // Get the element by Id  
    const whyId = document.getElementById("why-react");  
  
    // create a h2 element - heading  
    const heading = document.createElement("h2");  
    heading.innerText = "Why React?";  
    heading.classList.add("heading");  
    whyId.appendChild(heading);  
  
    // Loop through the reasons and update DOM  
    for (let i = 0; i < reasons.length; i++) {
```

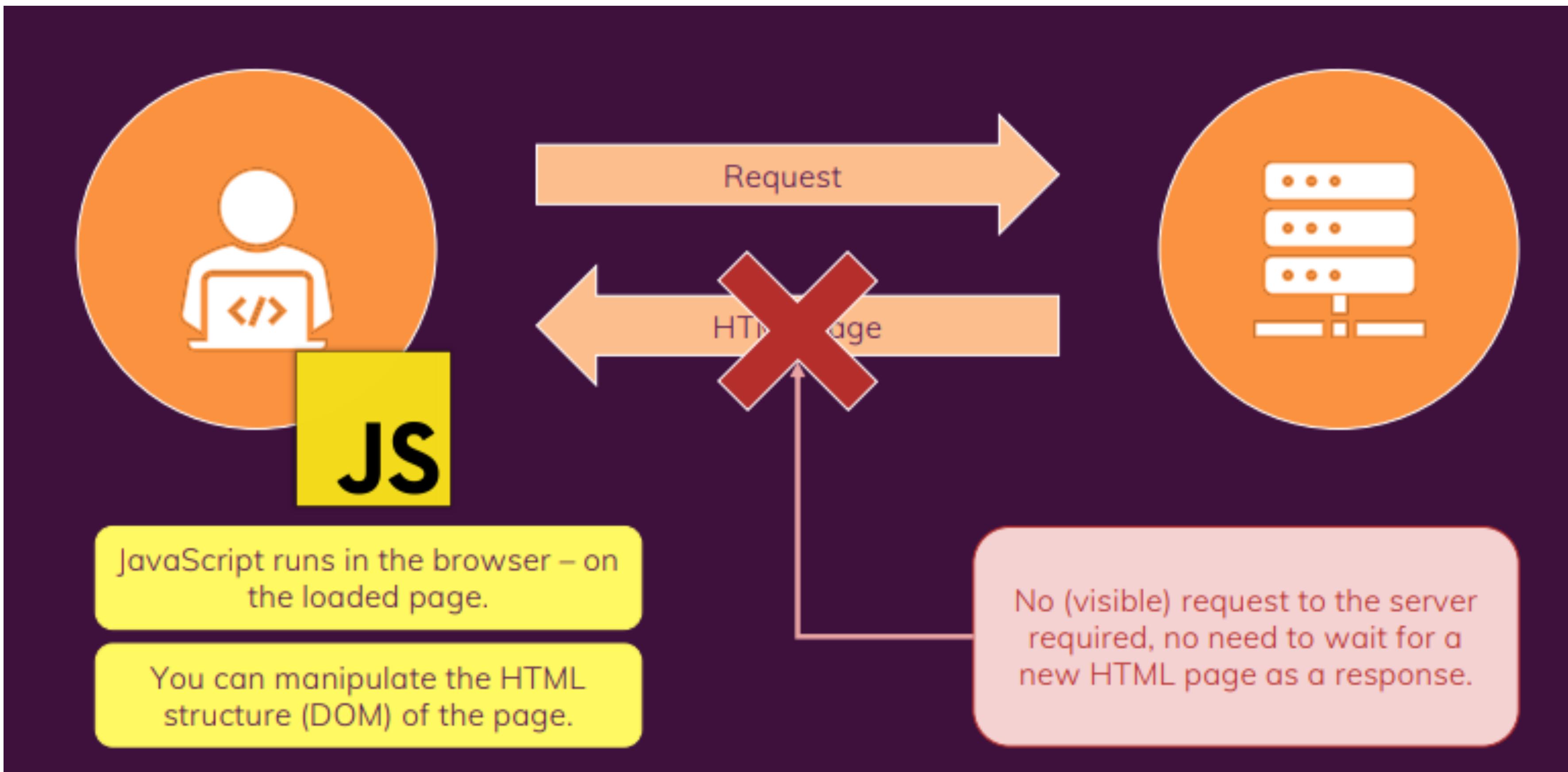
REACTJS - ITERATION

```
<ul>
  <h2 className="heading">Why React?</h2>
  {
    reasons.map( (reason, index) => {
      return (
        <li key={index}>{reason}</li>
      );
    } )
  }
</ul>
</>
```

REACTJS - COMPONENT STRUCTURE



Javascript the Master

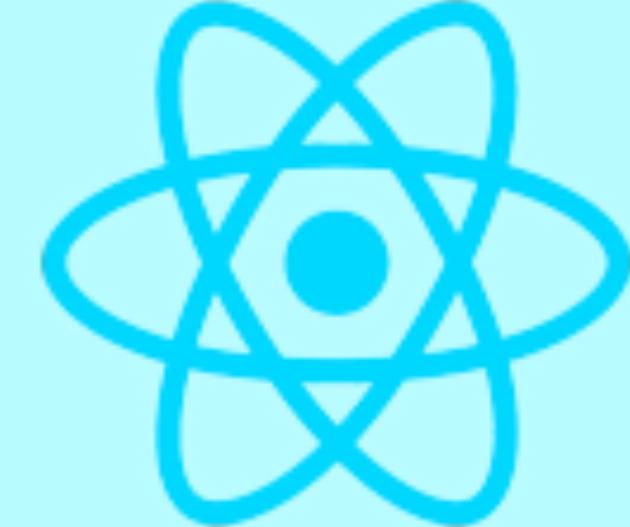


SPA-Single page Application

React can be used to **control parts** of HTML pages or entire pages.



React.js Alternatives

Angular	React.js	Vue.js
		
Complete component-based UI framework, packed with features. Uses TypeScript. Can be overkill for smaller projects.	Lean and focused component-based UI library. Certain features (e.g. routing) are added via community packages.	Complete component-based UI framework, includes most core features. A bit less popular than React & Angular.

React.js Component Approach

The screenshot shows the homepage of the Indian e-commerce platform Flipkart. The top navigation bar is blue, featuring the Flipkart logo, a search bar with placeholder text "Search for products, brands and more", a magnifying glass icon, a "Login" button, and a "More" dropdown menu. Below the navigation, there is a grid of category icons and names: "Top Offers" (gift boxes), "Grocery" (food items), "Mobiles" (two phones), "Fashion" (couple), "Electronics" (laptop and headphones), "Home" (clock and chair), "Appliances" (washing machine), and "Travel" (airplane). A promotional banner for travel from Chennai is displayed, showing options for Phuket, Manila, Denpasar Bali, and Jakarta, each with an "Economy" fare starting from INR 22,300. A "BEST FARE GUARANTEE" badge is visible in the top right corner of this banner.

Flipkart
Explore Plus

Search for products, brands and more

Top Offers

Grocery

Mobiles

Fashion

Electronics

Home

Appliances

Travel

Book now, travel later from [Chennai](#)

Phuket
Economy
from INR 22,300

Manila
Economy
from INR 29,300

Denpasar Bali
Economy
from INR 32,000

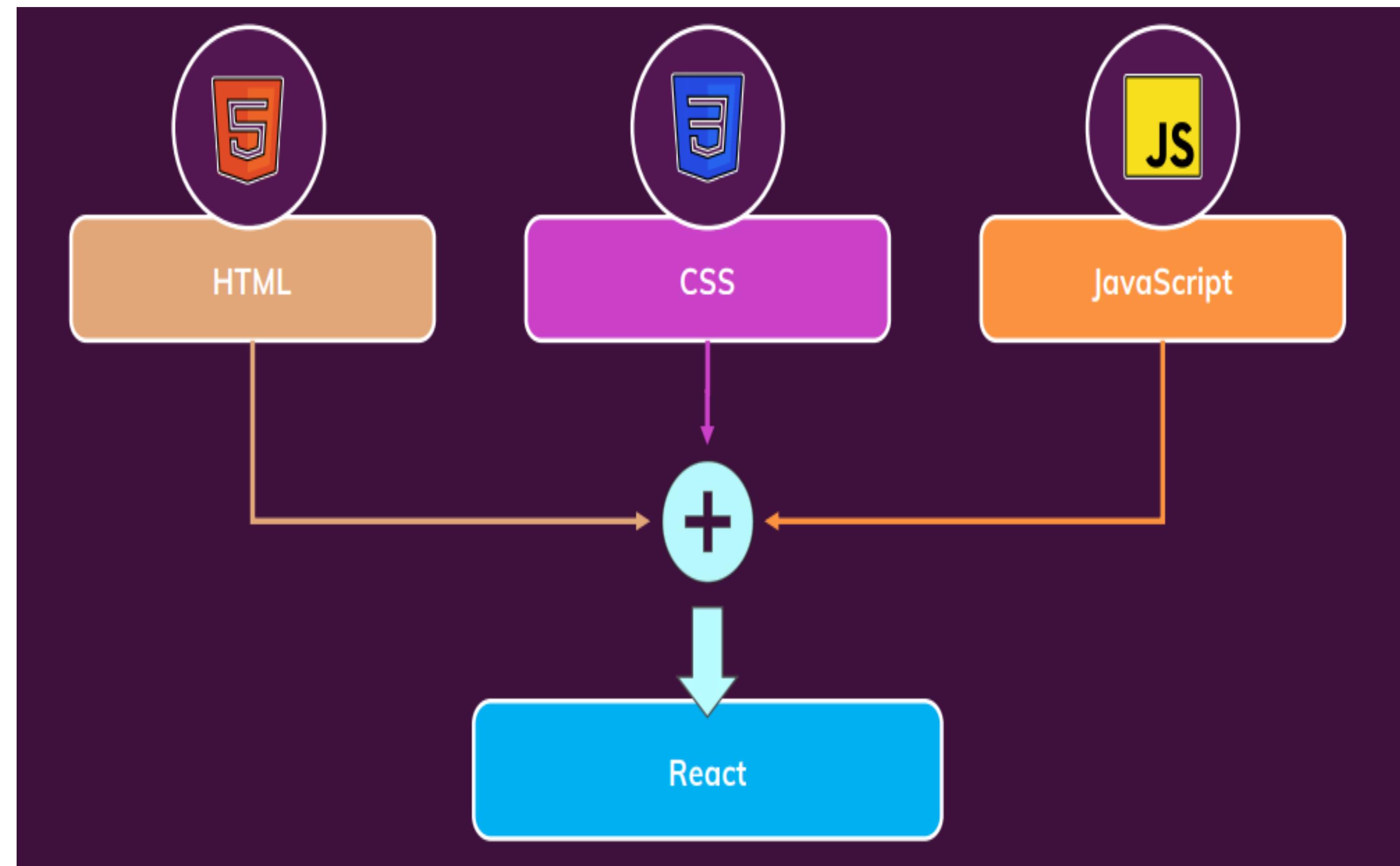
Jakarta
Economy
from INR 32,000

BEST FARE GUARANTEE

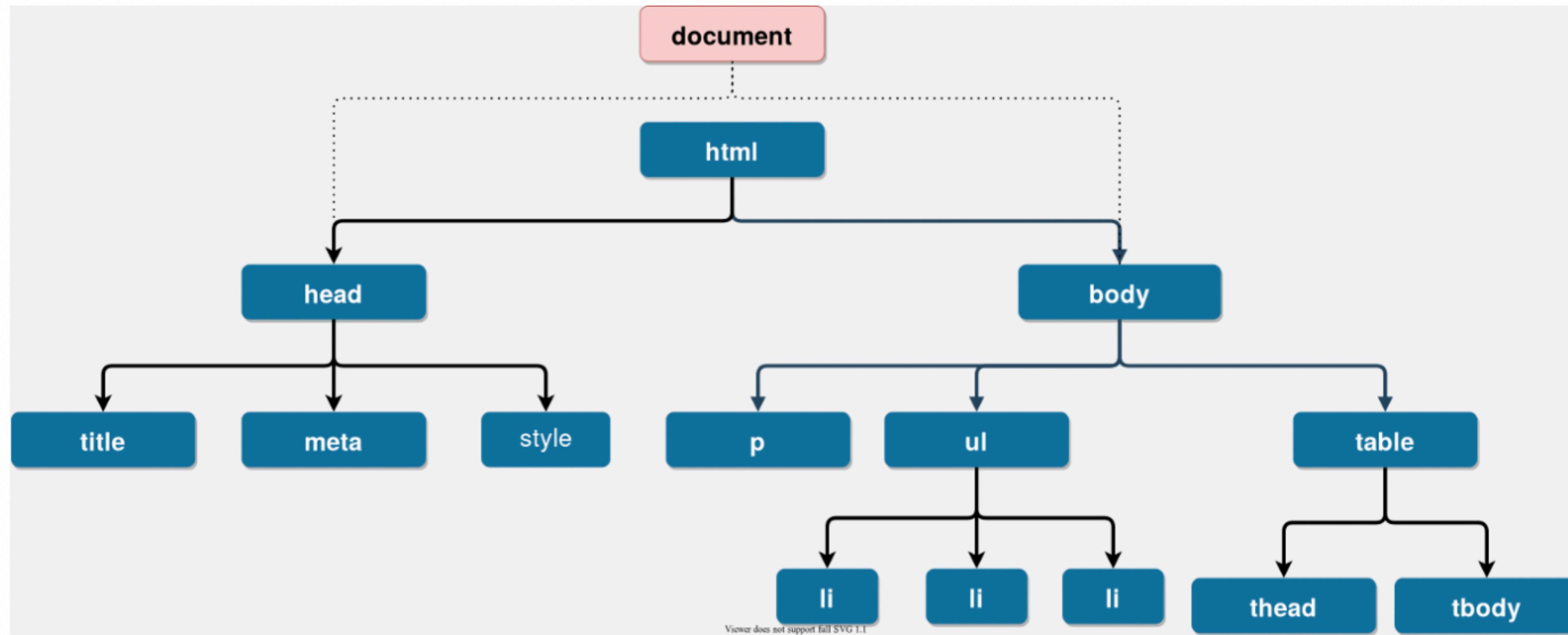
React.js Component Approach

- Because all user interfaces in the end are made up of components
- Components benefits don't repeat itself
 - Don't do too many things in one and same function
 - Split big junks of code into smaller functions.

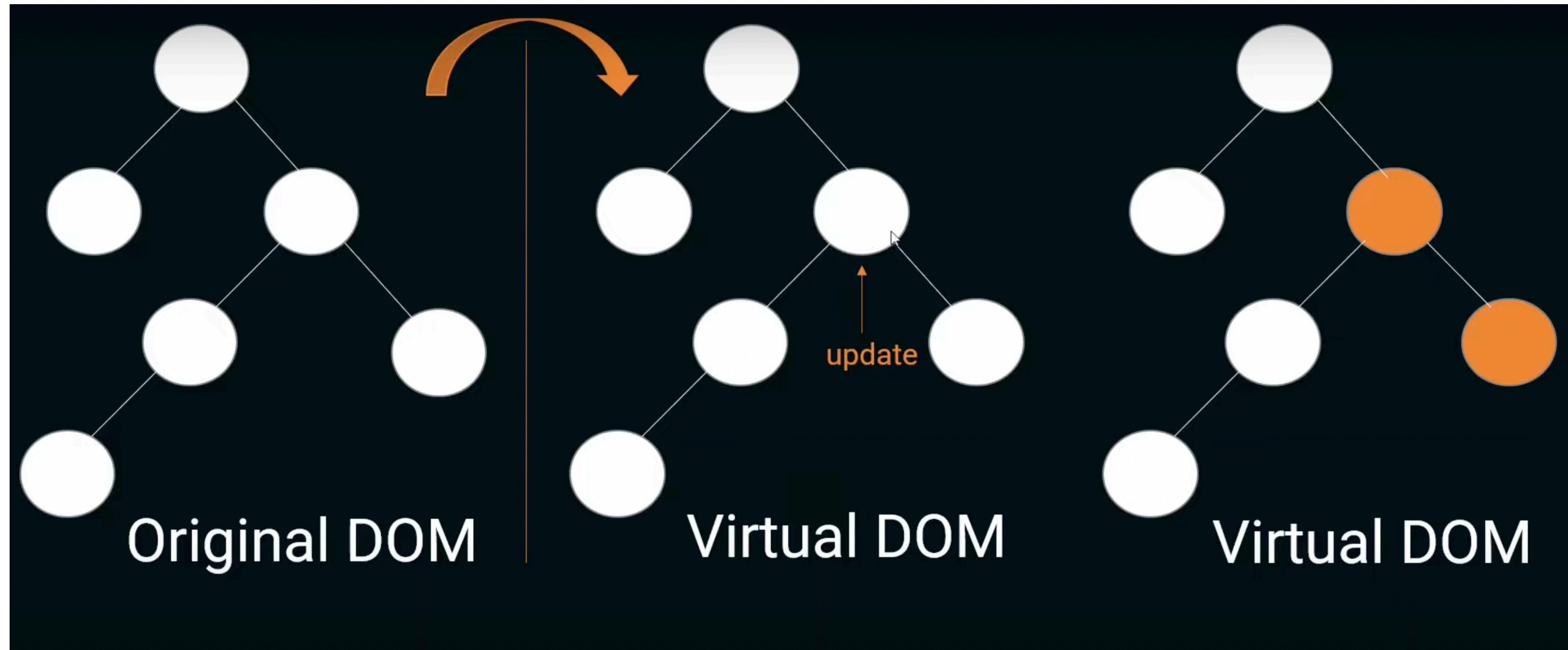
How Components is built



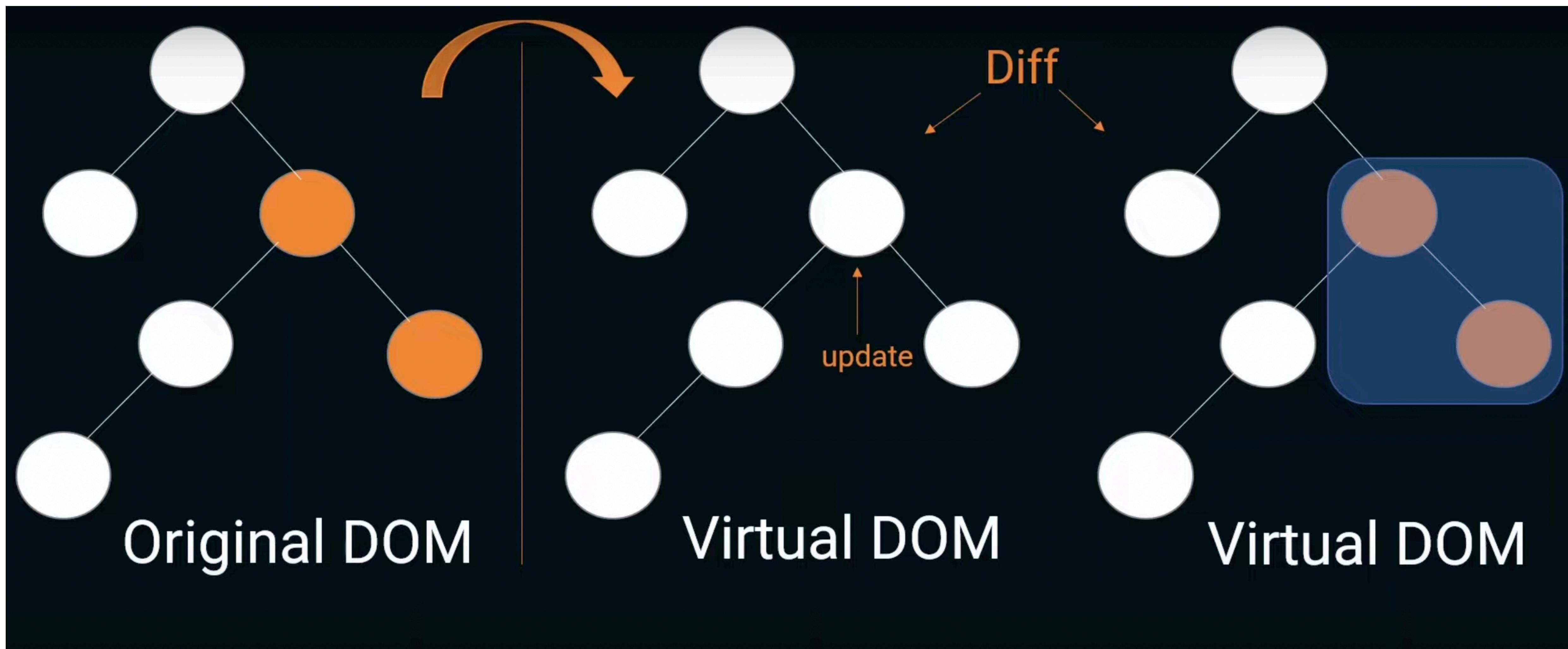
DOM



VIRTUAL DOM



DIFF



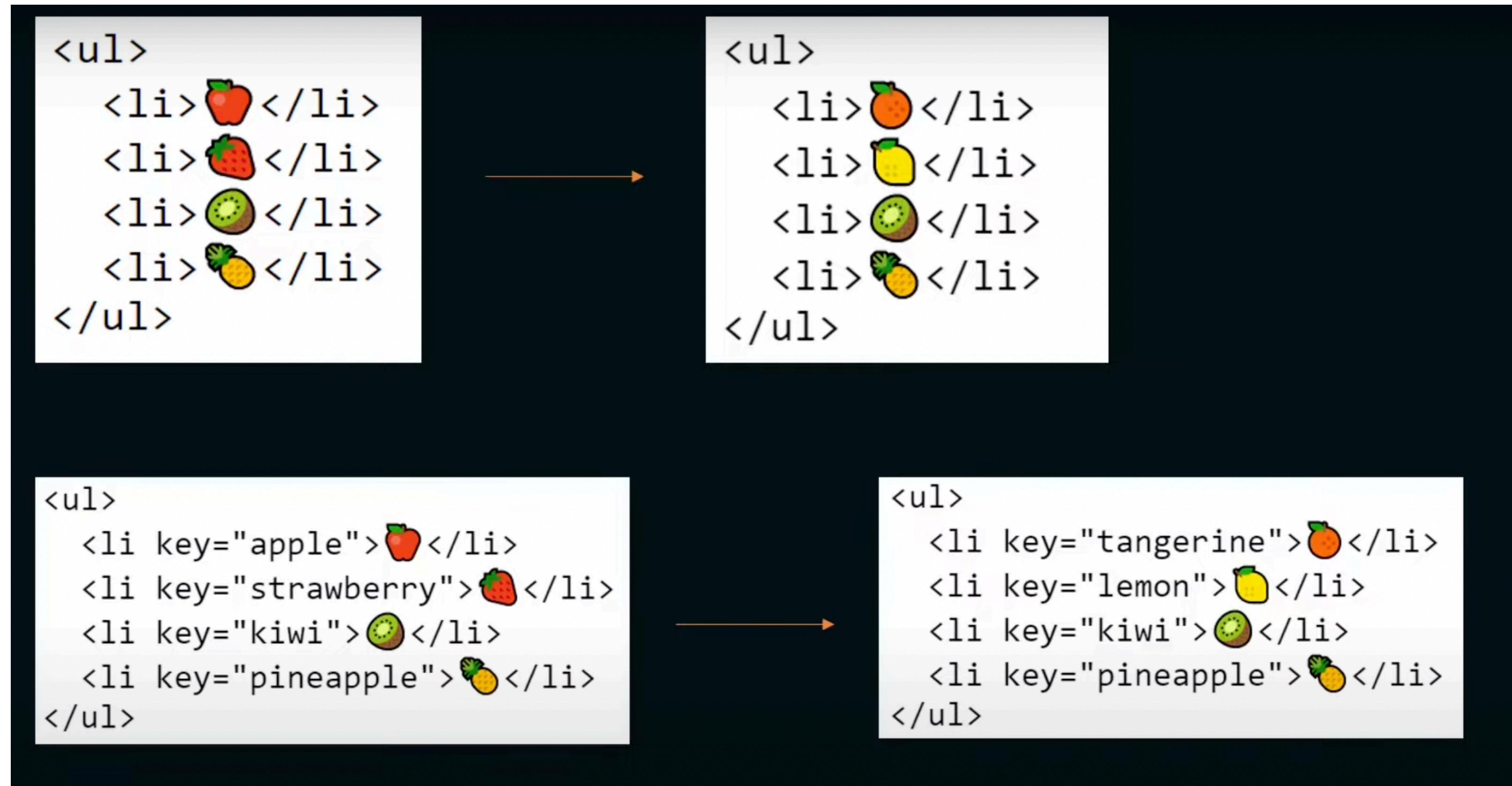
RECONCILIATION

React keeps the in-memory
Virtual representation of the
actual DOM and keep it sync
with a batch update. This
process is called

RECONCILIATION

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UNIQUE KEY



CREATE REACT APP

- `npx` is a package runner, which allows us to run a package binary without having to install it first.
- `create-react-app` is the package we're running. It will do all the heavy lifting of stubbing out our project, configuring dependencies, and setting up our build tooling.
- `spider-app` is the name of our application. CRA will create a folder with this name in the current directory, and place all the project files inside that directory.

```
npx create-react-app spider-app
```