React

Mastering React.js: A Comprehensive Crash Cou

Introduction

- Introduction to React.js
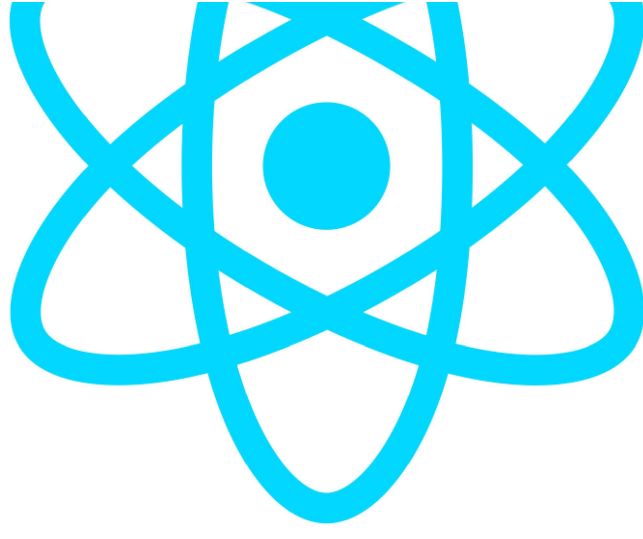- History of React.js
- Why React.js over Vanilla JavaScript
- Setting up development environment
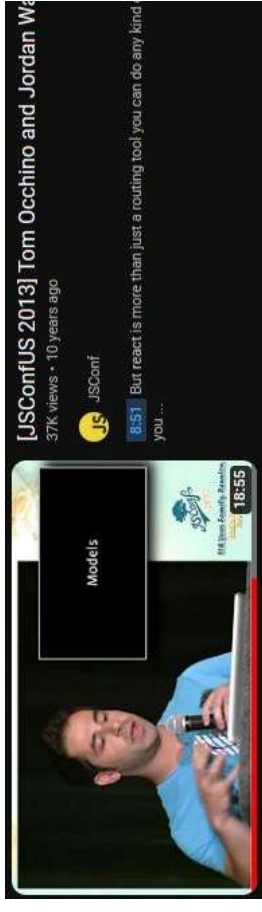- Creating React.js project

Introduction to React.js

- React.js is a **JavaScript library** used for building **user interfaces (UIs)** and **single-page applications.**

- Created by **Jordan Walke** at **Facebook.**

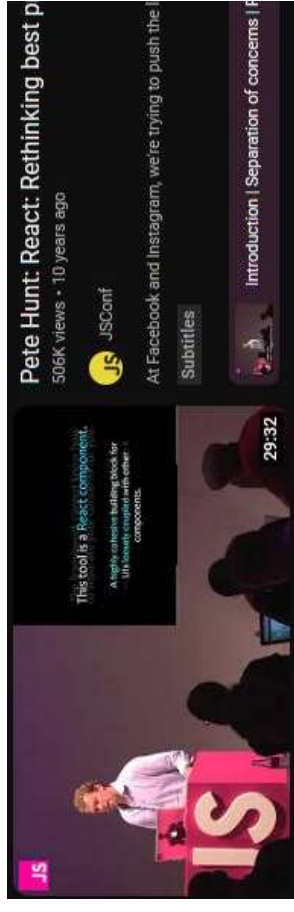- Most popular JavaScript library for frontend development.

History of React.js

- React.js began as an internal tool for dynamic Facebook components.

- Created in 2011 but remained private initially.

- React.js was open-sourced by Jordan Walke and Tom Occhino at JSConfUS 2013.

- Released with the belief that its success at Facebook could benefit others.

- Initially faced criticism for combining JavaScript and HTML in a single file.

- It was widely hated and criticized because of its combination of JavaScript and HTML in single file.

- It slowly gained traction and blew up in adoption.

[JSConfUS 2013] Tom Occhino and Jordan Wa...
37K views · 10 years ago
JSConf
8:51 But react is more than just a routing tool you can do any kind
you ...
Models
18:55

First Keynote given by Tom Occhino and Jordan at JSConfUS 2013.

Pete Hunt: React: Rethinking best p...
506K views · 10 years ago
JSConf
At Facebook and Instagram, we're trying to push the
Subtitles
This tool is a React component.
A tightly cohesive building block for UI's loosely coupled with either components.
Introduction | Separation of concerns | F
29:32

Second Keynote given by Pete Hunt at JSC...

React.js History in 10minutes: The Revolutionary Journey from Facebook to...

6K views • 10 days ago

Thapa Technical ✓

Discover the story of React.js in our exciting documentary, "Unveiling React.js:
The Revolutionary Journey from Facebook to ...

CC

HOW WAS REACT
CREATED AT META?
10:52

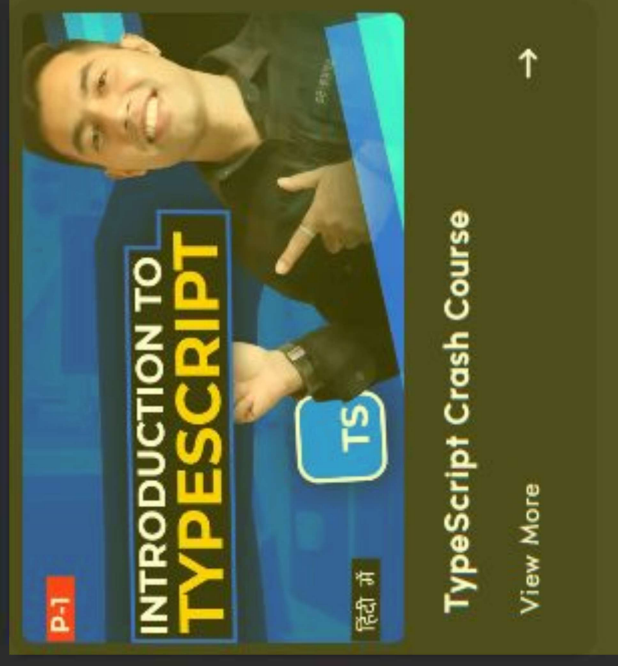*Watch this Documentary to know complete history of React.js*

Is React JS Library or Framework?
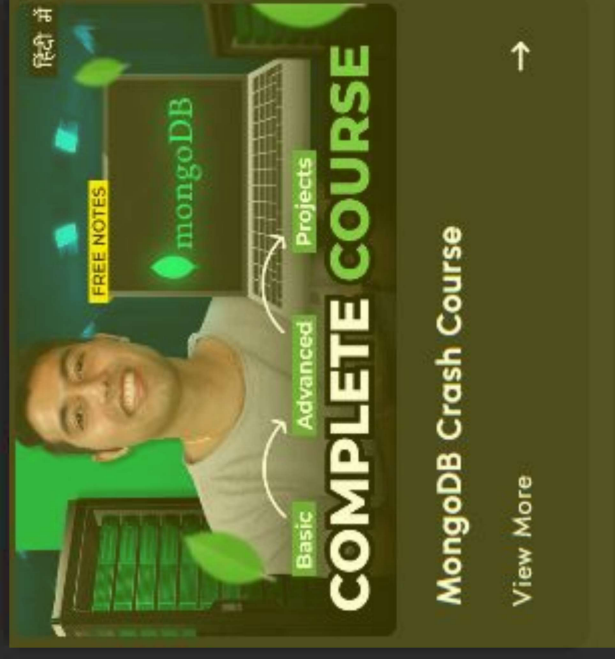
- React is not a framework. React is a JavaScript library for building user interfaces.

- It is also known as ReactJS and React.js, so don't get confused if you read different notation in different places.

- React knows only one thing that is to create an awesome UI.

React is all about Components

Navbar

NavLogo

Thapa Technical

Home   About   Source Code   Blogs   Courses   Contact   Login   Signup

NavLinks

PageHeader

POPULAR
Courses

Search here...   CourseSearchInput

TypeScript Crash Course

View More →

CourseCard

MongoDB Crash Course

View More →

CourseCard

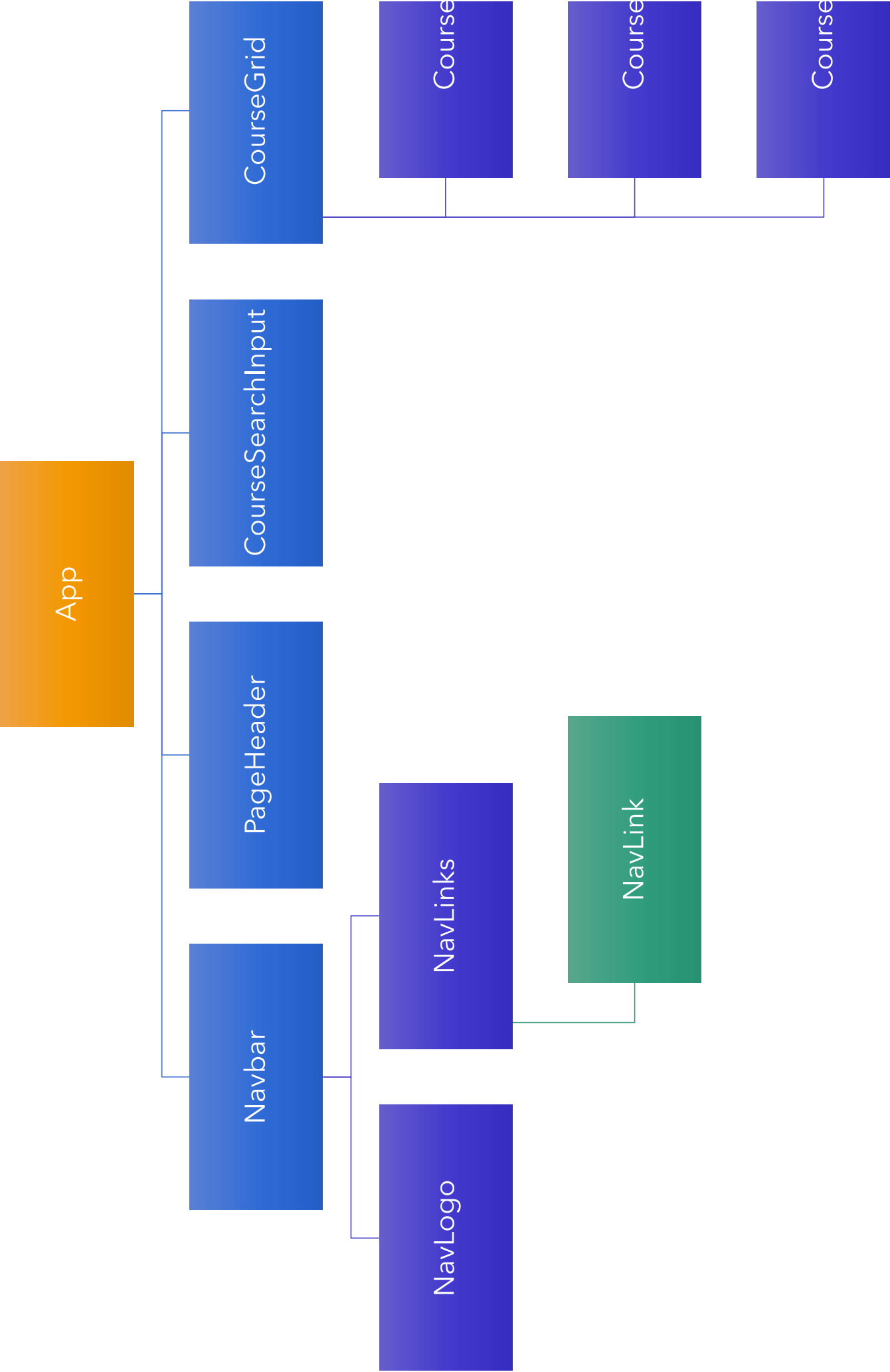**BEST HTML COURSE**

View More →
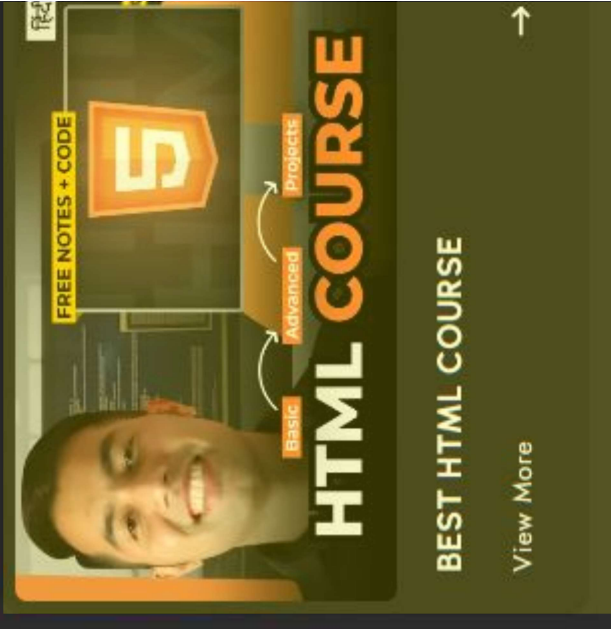
CourseCard

Here, **CourseCard** is shown 3 times. Traditionally, you would have to copy paste each of these but with React.js you can avoid duplicate code **(Do not Repeat Yourself, DRY).**

React.js application is just tree of such Components.

App

Navbar

PageHeader

CourseSearchInput

CourseGrid

NavLogo

NavLinks

NavLink

Course

Course

Course

People's Republic of Bangladesh

Population:164,689,383

Region: Asia

Capital:Dhaka

Islamic Republic of Pakistan

Population:220,892,331

Region: Asia

Capital:Islamabad

Federal Democratic Republic of Nepal

Population:29,136,808

Region: Asia

Capital:Kathmandu

Republic of India

Population:1,380,004,385

Region: Asia

Capital:New Delhi

```html
<a href="/country/Republic%20of%20India">
  <img
    src="path_to_india_flag.svg"
    alt="Indian national flag"
    class="IndiaFlag"
  />
  <div class="countryInfo">
    <p class="countryTitle">Republic of India</p>
    <div>
      <p>
        <span class="infoTopic">Population:</span> 1,380,004,385
      </p>
      <p>
        <span class="infoTopic">Region:</span> Asia
      </p>
      <p>
        <span class="infoTopic">Capital:</span> New Delhi
      </p>
    </div>
  </div>
</a>
```

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    <span class="infoTopic">Region:
    <span class="infoTopic">Capital
```

People's Republic of Bangladesh

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Region: Asia

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Population:29,136,808

Region: Asia

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Republic of India

Population:1,380,004,385

Region: Asia

Capital:New Delhi

```jsx
<Link to={`/country/${country.name.official}`}>
  <img
    src={country.flags.svg}
    alt={country.flags.alt}
    className={styles.countryFlag}
  />
  <div className={styles.countryInfo}>
    <p className={styles.countryTitle}>{country.name.official}</p>
    <div>
      <p>
        <span className={styles.infoTopic}>Population:</span>
        {country.population.toLocaleString()}
      </p>
      <p>
        <span className={styles.infoTopic}>Region:</span> {country.region}
      </p>
      <p>
        <span className={styles.infoTopic}>Capital:</span>
        {country.capital[0]}
      </p>
    </div>
  </div>
</Link>
```

```jsx
return (
  <div className={`container ${styles.countriesCards}`}>
    {filteredCountries.map((country) => (
      <CountryCard country={country} key={country.name.common} />
    ))}
  </div>
);
```

React is Declarative

Why React.js ?

- React is declarative because it describes what the UI should look like rather than how to achieve it. This makes the code easier to read and maintain, as it is more focused on the end result rather than the steps involved in getting there.

React - Declarative

```
function MyComponent({ name }) {
    return <div>Hello, {name}!</div>;
}
```

**JS - Imperative**

```
function MyComponent(name) {
    const element = document.createElement('div');   // Create a new div element
    element.textContent = `Hello, ${name}!`;         // Set text content manually
    return element;                                  // Return the created element
}
```

- Here, we are manually creating elements, setting their properties, and appending them to the DOM.

How React works?

Reconcilation

React Elements

Instances

Final UI

Component

DOM Element
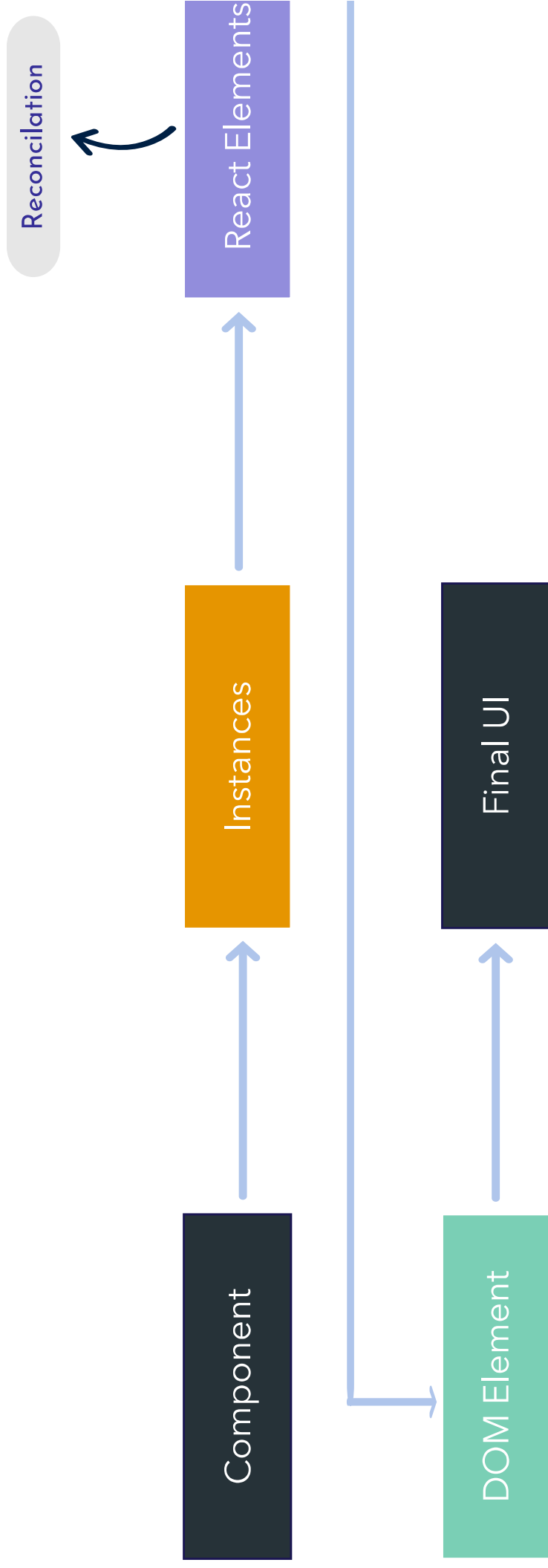
Why React.js over Vanilla JavaScript?

- Oppose to Vanilla JavaScript, React has a concept called **components** which combines all HTML, CSS and JavaScript features instead of separating HTML, CSS and JavaScript completely.

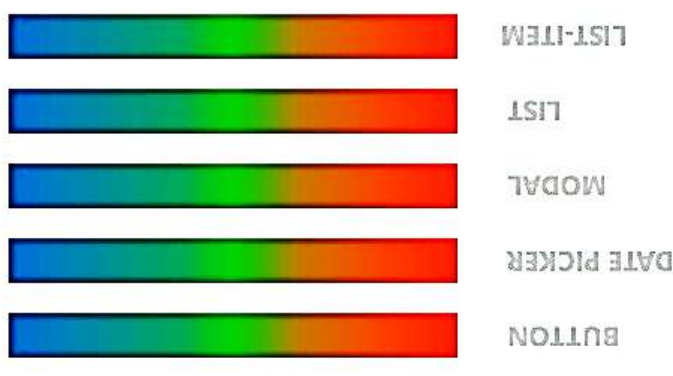- React.js manages updating the DOM or Document Object with the components written by us.

Separation of Concerns

JS

CSS

HTML
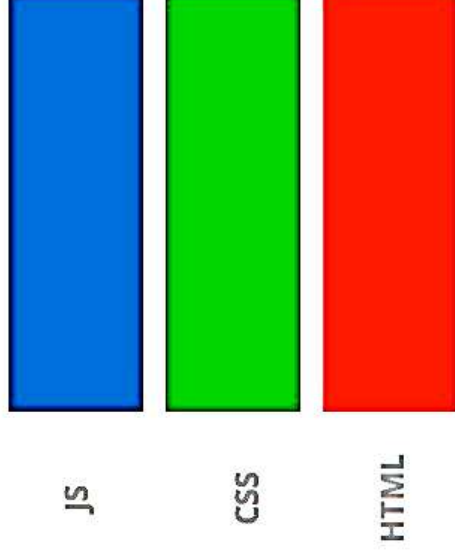
Traditional Way

Separation of Concerns
(only, from a different point of view)

BUTTON

DATE PICKER

MODAL

LIST

LIST-ITEM

React.js

Why React.js?

- React is the Most Popular JavaScript library for building user interfaces.

- Component-Based Architecture

- Declarative UI

- Rich Ecosystem – npm packages

- Strong Community Support – Online / Github