

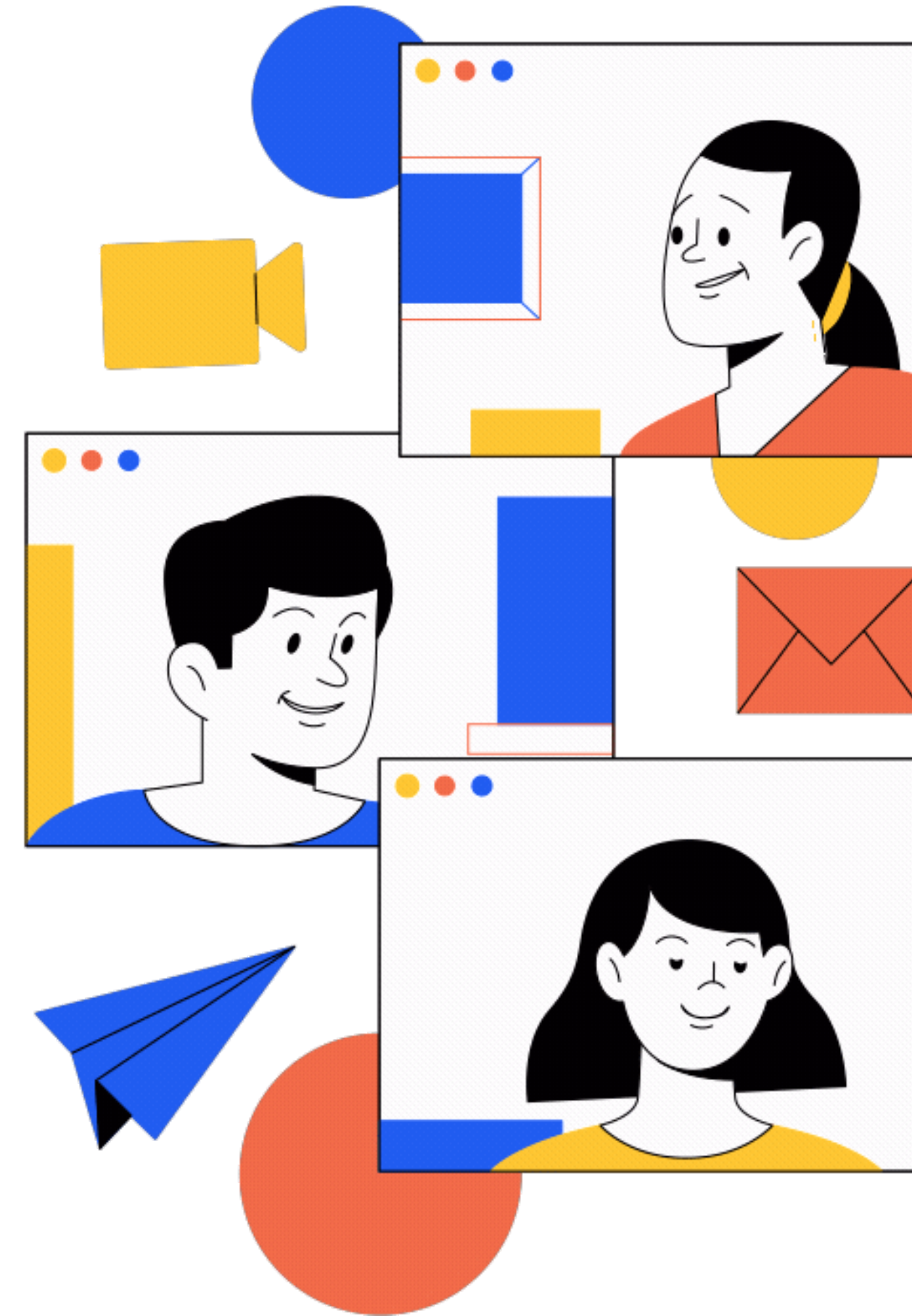


# Week 1 – React Dev. Cross-Skilling ND

Welcome onboard

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React Session Lead



# Introduce Yourself

In just 30 second, tell us more about yourself



01

Name

02

Age

03

Major

04

Favorite series, film or  
cuisine

# Agenda



## What we'll cover in this session

- Introduction
- Join our Community
- What is React? and Why using React?
- Rendering UI Components with React
- Live Demo

# Program Prerequisites

you don't have to be a master

1

HTML/CSS

2

JavaScript

# Dos

What students should do to graduate

- ✓ Attend Weekly Sessions
- ✓ Make progress in your classroom each week.
- ✓ Submit the first project before **its deadline**

# Don'ts

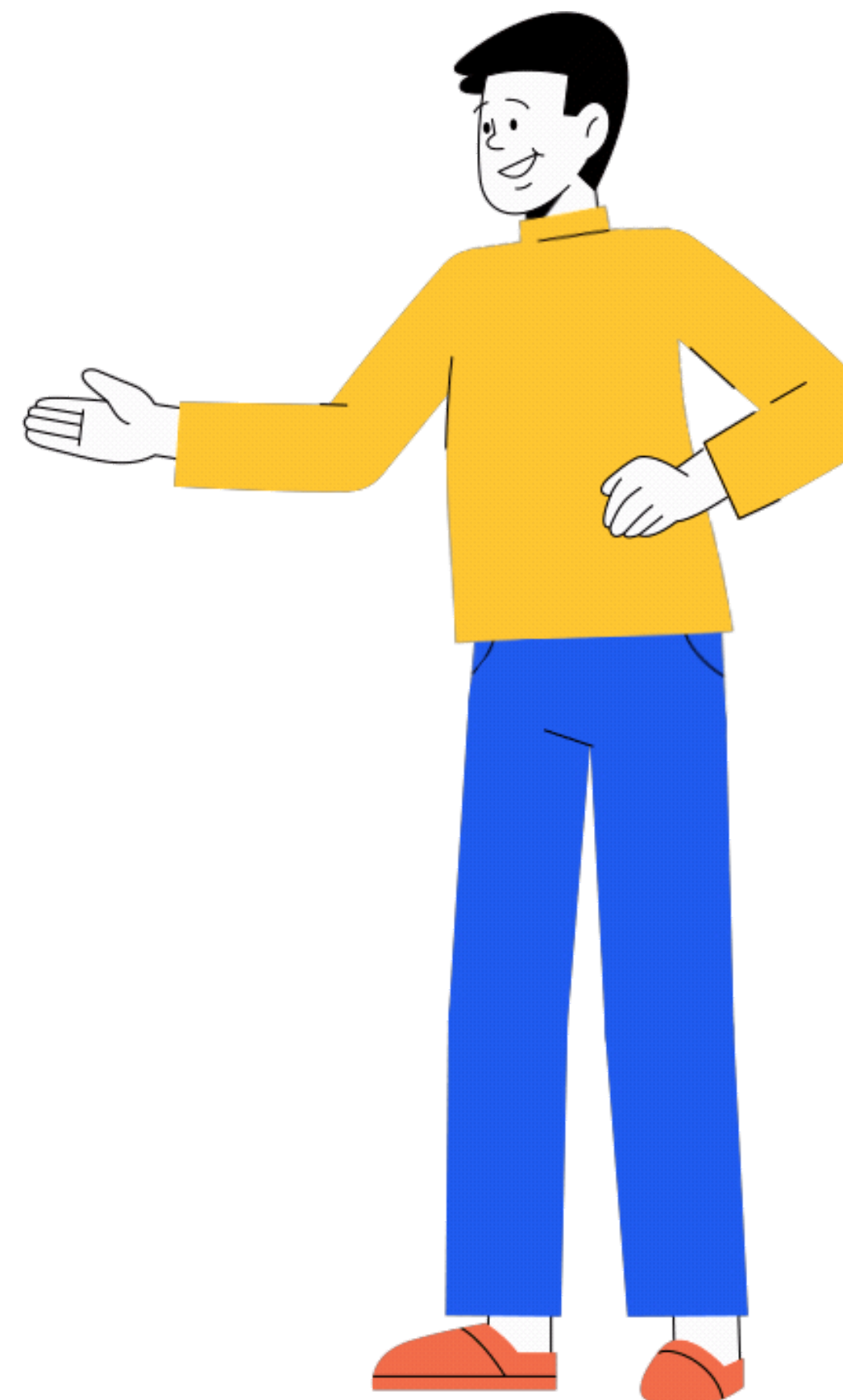
What to avoid

✗ **Plagiarism**



# Join our Slack Community

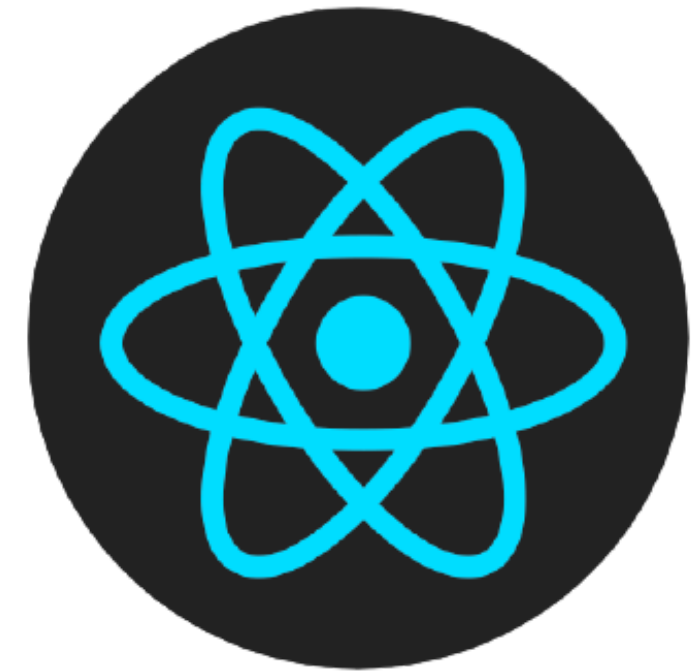
[https://join.slack.com/t/egfwd-t4-july-22/shared\\_invite/zt-1bzvdhl41-9RfmDc10pJirPrJGjGP9bg](https://join.slack.com/t/egfwd-t4-july-22/shared_invite/zt-1bzvdhl41-9RfmDc10pJirPrJGjGP9bg)





# What is React?

- React is a JS library used for building reusable, complex UI components.
- Components are the heart of every React App.
- Developed and maintained by Facebook and became open-sourced in 2013.
- Components can be nested inside each other to build the whole page.



## Real (Actual) DOM

- DOM is an acronym for **Document Object Model**.
- When a web page is loaded, the browser creates a DOM of the page.
- DOM is data representation of the objects that build the structure and content of a document on the web.
- DOM can be used as a **programming interface** for web documents, it represents the page so that the programs can manipulate it easily.
- DOM Manipulation is **very expensive and memory intensive**

## Virtual DOM

- **VDOM** is a virtual representation of the actual DOM.
- React BTS creates a whole copy of the initial Real DOM and call it virtual DOM.
- On component updates, React updates the VDOM.
- React matches the actual DOM with its copy (updated VDOM) and detects what has been changed. and then apply these changes to the Real DOM.
- VDOM manipulation is **Cheap, Fast and memory efficient**

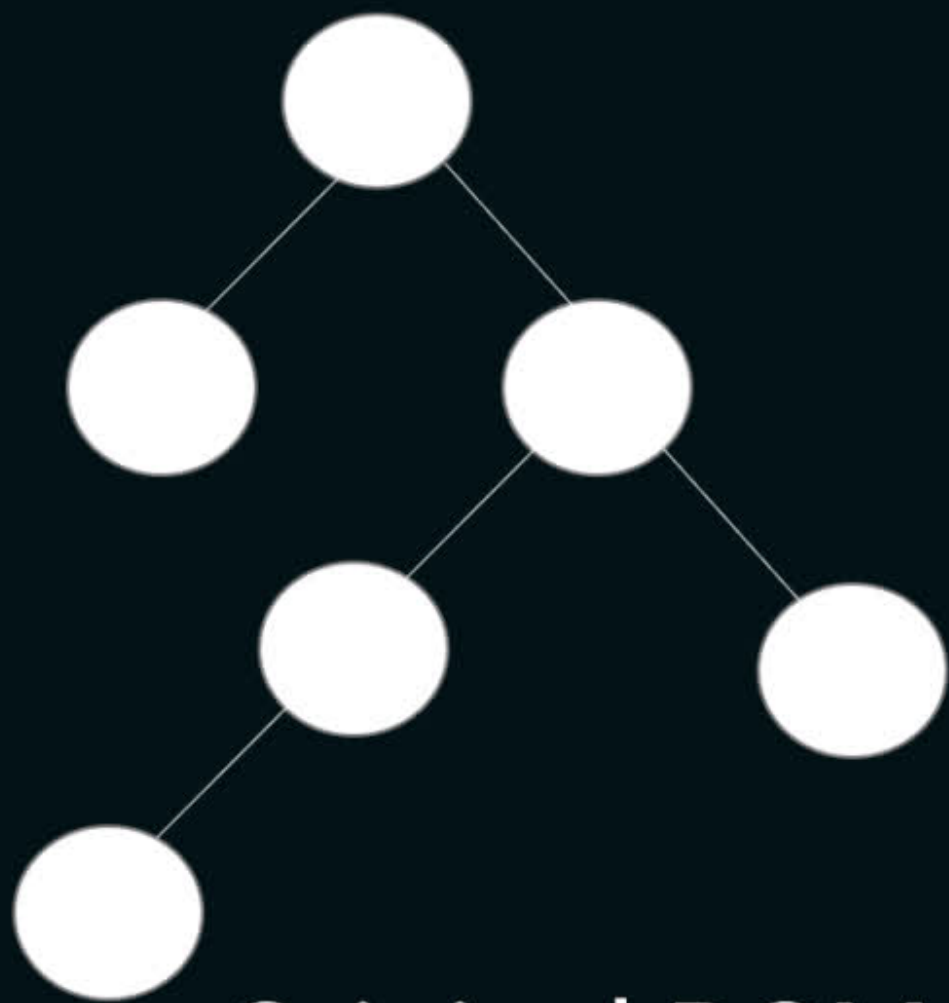
# Why using React?

## Why choosing React in the first place



- It uses Virtual DOM
- It can be used for SSR or CSR
- It follows Uni-Directional Data flow
- Composition
- The most famous frontend web framework
- Uses JSX

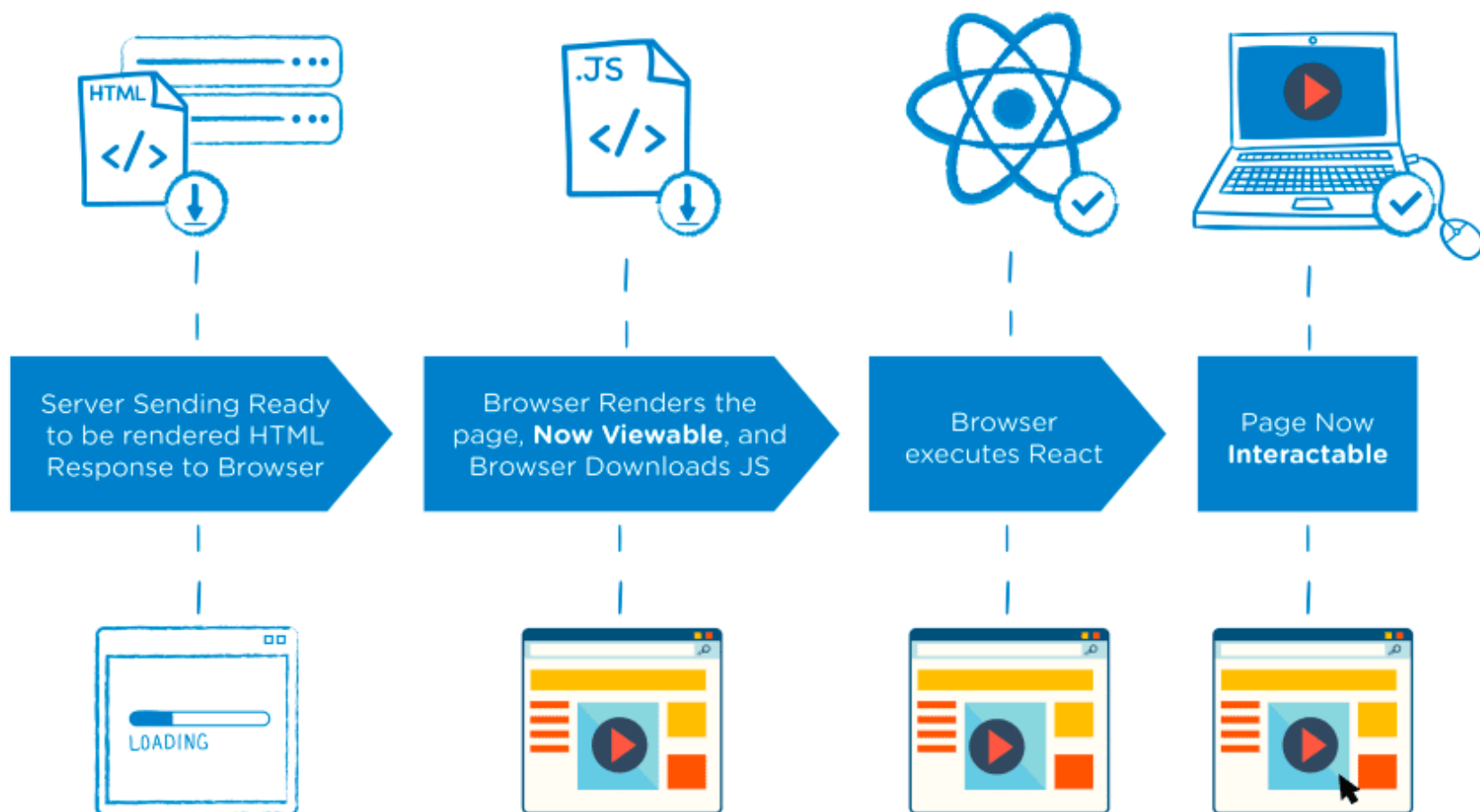




Original DOM

## Server-Side Rendering (SSR)

- The ability of a web application to render the web page on the **server** instead of rendering it in the browser
- Ideal for static sites
- Good for **SEO**



## Why using React?

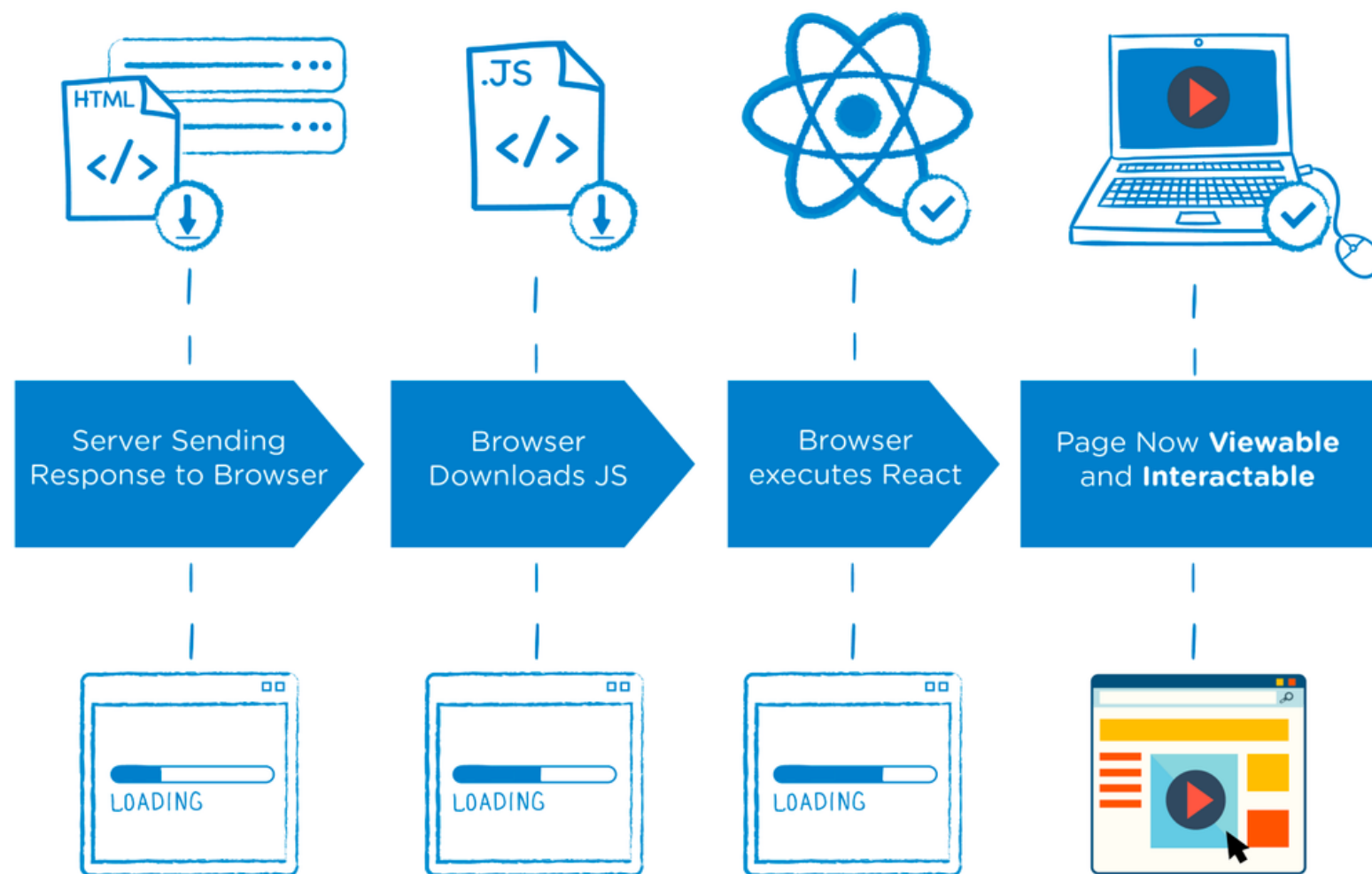
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## Client-Side Rendering (CSR)

- Empty HTML is served to the browser at first.
- Browser download JS files from the server.
- HTML is then build on the browser and then the page is viewed and interactable.
- Use CSR when SEO is **not** a priority



## Why using React?

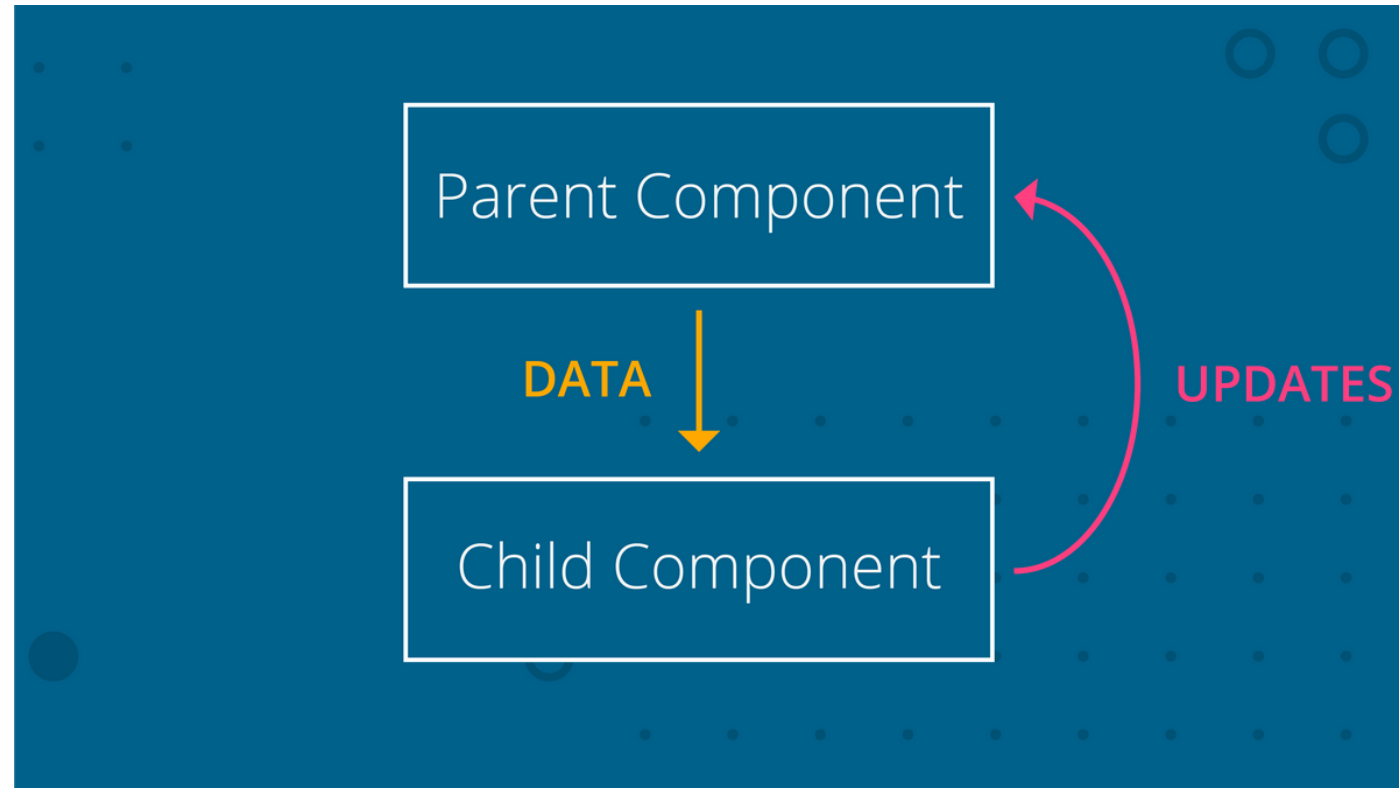
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## Uni-Directional Data flow

- In React, data flows in only one direction, from parent to child.
- Parent is **the one and only** responsible for updating the data.
- The parent must pass a **callback function** to the child in order to be able to update the data
- If the child wants to render some data maintained by its parent, then the parent must pass it as **props**



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## Composition

- Composition is a **pattern** that is used to combine simple functions or components to build more complicated ones
- In React, Composition means combining simple components to build complex UI.



```
<Layout>
  <Navbar />
  <MainContent />
  <Footer />
</Layout>
```

# Why using React?

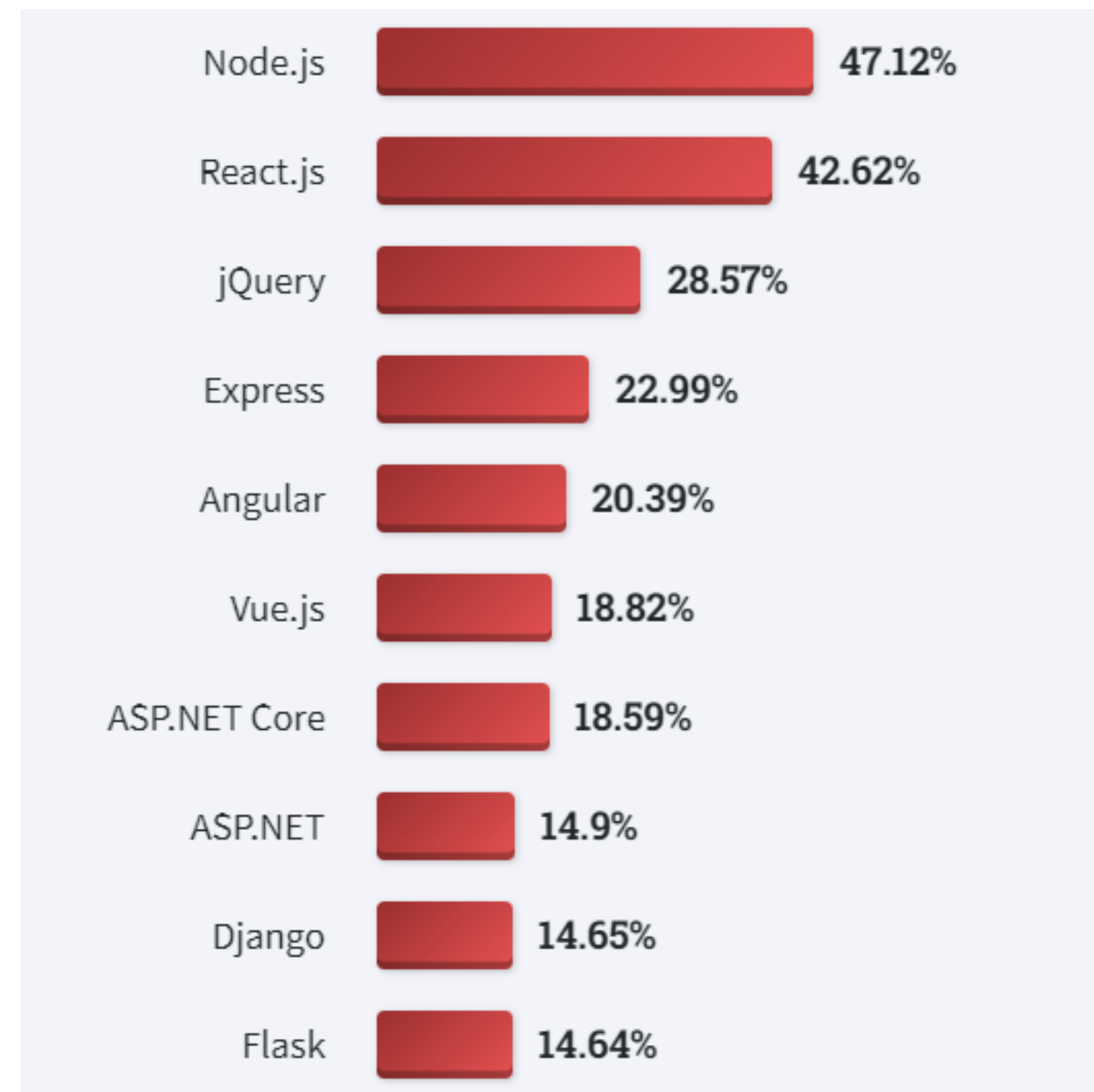
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## Most Famous Frontend Web Framework

according to [Stackoverflow Survey 2022](#)



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## JSX (JavaScript HTML)

- JSX is a combination of JavaScript and HTML that allows us to write HTML Tags and elements into javascript files.
- This lets us organize everything into components  
    <Button /> without using **React.createElement** to build HTML elements.

```
//written with JSX
class Hello extends React.Component {
  render() {
    return <h1>Hello, {this.props.toWhat}!</h1>;
  }
}

ReactDOM.render(
  <Hello toWhat="world" />,
  document.getElementById("root")
);

//written without JSX
class Hello extends React.Component {
  render() {
    return React.createElement("h1", null, `Hello, ${this.props.toWhat}!`);
  }
}

ReactDOM.render(
  React.createElement(Hello, { toWhat: "world" }, null),
  document.getElementById("root")
);
```

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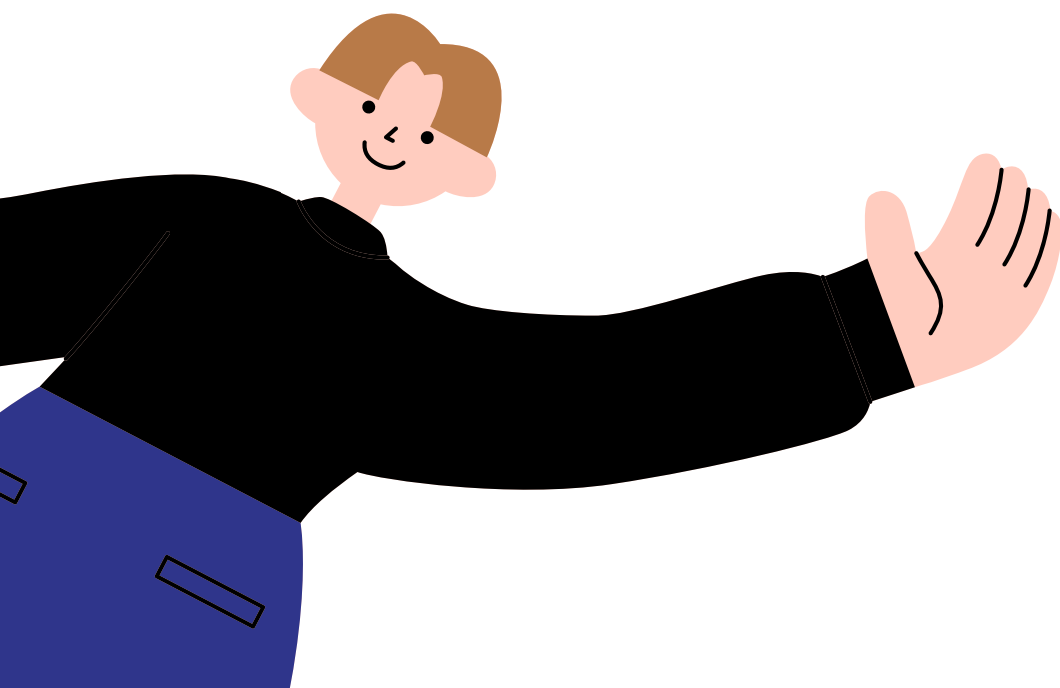
# Its Demo Time



peacock



**Any Questions?**



# Thank you!

For questions, requests and anything, please reach out to me on slack or email me at [aghonem2011@gmail.com](mailto:aghonem2011@gmail.com)



Follow me on Github @3ba2ii  
code and slides are found at this [github repo](#)

