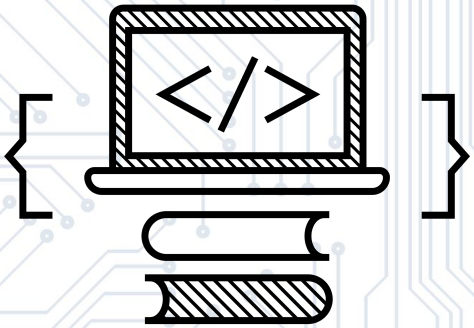


Props, Lists, and Stateful Components

Web Development

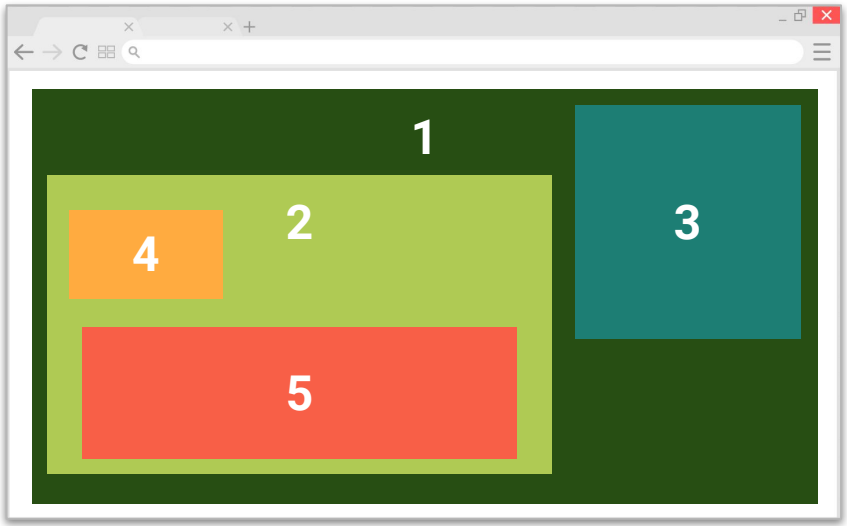
Lesson 19.2

Components

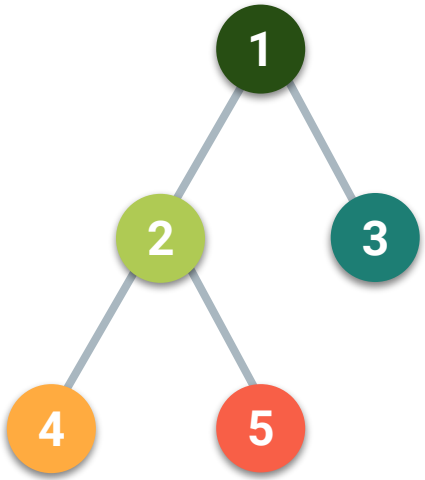
Components

Components are JavaScript functions that return a part of an application's UI. Think of them as the building blocks of a React application.

Browser



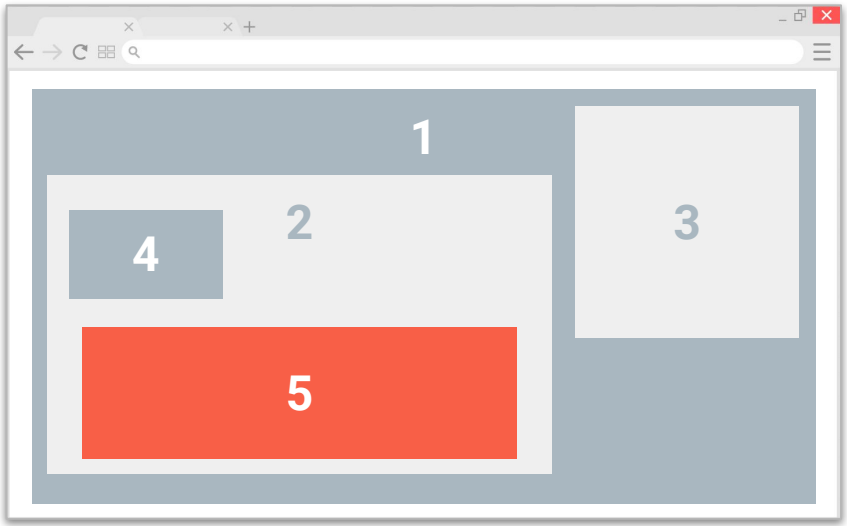
UI Tree



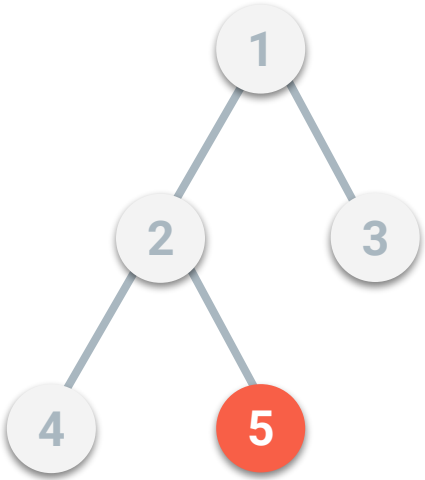
Components

Components let you split the UI into independent, reusable pieces and to consider each piece in isolation.

Browser

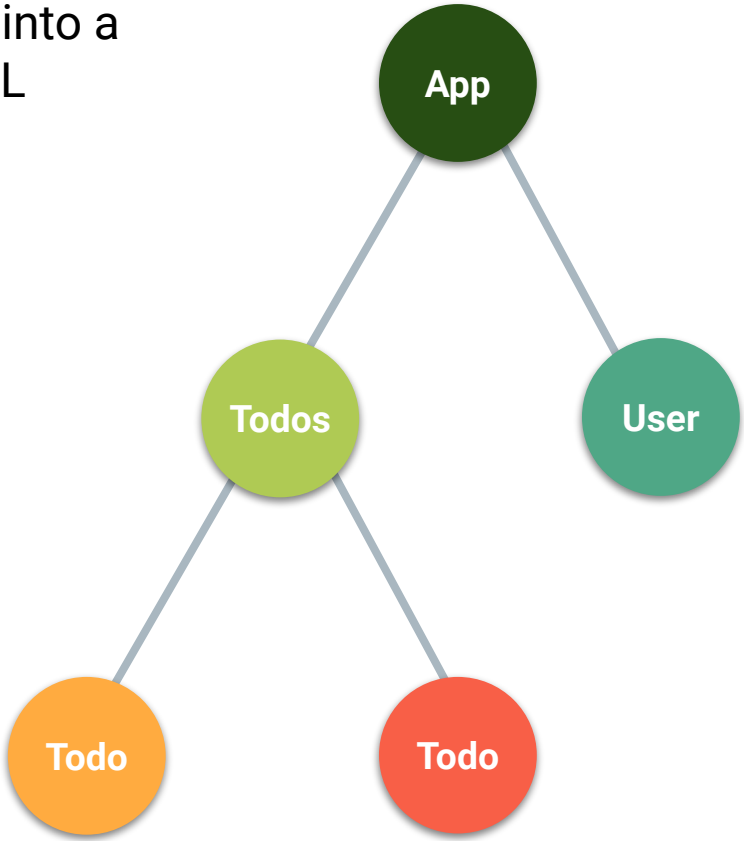


UI Tree



Components

Components are organized into a tree structure, just like HTML elements in the DOM.



Components

By separating elements into components:

01

Layout and logic are bundled together in a self-contained package.

02

Components can be reused throughout the application without needing to be re-coded.

03

Testing is easier (e.g., having one reusable component means only one UI element needs to be tested).

JSX

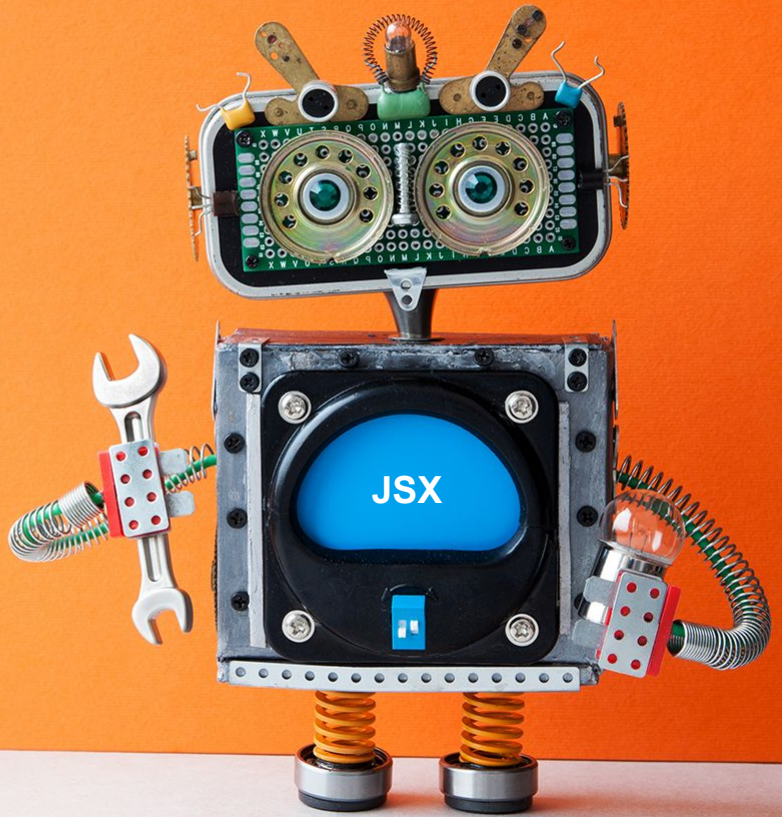
JSX is a preprocessor step that adds XML syntax to JavaScript.

JSX makes React more elegant.

JSX

JSX looks like HTML, but there are some differences you need to know about.

React’s documentation covers the gotchas to look out for.



JSX Curly Braces

Use curly braces `{ }` in JSX code to embed JavaScript expressions.

Evaluating a JavaScript variable:

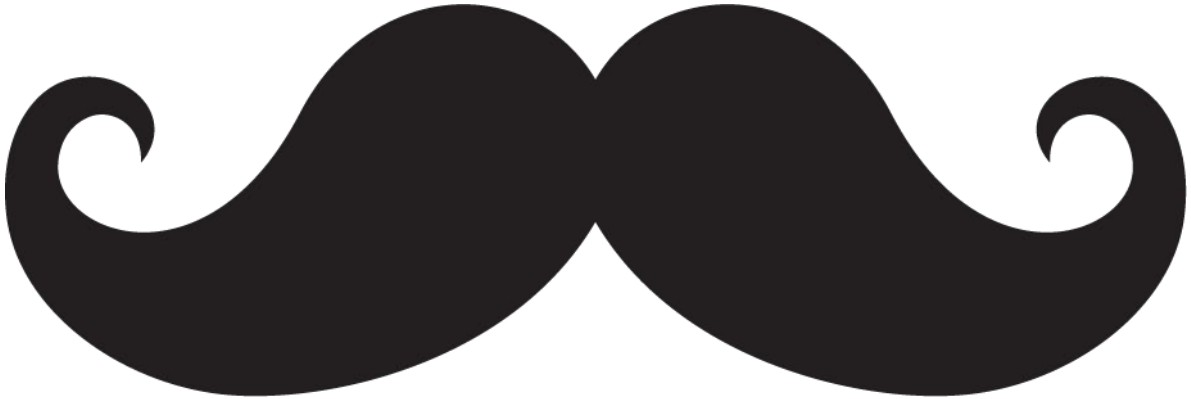
```
const yellowStyle={color: 'yellow'}
<Star style={yellowStyle} />
```

Which is same as:

```
<Star style={{color: 'yellow'}} />
```

JSX Curly Braces

JSX curly braces { } can be compared to the double curly braces {{ }} in Handlebars.



Props

Props are like function arguments that you can pass to components for them to use.

Props

01

Can be passed to a component by attaching attributes to the JSX that render the component, similar to how you attach attributes to HTML elements.

02

Considered immutable (something you can't change).

03

Can be used to change the default behavior of a component.

ReactDOM.render

ReactDOM.render

01 **ReactDOM**

ReactDOM is a library separate from React with methods for working with the DOM.

02 **ReactDOM.render()**

`ReactDOM.render()` renders a single root component to the Virtual DOM, and then the real HTML DOM. We typically call this method only once per React application.

<Time to Code>