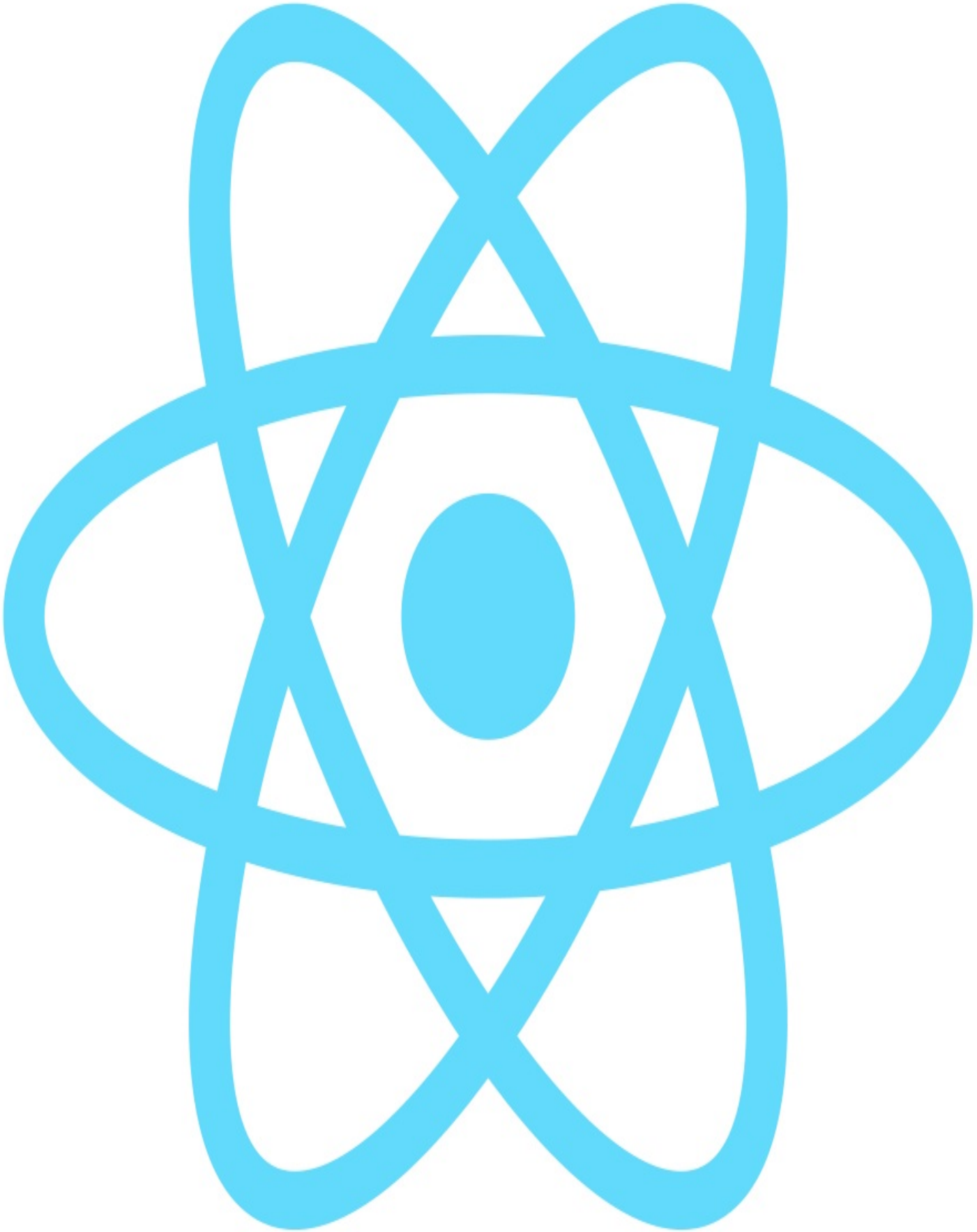

# Table of Contents

# React Enlightenment

Written by Cody Lindley sponsored by — Frontend Masters

Learn React in the terse cookbook style found with previous Enlightenment titles (i.e., jQuery Enlightenment, JavaScript Enlightenment, DOM Enlightenment)

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**Read Online At**:

- reactenlightenment.com

**download a .pdf, .epub, or .mobi file from**:

- https://www.gitbook.com/book/frontendmasters/react-enlightenment/details

**contribute content, suggestions, and fixes on github**:

- https://github.com/FrontendMasters/react-enlightenment

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# What is React?

React is a JavaScript tool that makes it easy to reason about, construct, and maintain stateless and stateful user interfaces. It provides the means to declaratively define and divide a UI into UI components (a.k.a., React components) using HTML-like nodes called React nodes. React nodes eventually get transformed into a format for UI rendering (e.g., HTML/DOM, canvas, svg, etc.).

I could ramble on trying to express in words what React is, but I think it best to just show you. What follows is a whirlwind tour of React and React components from thirty thousand feet. Don't try and figure out all the details yet as I describe React in this section. The entire book is meant to unwrap the details showcased in the following overview. Just follow along grabbing a hold of the big concepts for now.

# Using React to create UI components similar to a `<select>`

Below is an HTML `<select>` element that encapsulates child HTML `<option>` elements. Hopefully the creation and functionality of an HTML `<select>` is already familiar.

> source code

When a browser parses the above tree of elements it will produce a UI containing a textual list of items that can be selected. Click on the "Result" tab in the above JSFiddle, to see what the browser produces.

The browser, the DOM, and the shadow DOM are working together behind the scenes to turn the `<select>` HTML into a UI component. Note that the `<select>` component allows the user to make a selection thus storing the state of that selection (i.e., click on "Volvo", and you have selected it instead of "Mercedes").

Using React you can create a custom `<select>` by using React nodes to make a React component that eventually will result in HTML elements in an HTML DOM.

Let's create our own `<select>`-like UI component using React.

# Defining a React component