A Practical Start with React

Should You React?

Roland Guijt
Microsoft MVP, Consultant, Trainer

@rolandguijt   rolandguijt.com

Overview

What we're building

What you should know

Why React is great

Working with components

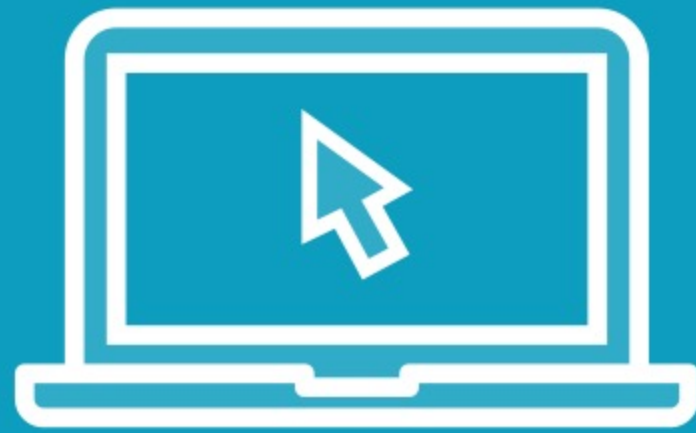React compared to Angular and Vue

Prerequisites

JavaScript (ES 2017+)

Bootstrap 4
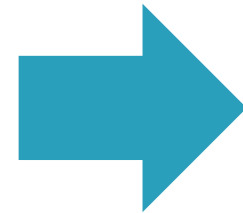
Demo

Show how smart React is with updating the DOM

Start with plain javascript example

Compare with React example

Element Tree

```
<div class="split">
  <input />
  <p>Sunday 4:00 pm</p>
</div>
```

➡

```
React.createElement(
  "div",
  { className: "split" },

  React.createElement("input"),
    React.createElement(
      "p",
      null,
      "Sunday 4:00 pm")
);
```

What is displayed in the browser is a reflection of the state of the application.

Tree Reconciliation

```
React.createElement(
  "div",
  { className: "split" },

React.createElement("input")
,
      React.createElement(
        "p",
        null,
        "Sunday 4:01 pm")
);
```

```
React.createElement(
  "div",
  { className: "split" },

React.createElement("input")
,
      React.createElement(
        "p",
        null,
        "Sunday 4:00 pm")
);
```

JSX

```
React.createElement(
  "div",
  { className: "split" },

  React.createElement("input"),
      React.createElement(
        "p",
        null,
        "Sunday 4:01 pm")
);
```

```
<div className="split">
  <input/>
  <p>
    Sunday 4:01 pm
  </p>
</div>
```

The React Workflow

```
<div
className="split">
  <input/>
  <p>
    Sunday 4:01 pm
  </p>
</div>
```

Babel →

```
React.createElement(
  "div",
  { className: "split" },
      React.createElement("input"),
      React.createElement(
        "p",
        null,
        "Sunday 4:01 pm")
);
```
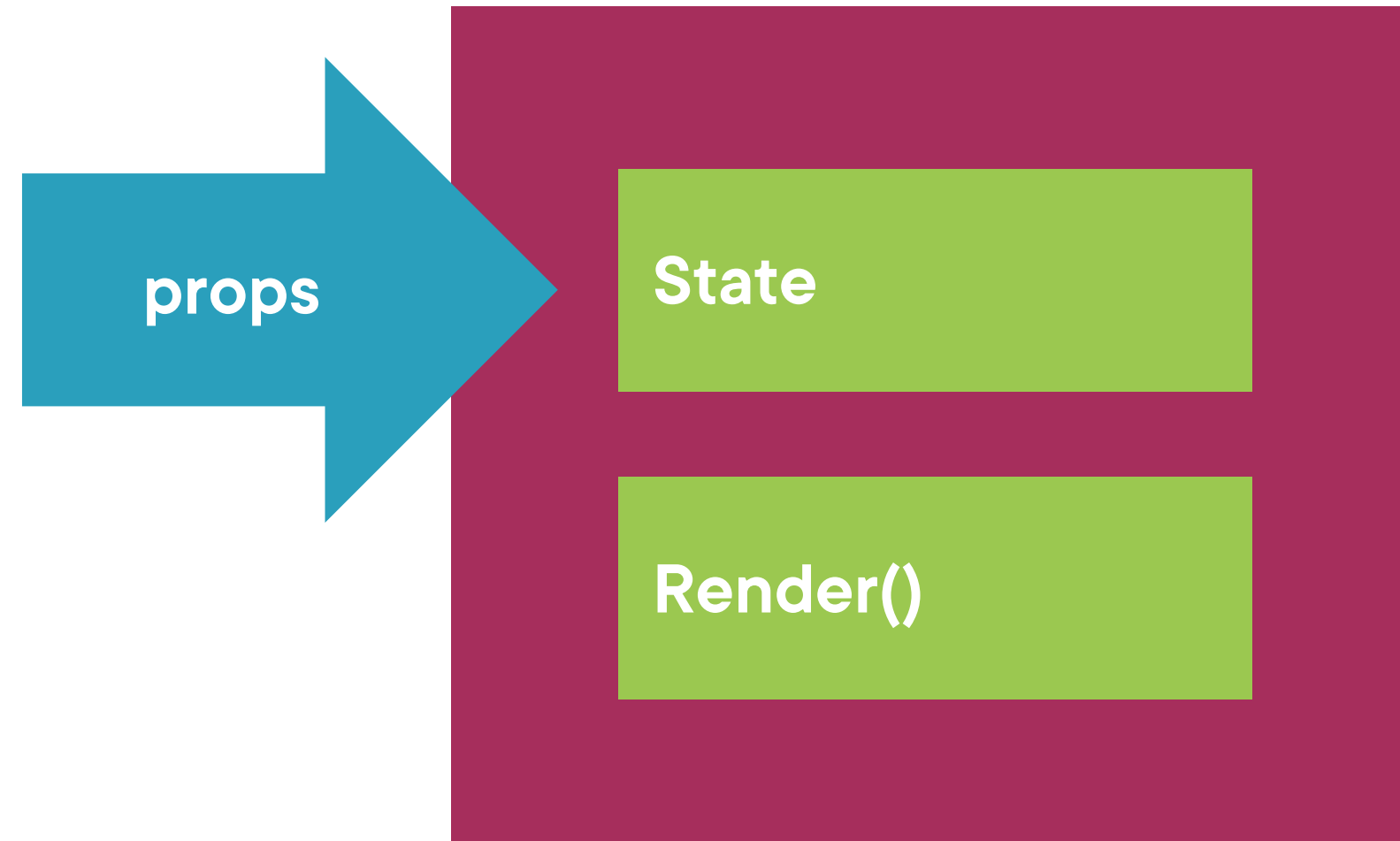
React DOM →

```
<div class="split">
  <input
type="text"/>
  <p>
    Sunday 4:01 pm
  </p>
</div>
```

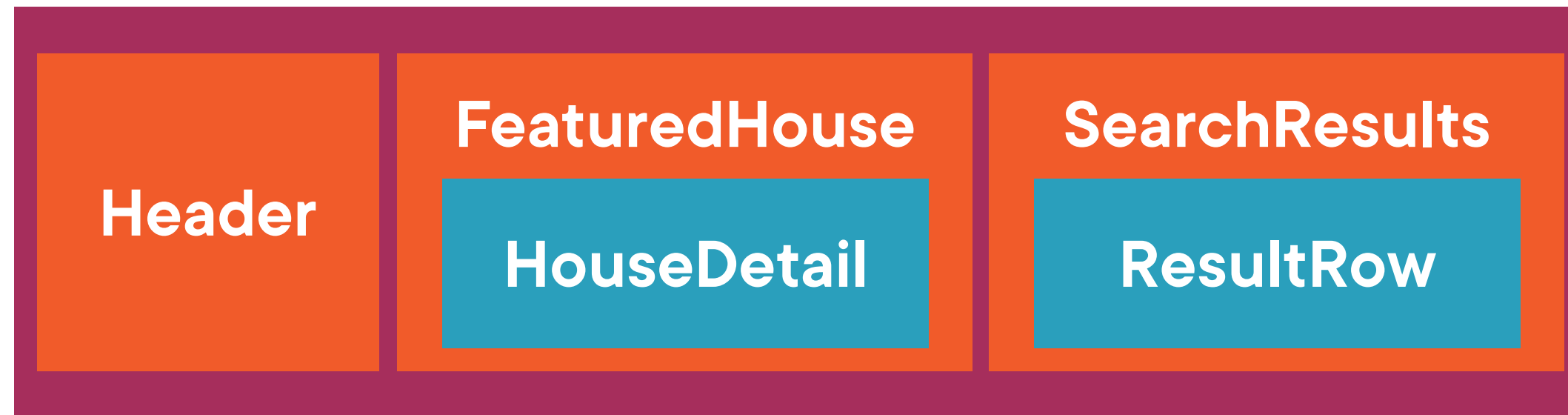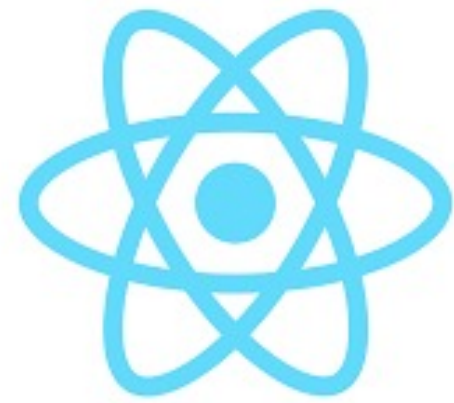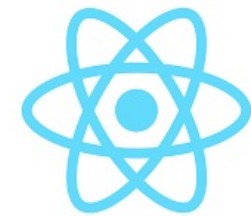React is a javascript library to create and compose components.

Component

props → **State**

Render()

<Component prop="value"/>

Composition

Comparing React to Alternatives

These are all great

Comparing React to Alternatives

React	Angular	Vue
Components	Components	Components
Library	Framework	Library
Facebook	Google	Community
MIT	MIT	MIT
1 way data-binding	2 way data-binding	1 way data-binding
UI in JavaScript	UI in HTML	UI in HTML

Summary

Smart UI updates

Tree reconciliation

JSX

Components

Alternatives