

Refactoring with React



Chris Minnick

CEO, WATZTHIS

@chrisminnick www.watzthis.com



Pretest



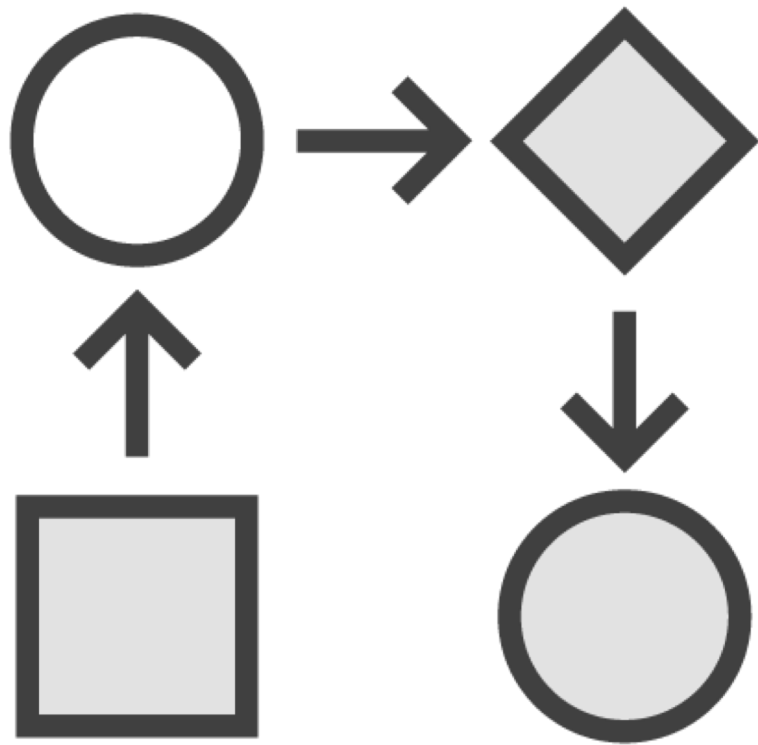
What is state?

What is inverse data flow?

What is a pure function?

How to test events and functions with Jest?





React Development Process

Create a Component Hierarchy

Build a Static Version

Identify the Minimal UI State

Identify Where State Should Live

Add Inverse Data Flow



Types of Data in React

Props

Is passed from parent to child

Is immutable

State

Is modified using `setState()`

Calling `setState()` triggers re-render

State updates may be asynchronous



Minimal UI State



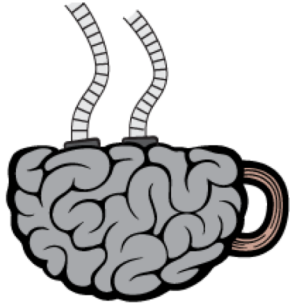
Is it not passed in from a parent?

Does it change over time?

Is it not possible to compute based on other state or props?



What's Our State?



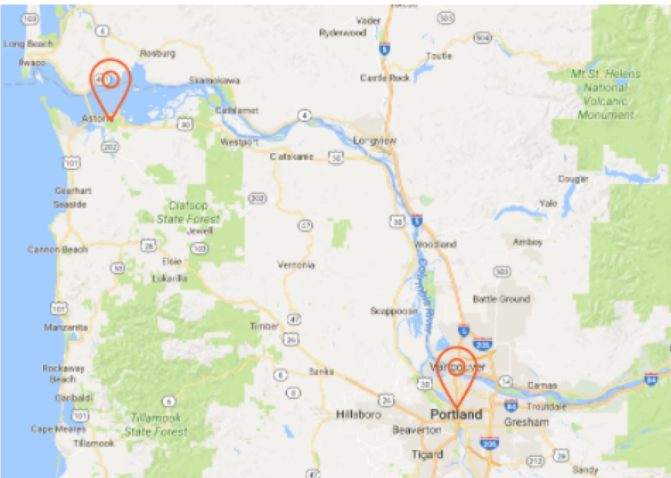
WIRED BRAIN

COFFEE

Portland

Astoria

All Locations



Button Name?

No, it's passed as a prop

Map Name?

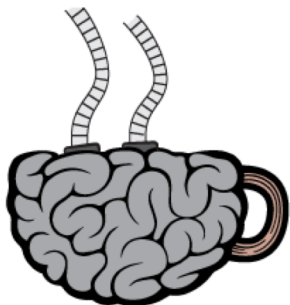
No, it's computed

Currently Displayed Map!

Yes! It changes based on user input



Where Should the State Live?

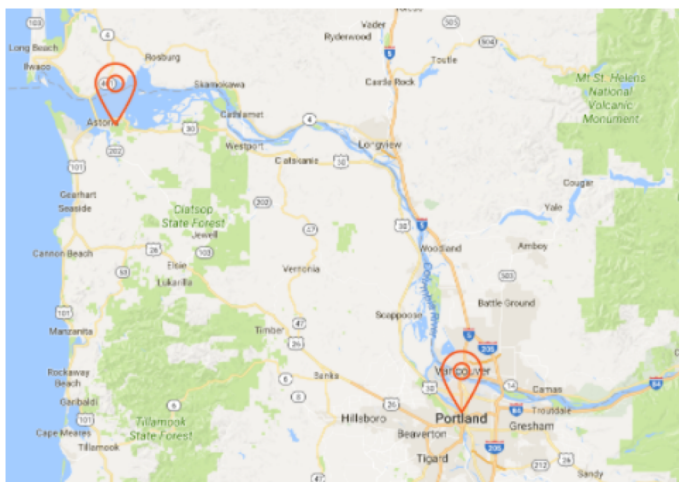


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Identify every component that renders something based on the state
Button, Map

Find a common owner (or parent)
StoreLocator



Inverse Data Flow



Events

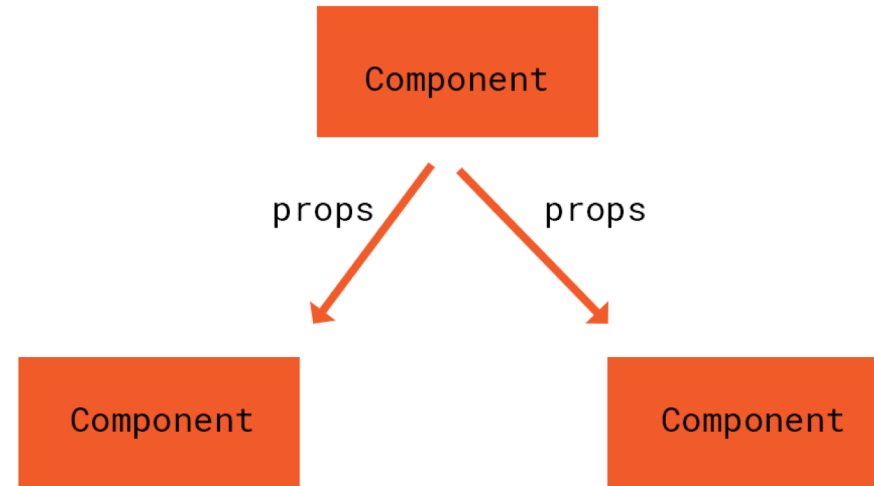
React uses one-way data binding

Make data flow explicit

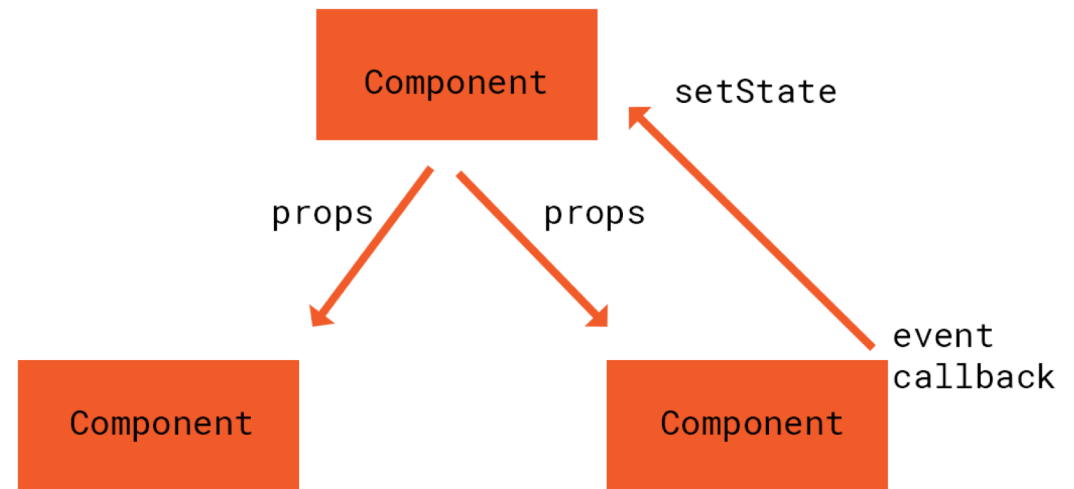
Update state using callbacks



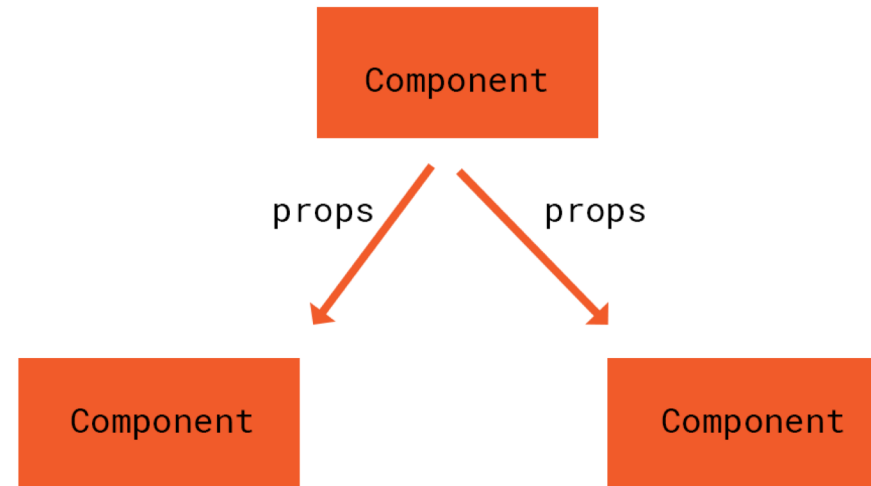
**Components pass
props to their children**



**Event callbacks
modify the parent's
state**



The new state is
passed to the children
as props



Demo



Adding Inverse Data Flow



Demo



Updating State

