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TALENT IN **TECH**NICOLOUR

React Functions as Props
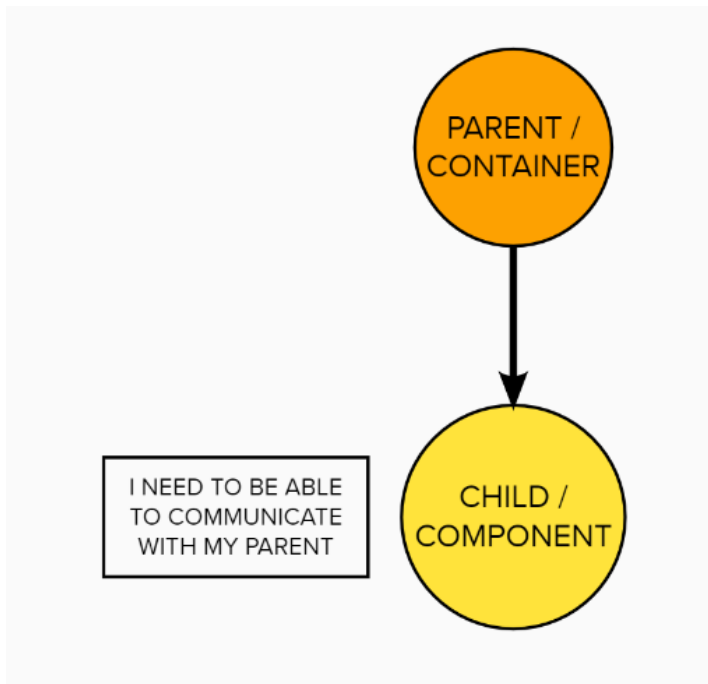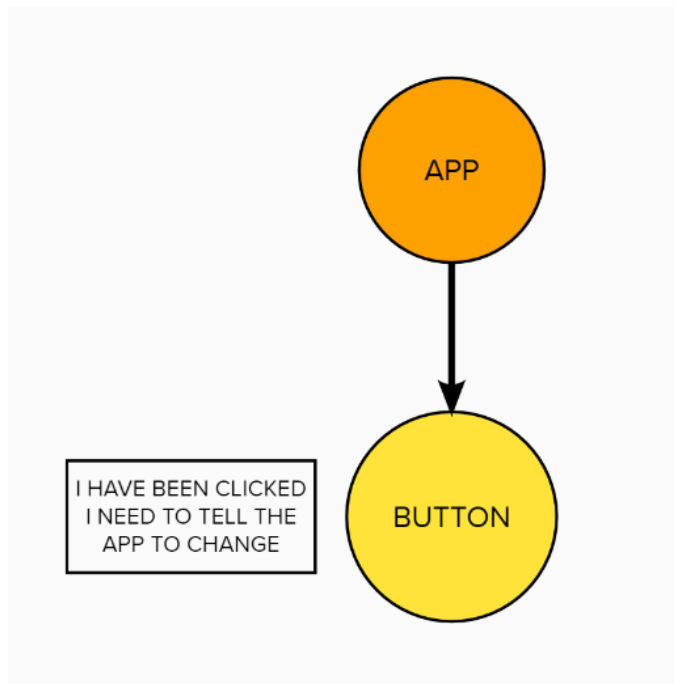
Learning Objectives

- Container Component design pattern.
- Why it's used.
- Passing functions as Props
- Passing the Event back
- Having state and set state in a Container.

Communication in an Application

Components need a way to communicate with the rest of the application.

What is a design pattern?

Container / Component

A general, reusable solution to a commonly occurring problem in software design.

Container / Component is just a design pattern.

The aims of Container / Component
- Make components simpler
- Scalable
- More Reuse less coding
- Easier to test

Separation of concerns

Container	Component
• Controller • Business Logic • Manages State / Stateful • Does the work	• View • Simple / Presentational • User interacts with • Displays the work

How can a component communicate with its container?

Functions as Props

Functions are written in the parent / container not in the component.

They are passed to the relevant component as props.

The component is then able to use the function when it is needed e.g., on a click.

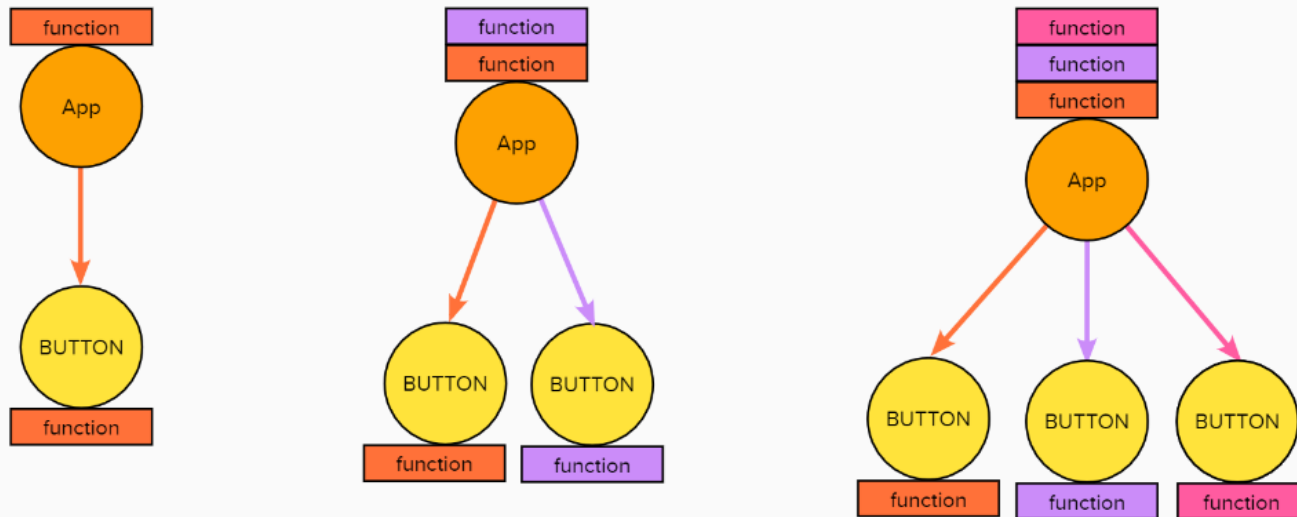This makes our component more:
- Versatile.
- Reusable.
- Simpler.

PROPS GET PASSED DOWN EVENTS GET PASSED UP

Functions as Props

How the same component could be passed DIFFERENT functions by its parent container.

The button is the same component just given different functions by the container.

With State
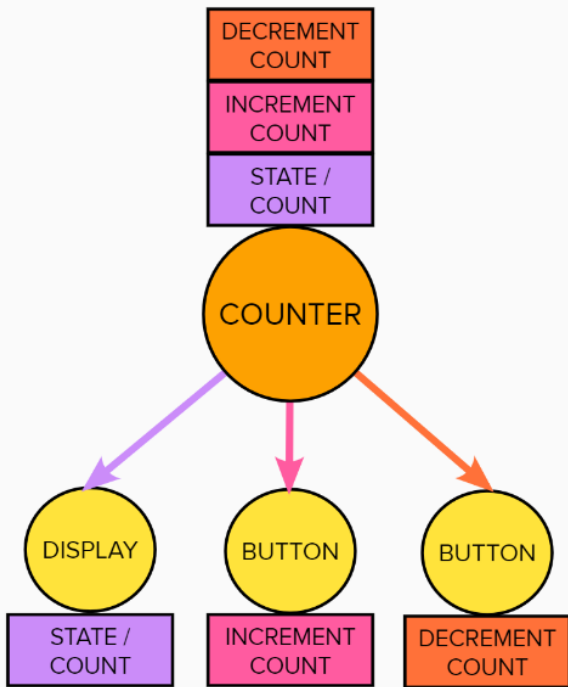
A container can manage state.

Passing state to components that need it

Passing functions to components that need to interact with it.

Below all the logic has been moved to the container.
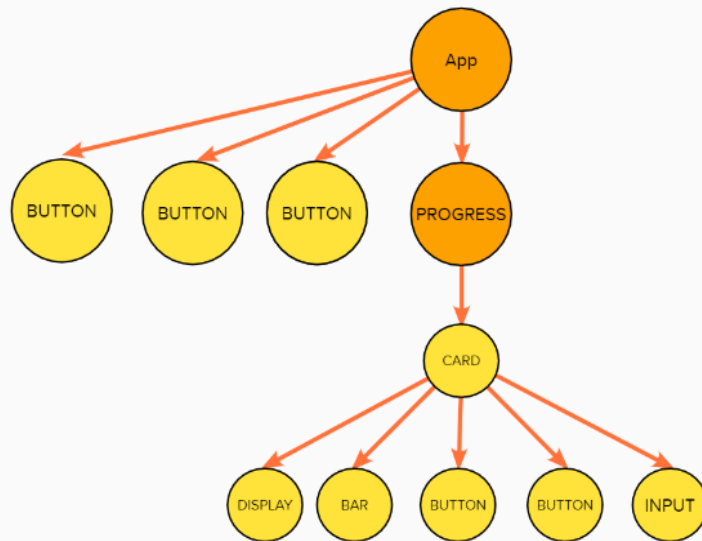
The components are purely presentational.

They show the data and use functions that are given.
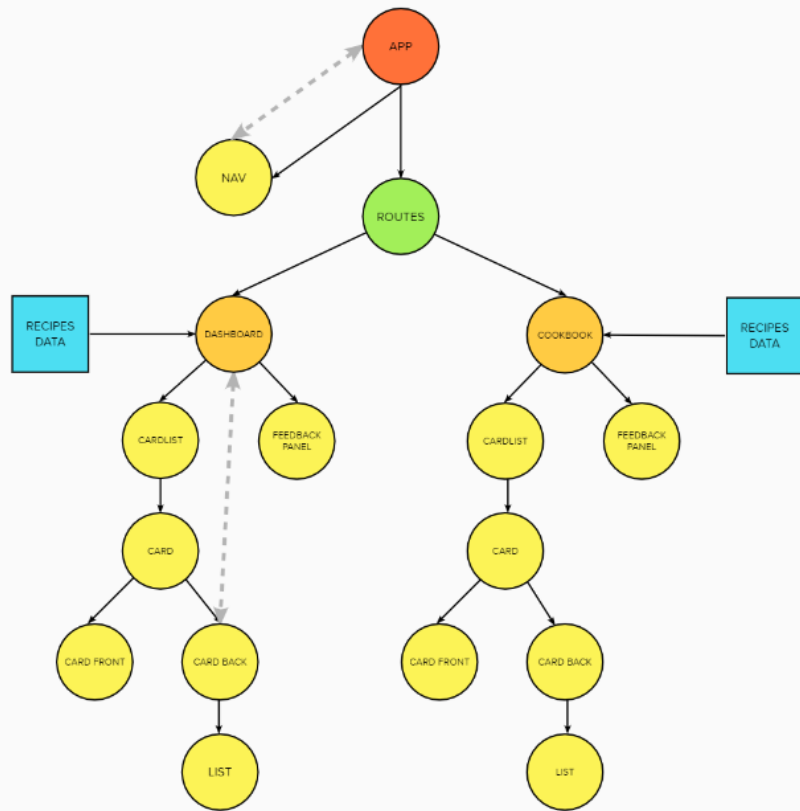
Code along - Sandbox

- Moving logic into container makes components reusable.

- Create three functions and pass them into a Button component

- Connect components to state that lives in the parent container.

- To pass functions that interact with state to the child components.

Code along - Mealworm

- Show functions being passed down as props.

- Implement the logic to search through the data file for a matching recipe.

- Add recipes from the dashboard into your favourites/cookbook

Additional Reading

- [Superpowers - Container Component Design](#)

- [A collection of different Design Patterns for React](#)

- [A little blog about Container Component](#)