

Chapter 11 - Data is the new Oil

Theory:

- What is prop drilling?

Prop Drilling is when you pass data from a parent component to a deeply nested child component by passing it through several layers — even if the middle components don't need it.

Why it's a problem?

It makes your code harder to manage when your component tree gets bigger.

```
<App data="Hello">
  <ParentComponent data={data}>
    <ChildComponent data={data} />
  </ParentComponent>
</App>
```

Even if only ChildComponent needs the data, App has to pass it through ParentComponent.

- What is lifting the state up?

Lifting state up means moving the useState or state logic **from a child to the parent** when multiple components need to use the same data.

Why do this?

To make one shared place (usually the parent) control the state.

// Parent keeps the state

```
const [count, setCount] = useState(0);
```

// Pass to child

```
<Child count={count} onIncrement={() => setCount(count + 1)} />
```

This helps multiple children work with the same data properly.

- What is Context Provider and Context Consumer?

React's **Context API** is used to avoid prop drilling by providing and accessing data globally.

Context Provider:

It **provides the data** to components that need it.

```
<MyContext.Provider value={"Hello from context"}>
  <Child />
</MyContext.Provider>
```

Context Consumer:

It **receives the data** from the nearest provider above it.

```
<MyContext.Consumer>
  {(value) => <p>{value}</p>}
</MyContext.Consumer>
```

When to use?

Use Context when you want to pass data deeply without sending it through every single component.

- If you don't pass a value to the provider, does it take the default value?

Yes

When you create a context like this:

```
const MyContext = React.createContext("Default Value");
```

```
<MyContext.Provider>
```

```
  <ChildComponent />
```

```
</MyContext.Provider>
```

Then ChildComponent (or any consumer) will receive "Default Value".

So: If you don't pass a value, it uses the **default** from createContext().

Coding:

- Practice React Context with code examples
- Try out Nested Contexts

References:

- [Lifting State Up](#)
- [React Context](#)