HANDWRITTEN NOTES

Props Drilling + Data Handling in React

🔖 Save notes for later

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* Handling data for a web app is one of the most critical part.

* In a web app, there is a

    1. → UI layer on it (everything we see on browser)
    2. → Data layer

UI layer (!imp)

→ written in JSX

→ at EOD, babel converts JSX into objects.

→ That big object structure is known as virtual DOM.

→ We need virtual DOM used for reconciliation.

→ The previous virtual DOM is compared with current one and whatever the "diff" is kept in sync with actual html DOM.

→ The whole UI layer is powered by Data layer.

Data Layer :-

→ What does DL consists of ?

　　o To maintain data within the applications,
　　we use state and props. and more other things.

Difference between State and Prop ?

o Suppose, if we have a container, we want a
　variable which have scope just within that
　container. It is known as **STATE**

o If we have to pass data between one
　component and another component, we can
　use **PROPS**

PROPS DRILLING

　　(install 'React Developer tools' chrome ext)

→ When data is passed from parent to child,
　and then to it's child & then again to it's
　child, this process is known as **PROPS DRILLING**

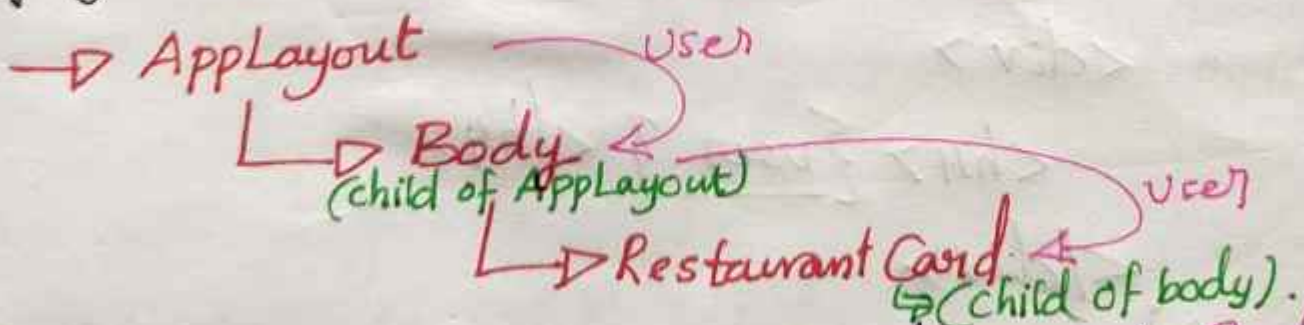Eg:- PROPS DRILLING

`<AppLayout/>` is our root component.

① Suppose, there is a local state in `AppLayout` func called 'user'

```
const AppLayout = () => {
    const [User, setUser] = useState ({
        name : "Ashraya"
        email : "ashraya14@gmail.com"});
```

② Suppose, if I want this information inside `<RestaurantCard/>`, you have to pass that info. How will I pass the data?

So, the hierarchy of components in our project is :-

```
→ AppLayout          user
    └ ▷ Body
      (child of AppLayout)              user
            └ ▷ Restaurant Card
                 (child of body).
```

a) So, first, I will pass the data to Body.

`<Body user = {user}/>`

b) Now, 'Body' receives this as prop :-

```
const Body = ({user}) => {
. . . . . . . . . . . .
    return (
    . . . . . . . .
    ★    <Restaurant-Card user = {user}/>
    )}
```

c) Now, from Body, I passed that prop into
`<RestaurantCard/>`

d) Now, Inside my component `<RestaurantCard/>`
I can get this user.

```
const RestaurantCard = ({user}) => {
    return (
    . . . . . . .
    <div>
        <h4> {user} </h4>
    </div>
    )}
```

In real world react application, this hierarchy can
go to lot more level.

★ What if I have to pass data from child to parent?

   → There are various ways to do this.

   → There are very less cases where you need data from child to parent.

   Ways to do this :-

     (*) We can build "Custom Hooks".

CONS OF PROPS DRILLING

★ Is 'PROPS DRILLING' a good way?

  ① I just needed the 'user' info in <Rest Card/> but we changed 3 files. : <Body/> component does not needed the 'user' info.

  So, basically, this will make our code cluttered

So, If we have a hierarchy of 2 or 3 levels, it is okay to pass props.

But, if we want this data under 10 levels, it's not a good way.

One way to solve this problem is using REDUX

(2) Suppose, we have data passing in from 10 components. It will make these 10 components to be rerendered.