

Training Day 16

Day 16 - 10th July 2025

Topics Covered: Uplifting the State, Props Drilling, and Context API in React

Today, we focused on state management patterns in React, specifically **lifting state up**, handling **props drilling**, and solving it using the **Context API**.

1. Uplifting the State

- In scenarios where **two or more child components** need access to the same data, the **common parent** component holds the shared state.
- This promotes **single source of truth** and better coordination between components.

Example:

```
// Parent component
const Parent = () => {
  const [count, setCount] = useState(0);
  return (
    <div>
      <Child1 count={count} />
      <Child2 setCount={setCount} />
    </div>
  );
};
```

2. Props Drilling

- The process of **passing data from top-level components to deeply nested child components** using props.
- It becomes difficult to manage in large apps with deeply nested structures.

3. Context API

- A React feature to **avoid props drilling** by sharing state globally across components.

- Consists of React.createContext(), Provider, and useContext() hook.

Example:

```
const UserContext = React.createContext();

const App = () => {
  return (
    <UserContext.Provider value={"Sarbjee"}>
      <ComponentA />
    </UserContext.Provider>
  );
};

const ComponentA = () => {
  const username = useContext(UserContext);
  return <h1>{username}</h1>;
};
```

Task for Tomorrow:

- Create a small app demonstrating Context API in a real use-case
- Learn about useReducer for complex state management
- Revision of component tree and prop flow