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***REPORT #: W:7,D:6***

***TASK TITLE Context API Basics***

## **1. What is Context API?**

The **Context API** in React is a built-in feature used for **managing global state** without passing props manually through multiple component levels (**prop drilling**).

## **2. When to Use It?**

* When multiple components need access to the same data (e.g., user info, theme, language).
* To avoid passing props through many layers.
* For simple global state management (instead of heavier tools like Redux).

## **3. How It Works**

1. **Create Context** – React.createContext()
2. **Provide Context** – Wrap components in a Provider.
3. **Consume Context** – Use useContext() or Context.Consumer inside components.

## **4. Example: Basic Usage**

import React, { createContext, useState, useContext } from "react";

// 1. Create Context

const ThemeContext = createContext();

// 2. Provider Component

function ThemeProvider({ children }) {

const [theme, setTheme] = useState("light");

return (

<ThemeContext.Provider value={{ theme, setTheme }}>

{children}

</ThemeContext.Provider>

);

}

// 3. Consuming Context

function ThemeSwitcher() {

const { theme, setTheme } = useContext(ThemeContext);

return (

<button onClick={() => setTheme(theme === "light" ? "dark" : "light")}>

Current Theme: {theme}

</button>

);

}

// 4. Using Provider in App

export default function App() {

return (

<ThemeProvider>

<ThemeSwitcher />

</ThemeProvider>

);

}