Context API



Manage State Efficiently in Reac t Applications with Context API



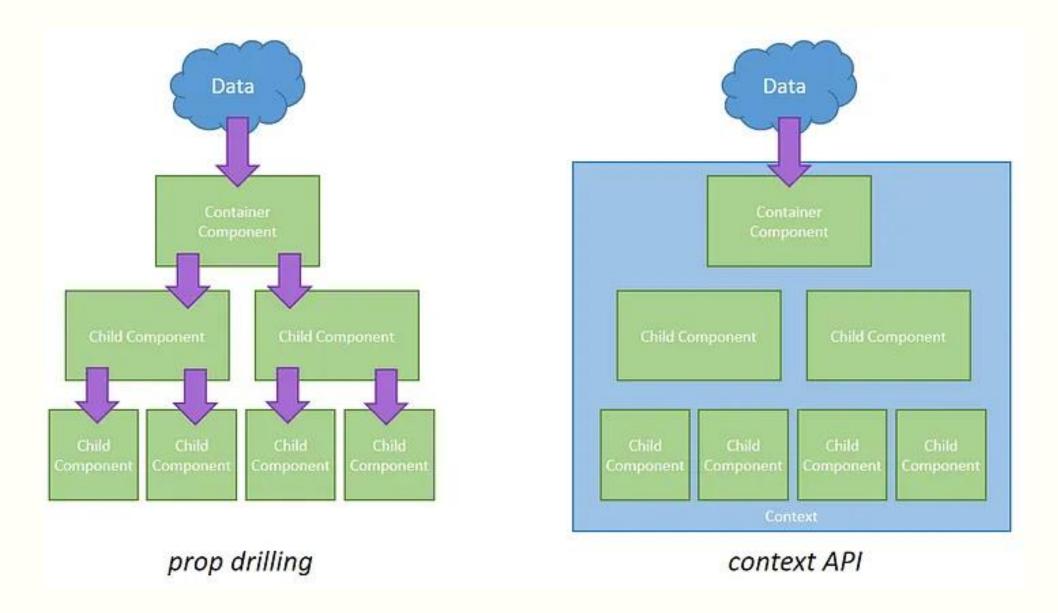
Introduction to Context API. What is Context API?



- A way to pass data through the component tree without having to pass props down manually at every level.
- Useful for sharing data like themes, user information, and settings.

Context API is used to fix prop drilling





When to Use Context API



- Ideal Use Cases
 - Theming
 - User authentication
 - Locale settings
 - Avoiding prop drilling for deeply nested components
- When Not to Use
 - Small applications where prop drilling is minimal
 - Situations requiring frequent updates (performance concerns)

Creating Context



```
// Create a context
   const MyContext = React.createContext();
3
   // Default values can be passed to createContext
   const MyContext = React.createContext(defaultValue);
5
6
```

Provider and Consumer



```
// Wrap your component tree with the Provider
     <MyContext.Provider value={/* some value */}>
       <App />
     </MyContext.Provider>
 5
    // Consume the context value in a child component
     <MyContext.Consumer>
       {value => (
 8
         /* render something based on the context value */
10
     </MyContext.Consumer>
11
```

Using Context in Functional Components



```
// Using useContext hook
    import React, { useContext } from 'react';
    import { MyContext } {rom './MyContextProvider';
 4
    function MyComponent() {
      const value = useContext(MyContext);
      return <div>{value}</div>;
 8
 9
10
```

Using Context in Class Components



```
// Class component using contextType
    import React, { Component } {rom 'react';
    import { MyContext } {rom './MyContextProvider';
 4
    class MyComponent extends Component {
      static contextType = MyContext;
 6
       render() {
 8
        const value = this.context;
 9
       return <div>{value}</div>;
10
11
12
13
```

Best Practices



- Avoid Overusing Context
 - Only use it for state that needs to be shared globally.
- Separate Contexts
 - Create separate contexts for unrelated state to avoid unnecessary rerenders.
- Default Values
 - Utilize default values to make context easier to use and test.
- Performance
 - Be mindful of performance. Updates to context value can trigger rerenders in all consuming components.



The shift begins with

Yrainer nam

Trainer

Assistant name

Assistant

trainer@mail.com assistant@mail.com