How to manage state in React using Jotai

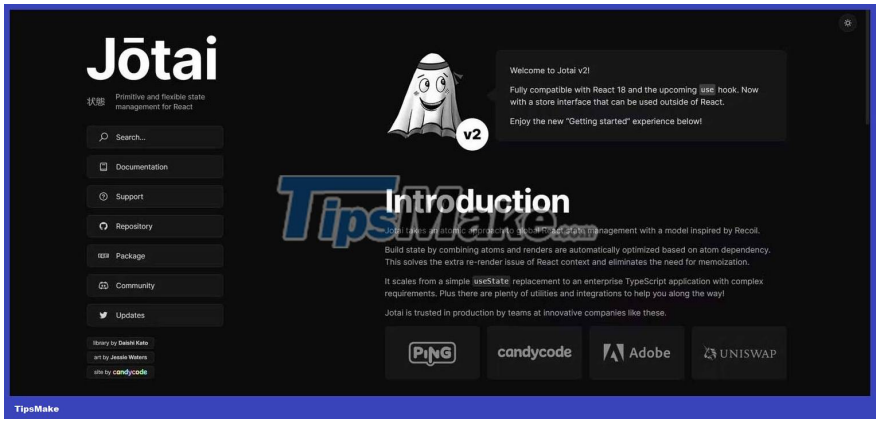
Upgrading React app state management with Jotai is a simpler alternative to Redux, and perfect for small projects. Here are detailed instructions.

State management on small-scale projects is often as simple as using React hooks and properties. However, as the application grows and needs to share data access between the generating components, it often leads to prop drilling. Unfortunately, prop drilling can quickly clutter up the codebase and present scalable challenges.

While Redux provides a state management solution, its API can be overwhelming for relatively small projects. In contrast, Jotai is a simple state management library that leverages independent state units called atoms for state management, removing challenges like prop drilling and allowing a simpler, and more extensible, state management approach.

What is Jotai and how does it work?

Jotai is a state management library that provides a simpler solution than complex alternatives like Redux. It uses independent units of state named atom to manage state in React applications.



Best of all, the various components in this application, access and update those atoms using the Jotai-provided hook called **useAtom** . Here is an example sample of how to create a Jotai atom:

```
import { atom } from 'jotai'; const countAtom = atom(1);
```

To access and work with atoms in Jotai, you can use the **useAtom** hook , which, like any other React hook, allows you to access and update the value of state in the function component.

Here is an example demonstrating its usage:

```
import { useAtom } from 'jotai'; const countAtom = atom(1); function MyComponent
```

Count: {count}

```
 Increment ); }
```

In this example, the **useAtom** hook is used to access the atom **countAtom** and its associated value. **The setCount** function is used to update the value of the atom and any associated components will automatically re-render with the updated value.

By enabling only affected components, it reduces unnecessary re-renders on the app. This targeted approach to re-rendering enhances the overall performance of the application.

Once you've covered the basics, let's start building a To-do React app to better understand Jotai's state management capabilities.

Managing State in React Using Jotai

To get started, create a React app. Alternatively, you can use Vite to set up a React project. When scaffolding a basic React app, go ahead and install Jotai in your app.

```
npm install jotai
```

Next, to use Jotai in your app, you need to include the entire app with a **Provider** component . This component contains a place that acts as the central component, dedicated to providing atom values ??for the entire application.

In addition, it allows you to declare the initial atom state. By attaching your app to a Provider, all components in the application have access to the atom you defined, and they can then interact and update state via the useAtom **hook** .

```
import { Provider } from "jotai";
```

Now include the app in **index.js** or **main.jsx** like below:

```
import React from 'react' import ReactDOM from 'react-dom/client' import App fro
```

Configure Data Store

Store acts as a central repository for the state of the application. It usually contains the definition of the atom, selector, and any other related functions needed for state management by Jotai.

In this case, it manages the atoms to manage the item list for the To-do application. **In the src** folder , create **TodoStore.jsx** and add the code below:

```
import { atom } from "jotai"; export const TodosAtom = atom([]);
```

By creating and exporting TodosAtom, you can freely interact and update the todo status across different components of your application.

To-Do Application Function Deployment

Now that you have Jotai configured in your React app and have created an atom to manage the state of the application, go ahead and create a simple to-do component to perform add, remove, and edit functions for the items to be handled.

Create a new **components/Todo.jsx file in the src** folder . In this file, add the code below:

1. Import datastore and **useAtom** hook :

```
import React, { useState } from 'react'; import { TodosAtom } from './TodoStore'
```

2. Create functional components and add JSX elements.

```
const Todo = () => { return ( setValue(event.target.value)} /> Add Todo
```

{todos.map(todo => (

1. {todo.text} handleDelete(todo.id)}>Delete

))}

```
 ); }; export default Todo;
```

This component presents a simple user interface for managing to-do lists.

3. Finally, implement the add and remove todo function.

```
 const [value, setValue] = useState(''); const [todos, setTodos] = useAtom(Todos/
```

1. **The handeAdd** function is responsible for adding the item to be refreshed in the list.
2. **setTodos** is then called to update the todo list in the atom by adding that new item.
3. **handleDelete** is responsible for removing the todo item from the list.

Above is how to use Jotai to manage state in React app. Hope the article is useful to you.

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