

import {useEffect} from "react";

The statement `import {useEffect} from "react";` is a JavaScript import declaration used in React applications.

Purpose:

This line imports the `useEffect` Hook from the React library. The `useEffect` Hook is a fundamental part of functional components in React, enabling developers to perform "side effects."

Side Effects in React:

Side effects are operations that interact with the outside world or have an impact beyond the component's render cycle. Common examples of side effects include:

- **Data fetching:** Making API calls to retrieve data from a server.
- **DOM manipulation:** Directly interacting with the browser's Document Object Model (e.g., setting the document title).
- **Subscriptions:** Setting up event listeners or connecting to external services like WebSockets.
- **Timers:** Using `setTimeout` or `setInterval`.

How `useEffect` Works:

`useEffect` takes two arguments:

- **A setup function:** This function contains the code for your side effect. It runs after every render of the component (including the initial render) unless its dependencies prevent it from doing so.
- **A dependency array (optional):** This array specifies the values that the effect depends on. If any of these values change between renders, the effect will re-run. An empty dependency array `[]` ensures the effect runs only once after the initial render (similar to `componentDidMount` in class components).

Example Usage:

```
import { useEffect, useState } from "react";

function MyComponent() {
  const [count, setCount] = useState(0);

  useEffect(() => {
    // This side effect updates the document title
    document.title = `Count: ${count}`;
  }, [count]); // The effect re-runs whenever 'count' changes
```

```
return (  
  <div>  
    <p>Count: {count}</p>  
    <button onClick={() => setCount(count + 1)}>Increment</button>  
  </div>  
);  
}  
  
export default MyComponent;
```

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