

# Getting Rid of Extra State Variables

Let's clean up the useExpanded.js file by removing extra state variables

## WE'LL COVER THE FOLLOWING ^

- Using a **ref** Object
- The Final Look
- Quick Quiz!

## Using a **ref** Object #

As discussed in the last lesson, I prefer to provide the **resetDep** via a **ref** object instead of creating a state variable. This way I'm sure to introduce only important variables as actual state variables.

The solution is similar, it's only an internal change within our custom hook, **useExpanded**. How the user consumes **resetDep** remains the same.

So, here's the implementation with a **ref** object:

```
// useExpanded.js
...
const resetRef = useRef(0)
const reset = useCallback(
  () => {
    // perform actual reset
    setExpanded(initialExpanded)
    // update reset count
    ++resetRef.current
  },
  [initialExpanded]
)
...
// expose resetDep within "value"
...
resetDep: resetRef.current
```



And that's it! Same functionality, different approaches. Feel free to use

whichever feels right to you. I pick the second though :)

As a summary, remember that with the state initializer pattern you offer the user the ability to decide the initial state within your custom hook. You allow for resetting and invoking a custom function after a reset is made as well.

Even if you had a more complex custom hook with multiple state values, you could still use this technique. Perhaps, receive the initial state passed in by the user as an object. Create a memoized `initialState` object from the user's state and use this within your custom hook.

If you also choose to manage your internal state via `useReducer`, you can still apply this pattern.

The point is, regardless of your implementation, the goal remains the same; to provide the user with the ability to decide the initial state and allow them to reset and invoke custom callbacks after a reset is made.

## The Final Look #

Here is the “Terms and Conditions” expandable object put together so far.

```
.Expandable-panel {  
  margin: 0;  
  padding: 1em 1.5em;  
  border: 1px solid hsl(216, 94%, 94%);  
  min-height: 150px;  
}
```

## Quick Quiz! #

Lets take a quick quiz before moving on!

Q

Why have we decided not to keep `resetDep` as a state variable?

COMPLETED 0%



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In the next chapter, we'll take things a notch higher as we give even more control to the users of our components. Remember, that's what building highly reusable components is about!