

## TERMINOLOGY

**useEffect** A function that adds the ability to perform side-effects from a function component.

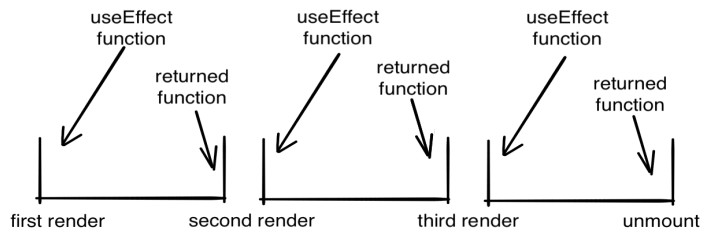
**mount** when a component is first added to a page

**unmount** when a component is removed from the page

## USEEFFECT ARGUMENTS

**first argument** The first argument to useEffect should be a function. Whatever happens in that function will get run when the component mounts and after each render.

**the return value of the first argument** The first argument to useEffect can also, optionally, **return** a “cleanup” function. If it does, the returned function will get run at the end of the render cycle, just before the next render (or unmount) happens.



useEffect lifecycle

**the second argument (optional)** By default, useEffect's functions get run every time the component renders. If a second argument is provided, it should be an array. When an array is passed, useEffect's functions get run only on the renders when at least one of the array's values have changed

**passing an empty array** Because useEffect's functions get run only on the renders when at least one of the array's values have changed, passing an empty array, [], as the second argument is a way of saying "only run these functions on the first render and the unmount"

## USEEFFECT EXAMPLES

```
// Show the alert after every render
useEffect(() => {
  alert("This component just rendered!")
})

// Show the alert after the first render only
useEffect(() => {
  alert("This component just mounted!")
}, [])

// After first render AND after `someValue` changes
useEffect(() => {
  alert("someValue just changed!")
}, [someValue])
```

## USEEFFECT EXAMPLES (WITH RETURN)

```
function showAlert(){
  alert("You just scrolled!")
}

// Sets up a very annoying listener to display an
// alert whenever the user scrolls. Then removes that
// listener. This will run the add and remove listener
// functions for every single render call.
useEffect(() => {
  document.addEventListener("scroll", showAlert);

  return () => {
    document.removeEventListener("scroll", showAlert);
  }
})

// Same as above, but because we're passing an empty
// array as the second argument, we only add the
// listener on the first render, and only remove it
// right before unmounting the component.
// Much more efficient!
useEffect(() => {
  document.addEventListener("scroll", showAlert);

  return () => {
    document.removeEventListener("scroll", showAlert);
  }
}, [])
```

## COMMON GOTCHA

```
// THE GOTCHA: If you're not careful, calling a setter
// function inside useEffect can cause an infinite loop
const [count, setCount] = useState(0)

useEffect(() => {
  fetch("https://some.site/where/we/saved/the/count")
    .then(response => response.json())
    .then(savedCount => {
      // Calling setCount re-renders the component
      // which means useEffect will get called
      // again, which means setCount will get
      // called again, aaaaand INFINITE LOOP
      setCount(savedCount)
    })
})

// THE FIX: use that second useEffect argument to
// prevent unnecessary useEffect calls
const [count, setCount] = useState(0)

useEffect(() => {
  fetch("https://some.site/where/we/saved/the/count")
    .then(response => response.json())
    .then(savedCount => {
      setCount(savedCount)
    })
})

// This little array argument right here is the fix!
// Now that fetch will only get called after the
// very first render
}, [])
```