



Google Developer Student Clubs

React #2

React JS: useState, props, useEffect



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```
const filterByOrg = study.lead_organization === filterByOrg ? true : false
const filterStatus = filterByStatus ? study.status === filterByStatus : true
const matchStatus = filterStatus ? true : false
```

```
function filterStudies({ studies, filterByOrg, filterByStatus }) {
  return studies.filter(study => {
    if (filterByOrg) {
      return study.lead_organization === filterByOrg
    } else if (filterByStatus) {
      return study.status === filterByStatus
    } else {
      return true
    }
  })
}
```



Follow Up

```
function filterStudies({ studies, filterByOrg = false, filterByCategory = false }) {
  return studies.filter(study => {
    if (filterByCategory) {
      return study.categories.some(category => category.id === filterByCategory);
    }
    if (filterByOrg) {
      return study.organizations.some(organization => organization.id === filterByOrg);
    }
    return true;
  });
}
```

What Have We Done?

Review

- HTML / CSS / JavaScript
- React JS Intro: Introduction, Structure
- ReactJS: useState, props, useEffect



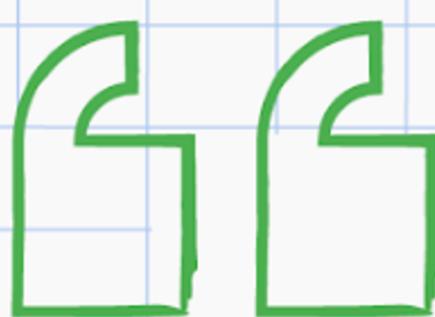
Before Start...

Read the official manual

- <https://react.dev/reference/react/useState>
- <https://react.dev/reference/react/useEffect>



useState



```
function filterStudies({ studies, filterByOrg = false, filter }) {  
  if (!filter) return studies;  
  return studies.filter(study => {  
    const orgs = study.organizations || [];  
    if (filterByOrg) {  
      return orgs.length > 0;  
    } else {  
      return orgs.every(org => org.isApproved);  
    }  
  });  
}
```

useState

Import Function



```
import { useState } from 'react';
```



useState

Function Introduction

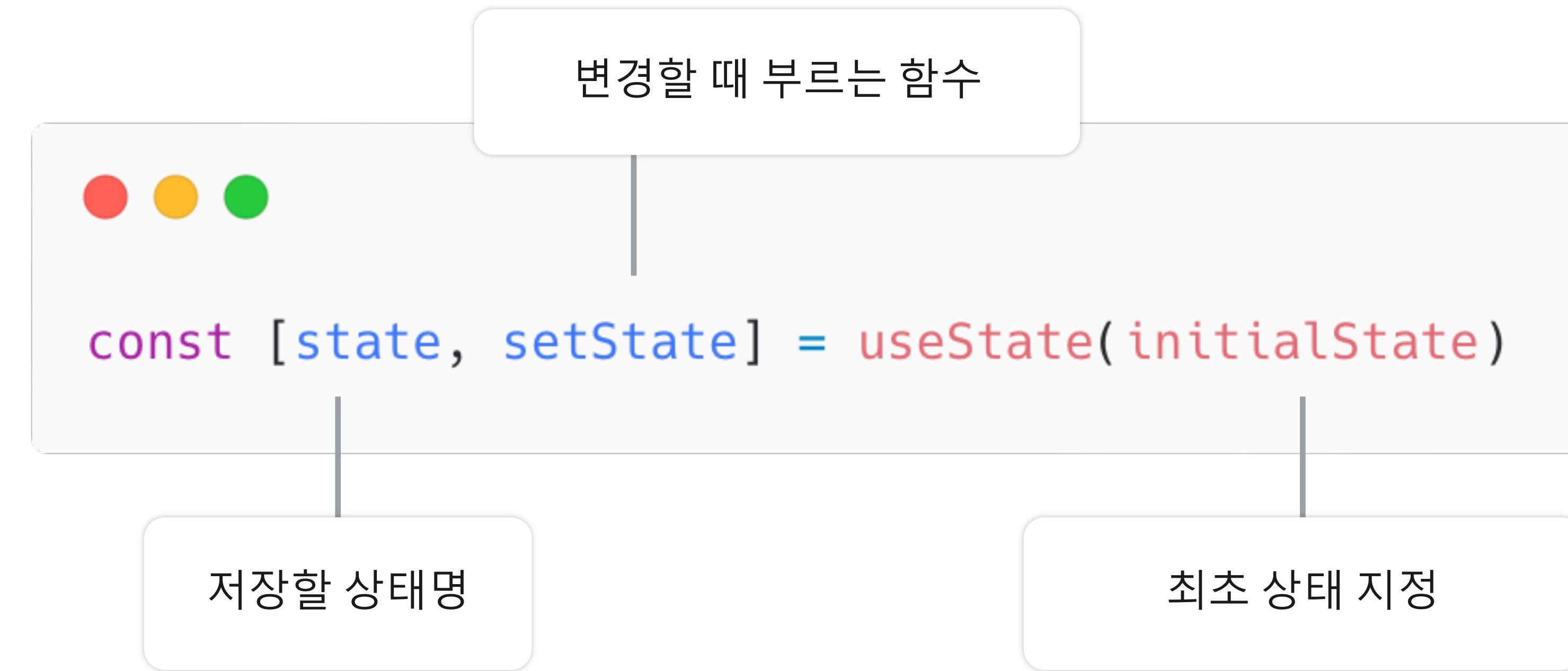


```
const [state, setState] = useState(initialState)
```



useState

Function Introduction



useState

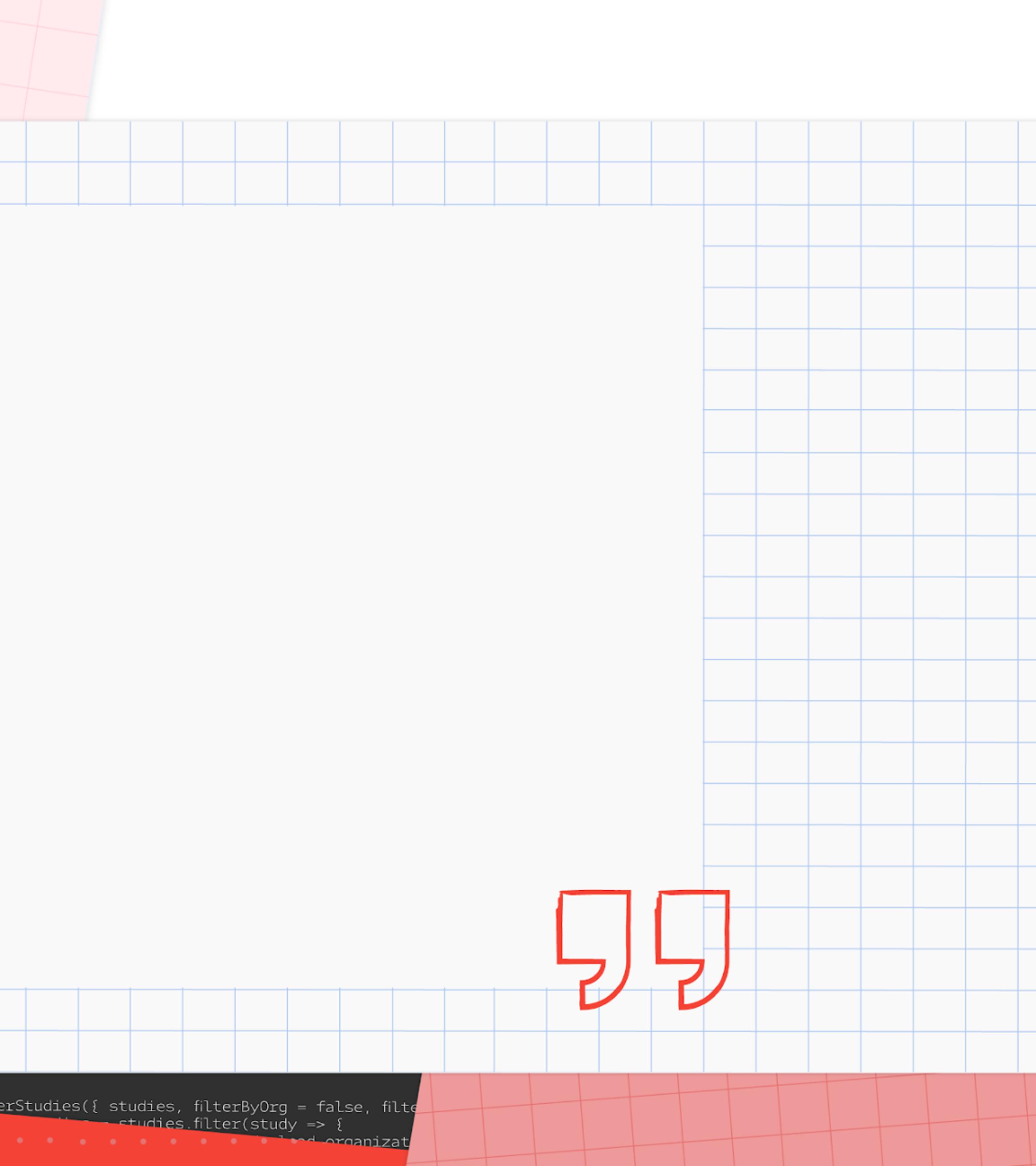
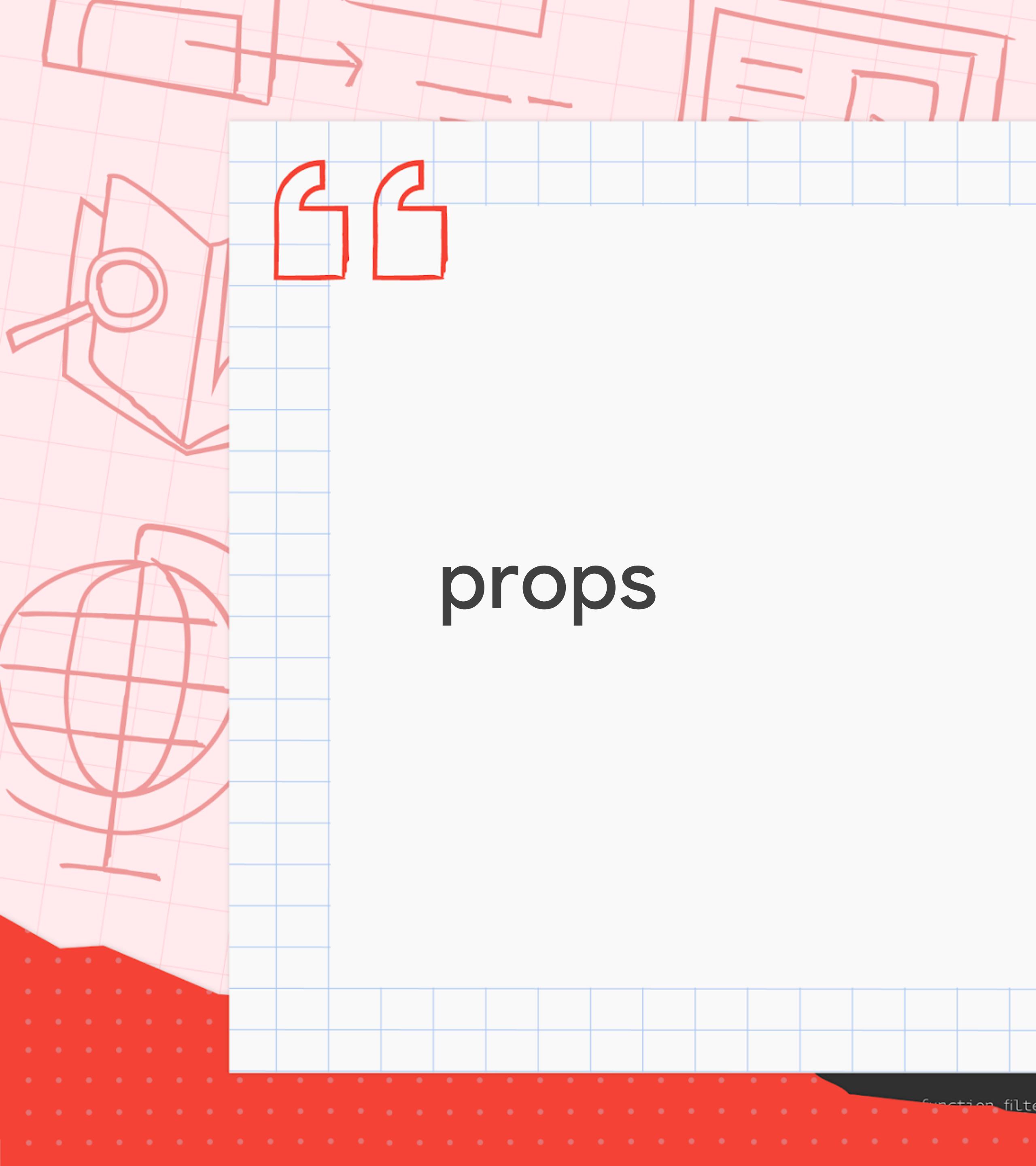
Function Example



```
function App( ) {  
  const [ number, setNumber ] = useState( 0 );  
  return (  
    <div>  
      <h1>Counter</h1>  
      <h2>{number}</h2>  
    </div>  
  );  
}  
  
export default App;
```

number? 0





props

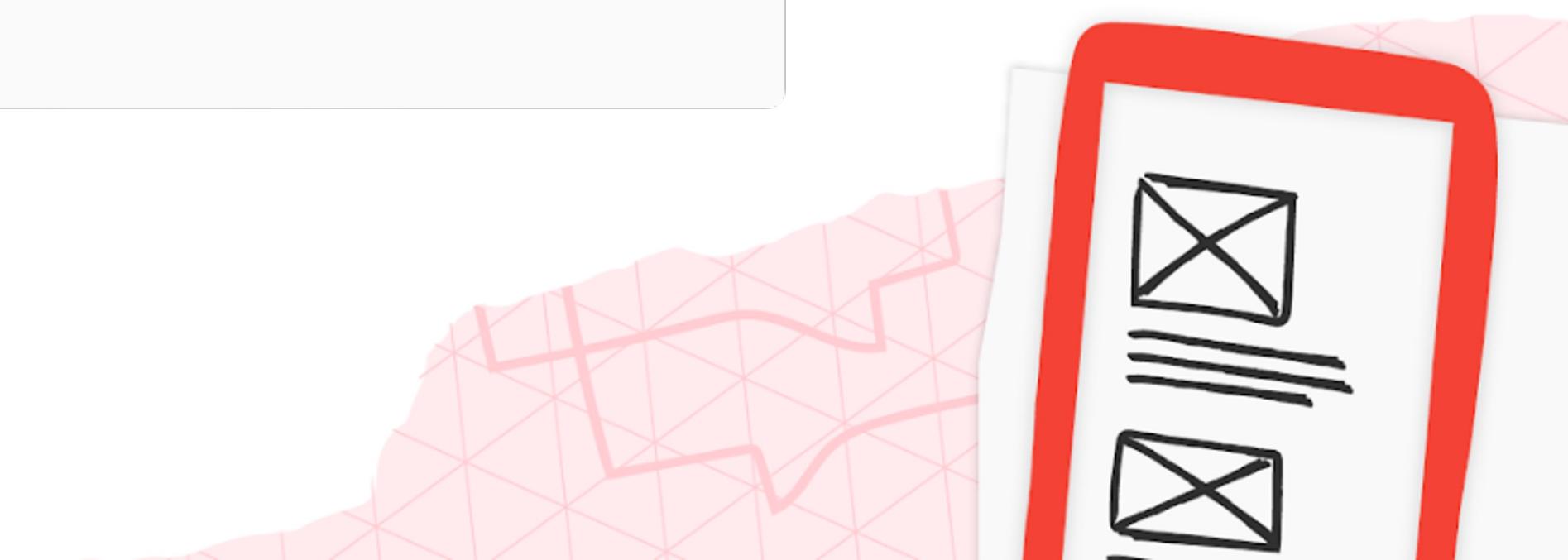
```
function filterStudies({ studies, filterByOrg = false, filter }) {  
  if (!filter) return studies;  
  return studies.filter(study => {  
    const orgs = study.organizations || [];  
    if (filterByOrg) {  
      return orgs.some(org => org.id === filter);  
    }  
    return true;  
  });  
}
```

Props

Passes Parameters

```
● ● ●

function App() {
  const [number, setNumber] = useState(0);
  return (
    <div className="App">
      <Button name={"감소"} onClickAction={() => setNumber(number - 1)} />
      <Button name={"증가"} onClickAction={() => setNumber(number + 1)} />
    </div>
  );
}
```



Props

Passes Parameters



```
function Button(props) {  
  return (  
    <button onClick={props.onClickAction}>{props.name}</button>  
  )  
}  
  
export default Button;
```



Props

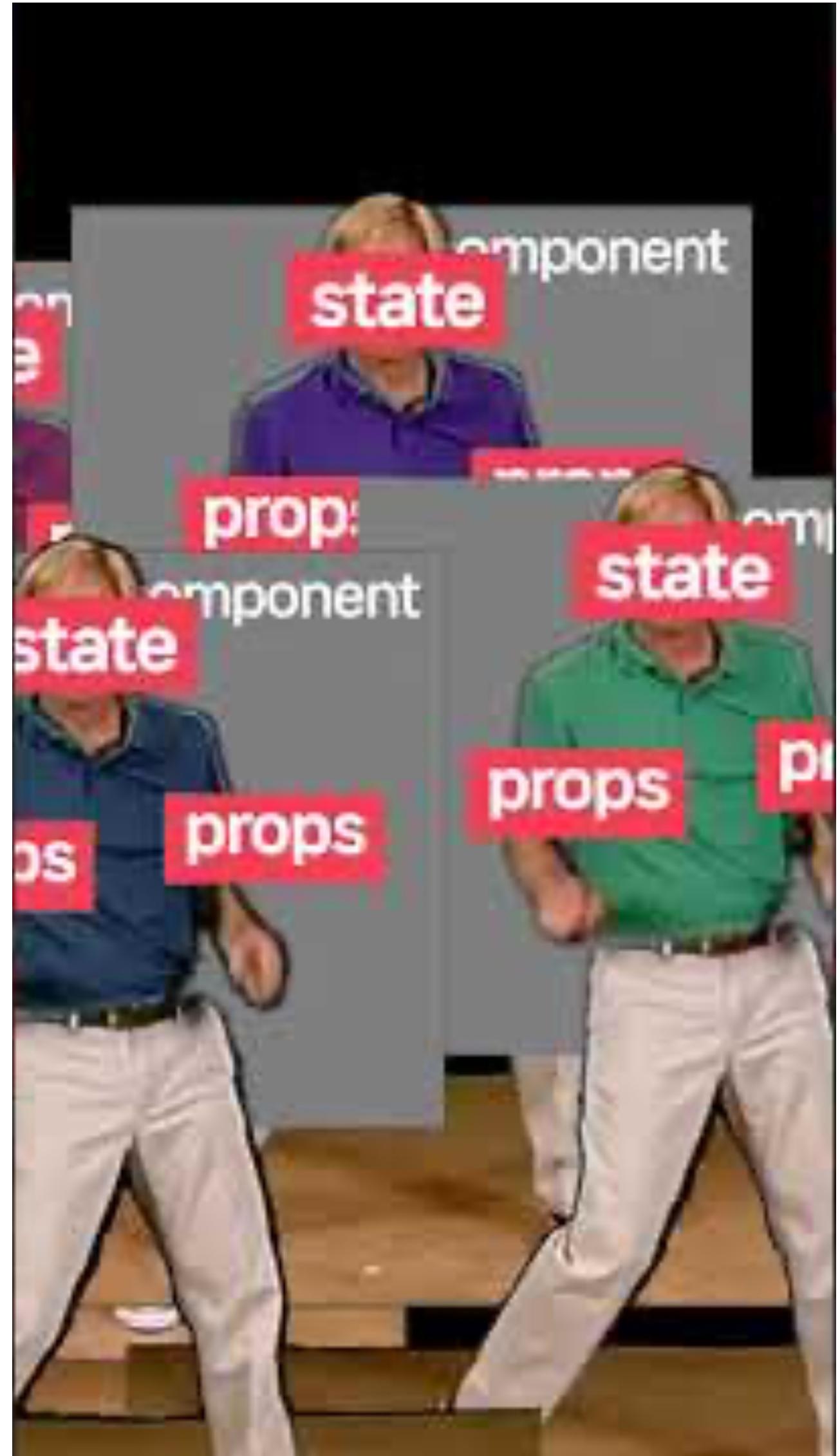
Passes Parameters

```
● ● ●  
  
function Button( {onClickAction, name} ) {  
  return (  
    <button onClick={onClickAction}>{name}</button>  
  )  
}  
  
export default Button;
```



Props: Problem #1

Large Projects



State Manager: Redux

Static state manager



- <https://ko.redux.js.org/introduction/getting-started/>

Props: Problem #2

Props type management

```
User.propTypes = {  
  age: PropTypes.number,  
  onChangeName: PropTypes.func  
}  
  
const User = ({ age, onChangeName }) => {  
  // ...
```

useEffect



```
function filterStudies({ studies, filterByOrg = false, filterByTitle = false }) {  
  return studies.filter(study => {  
    if (filterByOrg) {  
      return study.org === 'React';  
    }  
    if (filterByTitle) {  
      return study.title === 'React';  
    }  
    return true;  
  });  
}
```

useEffect

Import Function



```
import { useEffect } from 'react';
```



useEffect

Function Introduction



```
useEffect( setup, dependencies? )
```



useEffect

Function Introduction

언제 Effect 적용할 것인지? (관찰할 변수)



`useEffect(setup, dependencies?)`

실행할 효과

useEffect

Function Example



```
useEffect(() => {
  console.log("useEffect executed")
  setIsNumberOdd(number % 2 === 1 || number % 2 === -1)
  isNumberOdd ? setBackgroundColor("green") : setBackgroundColor("red")
}, [number])
```



useEffect

What if...?



```
useEffect(() => {  
  console.log("This only executes once")  
}, [])
```



Live Activity & Questions

