



# LECTURE #4

By: Aqib Rehman



# OUTLINE

**Conditional Output**

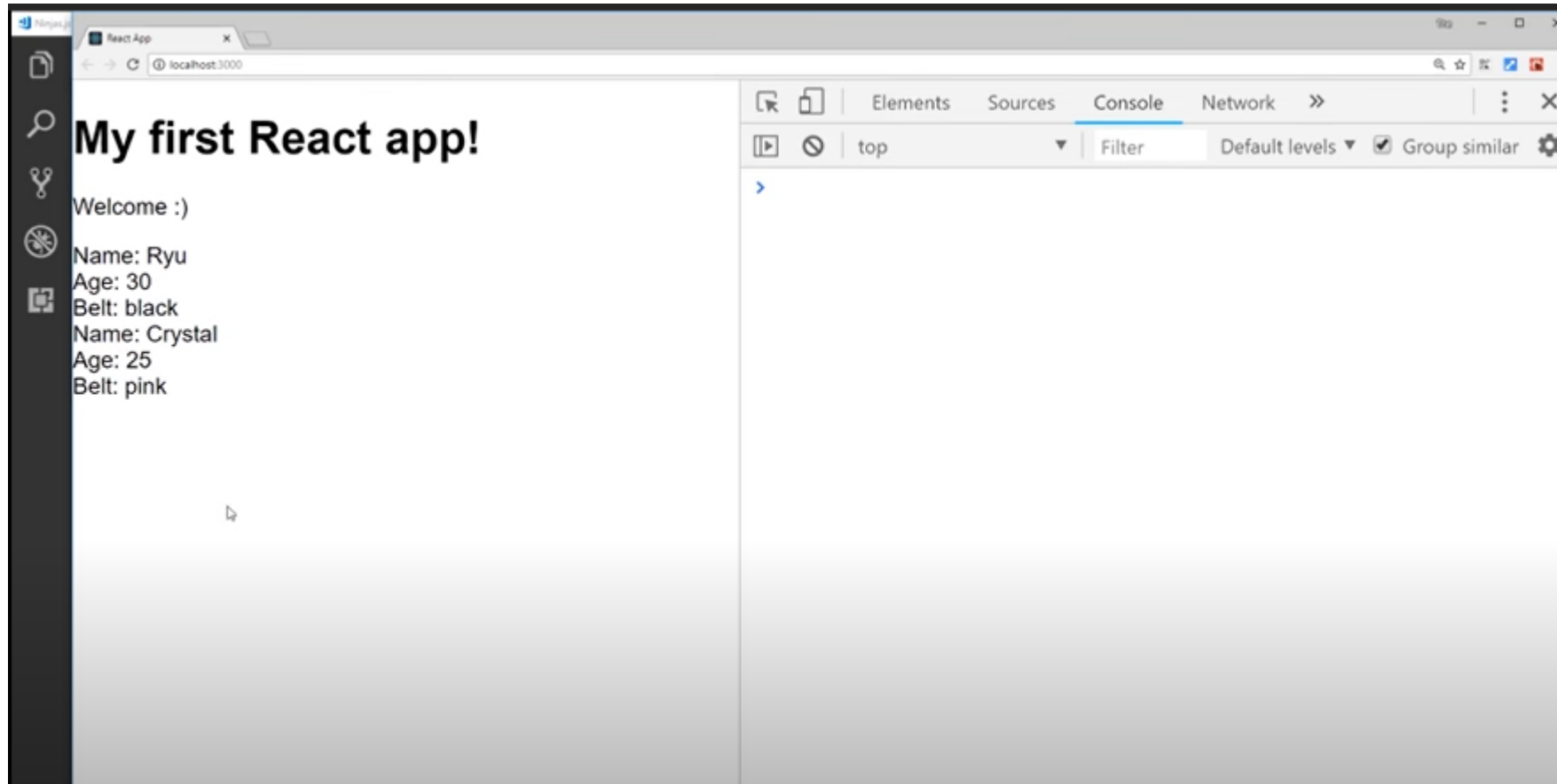
**Forms Revisited**

**Functions as Props**



# **CONDITIONAL OUTPUT**

```
1 import React from 'react';
2
3 const Ninjas = ({ninjas}) => {
4   const ninjaList = ninjas.map(ninja => {
5     if (ninja.age > 20){
6       return (
7         <div className="ninja" key={ninja.id}>
8           <div>Name: { ninja.name }</div>
9           <div>Age: { ninja.age }</div>
10          <div>Belt: { ninja.belt }</div>
11        </div>
12      )
13    } else {
14      return null
15    }
16  })
17  return(
18    <div className="ninja-list">
19      { ninjaList }
20    </div>
21  )
22 }
```



```
Ninjas.js - react-redux-complete - Visual Studio Code
App.js  Ninjas.js
1  import React from 'react';
2
3  const Ninjas = ({ninjas}) => {
4    // const ninjaList = ninjas.map(ninja => {
5    //   if (ninja.age > 20){
6    //     return (
7    //       <div className="ninja" key={ninja.id}>
8    //         <div>Name: { ninja.name }</div>
9    //         <div>Age: { ninja.age }</div>
10    //         <div>Belt: { ninja.belt }</div>
11    //       </div>
12    //     )
13    //   } else {
14    //     return null
15    //   }
16    // })
17    const ninjaList = ninjas.map(ninja => {
18      condition ? () : ()
19    })
20    return(
21      <div className="ninja-list">
22        { ninjaList }
23      </div>
```

```
Ninjas.js - react-redux-complete - Visual Studio Code
App.js  Ninjas.js
1  import React from 'react';
2
3  const Ninjas = ({ninjas}) => {
4    // const ninjaList = ninjas.map(ninja => {
5    //   if (ninja.age > 20){
6    //     return (
7    //       <div className="ninja" key={ninja.id}>
8    //         <div>Name: { ninja.name }</div>
9    //         <div>Age: { ninja.age }</div>
10    //         <div>Belt: { ninja.belt }</div>
11    //       </div>
12    //     )
13    //   } else {
14    //     return null
15    //   }
16    // })
17    const ninjaList = ninjas.map(ninja => {
18      return ninja.age > 20 ? () : null
19    })
20    return(
21      <div className="ninja-list">
22        { ninjaList }
23      </div>
```

```
Ninjas.js - react-redux-complete - Visual Studio Code
App.js  Ninjas.js
1  import React from 'react';
2
3  const Ninjas = ({ninjas}) => {
4    // const ninjaList = ninjas.map(ninja => {
5    //   if (ninja.age > 20){
6    //     return (
7    //       <div className="ninja" key={ninja.id}>
8    //         <div>Name: { ninja.name }</div>
9    //         <div>Age: { ninja.age }</div>
10    //         <div>Belt: { ninja.belt }</div>
11    //       </div>
12    //     )
13    //   } else {
14    //     return null
15    //   }
16    // })
17    const ninjaList = ninjas.map(ninja => {
18      return ninja.age > 20 ? (
19        <div className="ninja" key={ninja.id}>
20          <div>Name: { ninja.name }</div>
21          <div>Age: { ninja.age }</div>
22          <div>Belt: { ninja.belt }</div>
23        </div>
24      ) : null;
25    });
26    return(
```



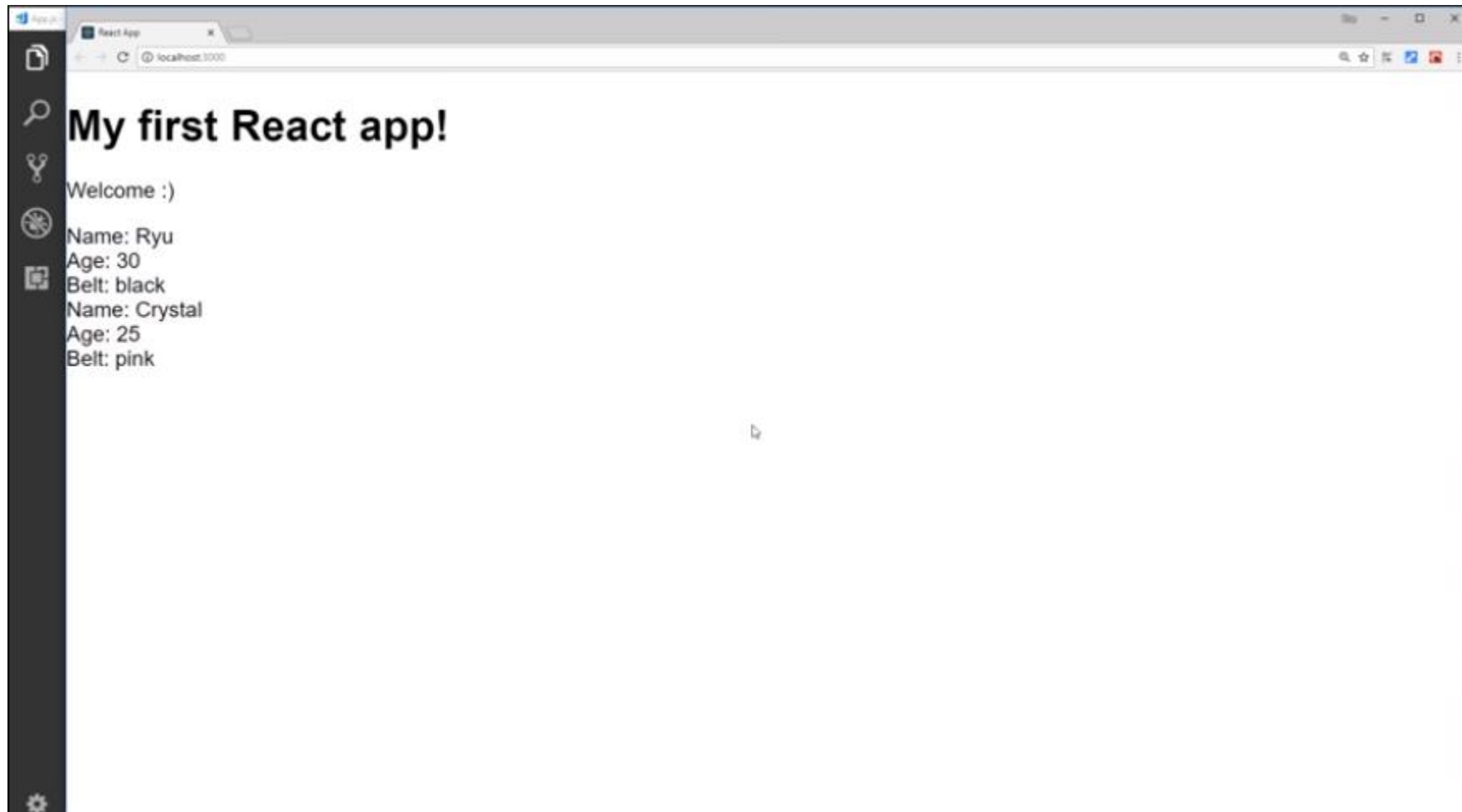
```
Ninjas.js - react-redux-complete - Visual Studio Code
App.js  Ninjas.js x
13 //   } else {
14 //     return null
15 //   }
16 // })
17 const ninjaList = ninjas.map(ninja => {
18   return ninja.age > 20 ? (
19     <div className="ninja" key={ninja.id}>
20       <div>Name: { ninja.name }</div>
21       <div>Age: { ninja.age }</div>
22       <div>Belt: { ninja.belt }</div>
23     </div>
24   ) : null;
25 });
26
27 return(
28   <div const ninjaList: any t">
29     { ninjaList }
30   </div>
31 )
32 }
33
34 export default Ninjas
```

```
Ninjas.js - react-redux-complete - Visual Studio Code
App.js  Ninjas.js
13 //   } else {
14 //     return null
15 //   }
16 // })
17
18
19   return(
20     <div className="ninja-list">
21       { ninjaList }
22     </div>
23   )
24 }
25
26 export default Ninjas
```

```
Ninjas.js - react-redux-complete - Visual Studio Code
App.js  Ninjas.js x
13 //   } else {
14 //     return null
15 //   }
16 // })
17
18
19 return(
20   <div className="ninja-list">
21     {
22       ninjas.map(ninja => {
23         return ninja.age > 20 ? (
24           <div className="ninja" key={ninja.id}>
25             <div>Name: { ninja.name }</div>
26             <div>Age: { ninja.age }</div>
27             <div>Belt: { ninja.belt }</div>
28           </div>
29         ) : null;
30       })
31     }
32   </div>
33 )
34 }
35
36 export default Ninjas
```



# **FORMS REVISITED**



What we have already

# WHAT WE GONNA DO

A form in which user can add new ninja of his/her choice.

Programmatically how?

What if by some method we update the ninjas list which we have defined in state of App comp.

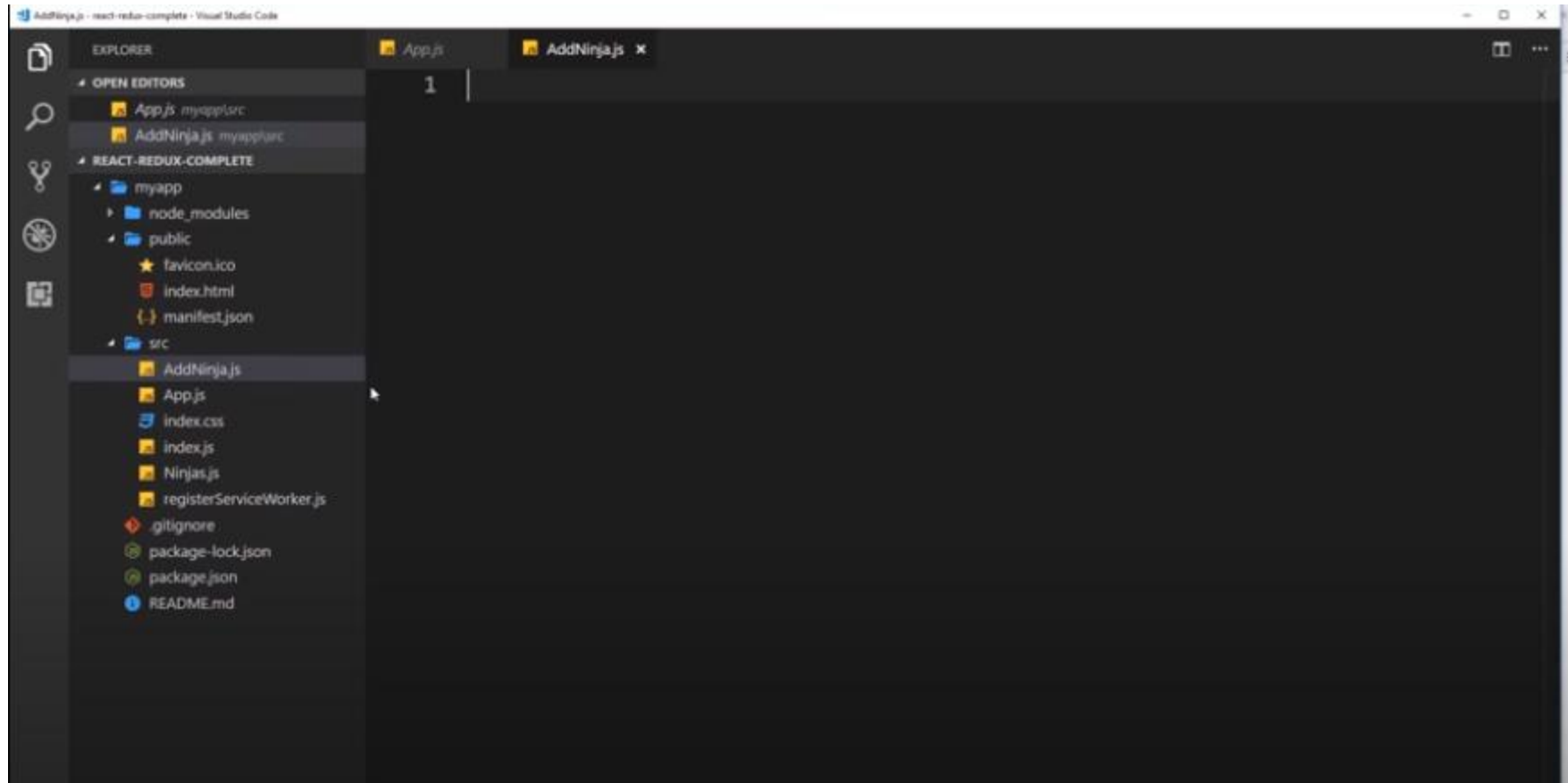
This list passes as props to Ninjas comp, where it is iterate and show on the screen.

So when list will be updated the updated one will be sent to Ninjas component and that will be shown to the user.

So lets create a form with 3 fields for name, age, belt and add button.



Create a new component with name `AddNinja`



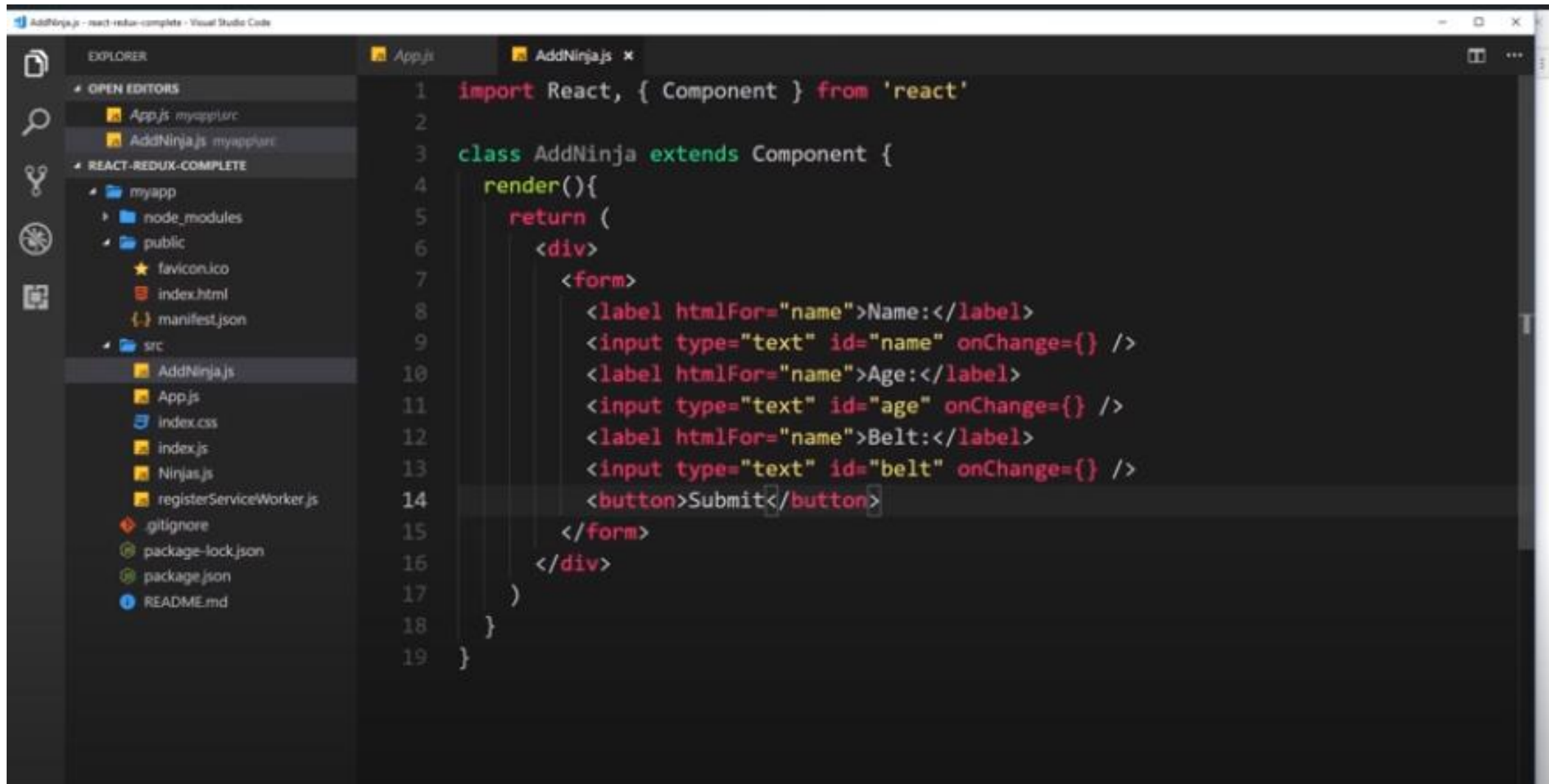




What will be type of this comp container or stateless?



As we want to store user input values locally in the state so container comp will be used



The screenshot shows the Visual Studio Code editor with a project named 'AddNinja.js - react-redux-complete'. The Explorer sidebar on the left shows the file structure, with 'AddNinja.js' selected in the 'src' directory. The main editor window displays the code for 'AddNinja.js', which is a class component extending 'React.Component'. The component's 'render' method returns a JSX element containing a form with three text inputs for 'Name', 'Age', and 'Belt', and a 'Submit' button. The code is as follows:

```
1 import React, { Component } from 'react'
2
3 class AddNinja extends Component {
4   render(){
5     return (
6       <div>
7         <form>
8           <label htmlFor="name">Name:</label>
9           <input type="text" id="name" onChange={} />
10          <label htmlFor="name">Age:</label>
11          <input type="text" id="age" onChange={} />
12          <label htmlFor="name">Belt:</label>
13          <input type="text" id="belt" onChange={} />
14          <button>Submit</button>
15        </form>
16      </div>
17    )
18  }
19 }
```

htmlFor in jsx template not for

```
1 import React, { Component } from 'react'
2
3 class AddNinja extends Component {
4   state = {
5     name: null,
6     age: null,
7     belt: null
8   }
9   render(){
10     return (
11       <div>
12         <form>
13           <label htmlFor="name">Name:</label>
14           <input type="text" id="name" onChange={} />
15           <label htmlFor="name">Age:</label>
16           <input type="text" id="age" onChange={} />
17           <label htmlFor="name">Belt:</label>
18           <input type="text" id="belt" onChange={} />
19           <button>Submit</button>
20         </form>
21       </div>
22     )
23   }
```

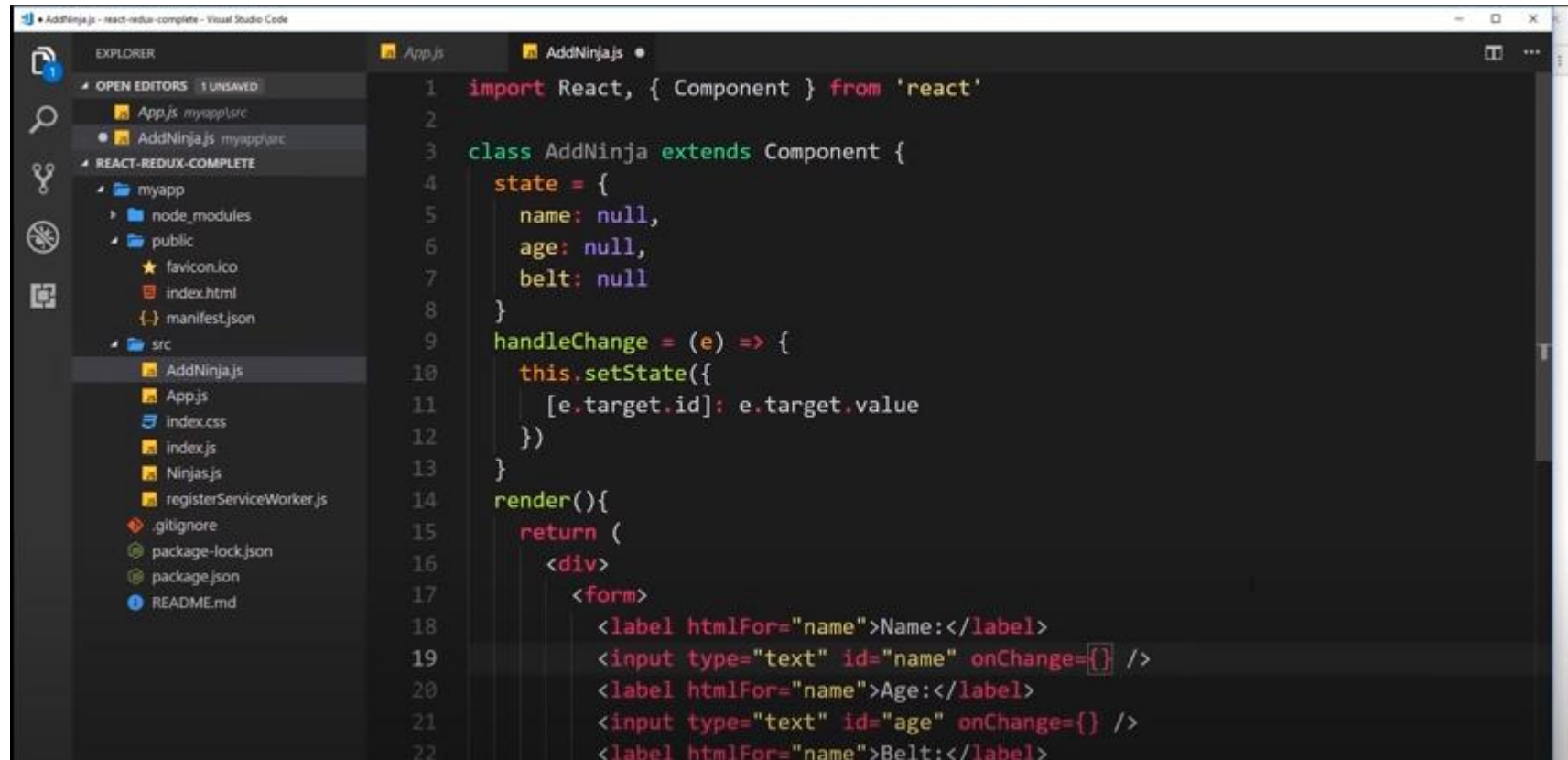
Define state



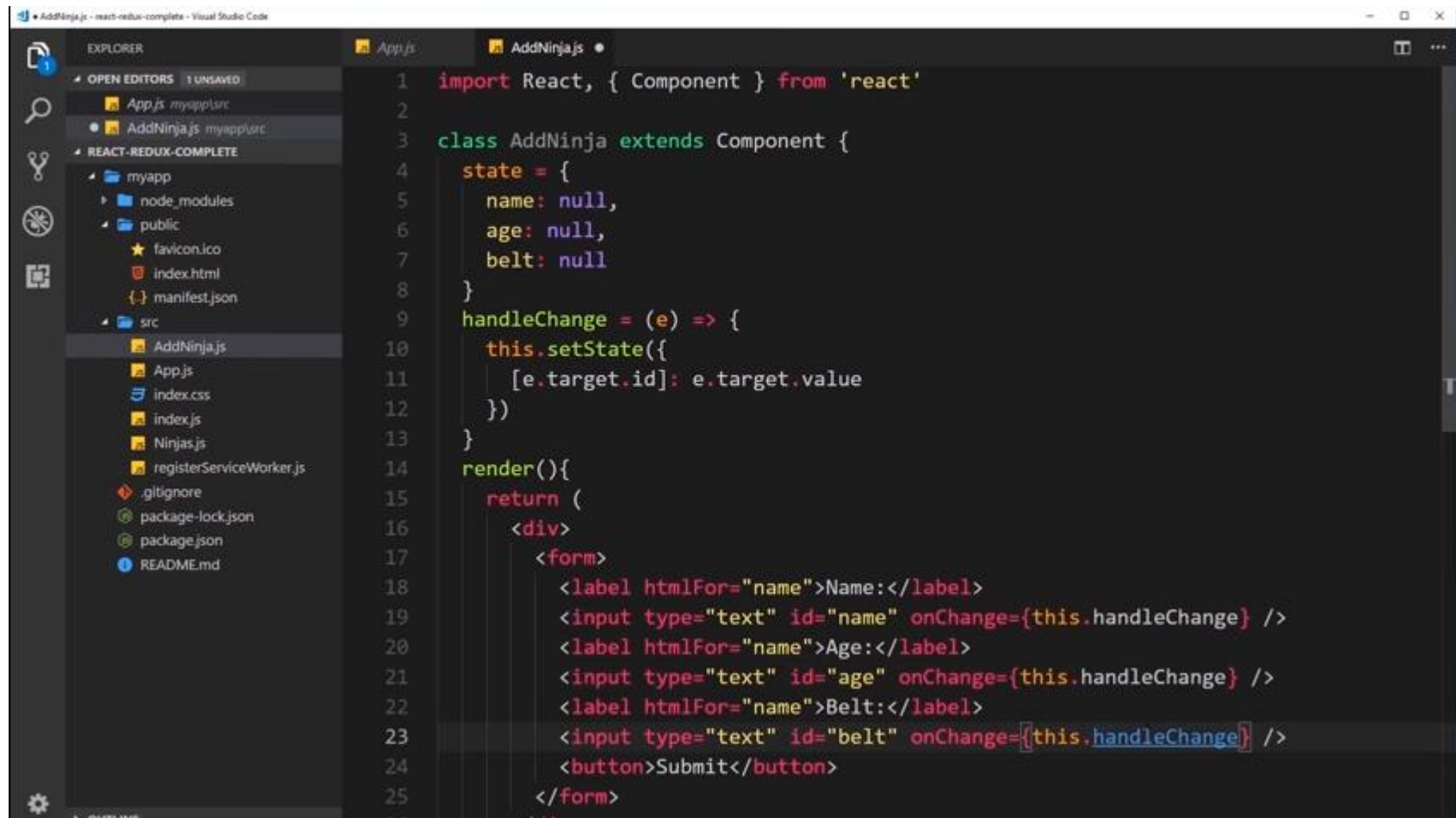
Need 3 functions for each field.

Right?

No



```
1 import React, { Component } from 'react'
2
3 class AddNinja extends Component {
4   state = {
5     name: null,
6     age: null,
7     belt: null
8   }
9   handleChange = (e) => {
10     this.setState({
11       [e.target.id]: e.target.value
12     })
13   }
14   render(){
15     return (
16       <div>
17         <form>
18           <label htmlFor="name">Name:</label>
19           <input type="text" id="name" onChange={} />
20           <label htmlFor="age">Age:</label>
21           <input type="text" id="age" onChange={} />
22           <label htmlFor="name">Belt:</label>
```



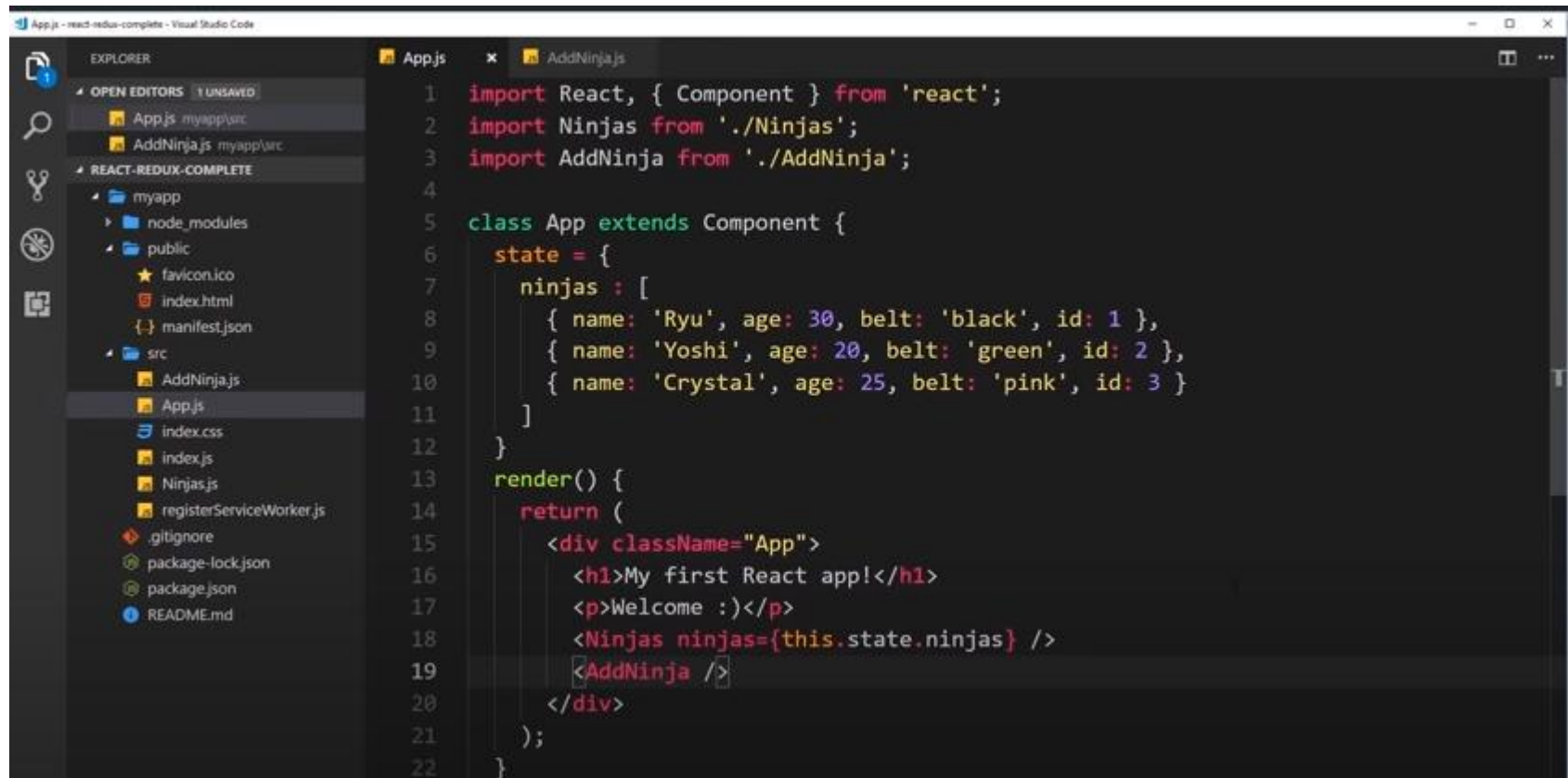
```
1 import React, { Component } from 'react'
2
3 class AddNinja extends Component {
4   state = {
5     name: null,
6     age: null,
7     belt: null
8   }
9   handleChange = (e) => {
10    this.setState({
11      [e.target.id]: e.target.value
12    })
13  }
14  render(){
15    return (
16      <div>
17        <form>
18          <label htmlFor="name">Name:</label>
19          <input type="text" id="name" onChange={this.handleChange} />
20          <label htmlFor="name">Age:</label>
21          <input type="text" id="age" onChange={this.handleChange} />
22          <label htmlFor="name">Belt:</label>
23          <input type="text" id="belt" onChange={this.handleChange} />
24          <button>Submit</button>
25        </form>
```

Calling handleChange func

```
7
8
9  belt: null
10 }
11 handleChange = (e) => {
12   this.setState({
13     [e.target.id]: e.target.value
14   })
15 }
16 handleSubmit = (e) => {
17   e.preventDefault();
18   console.log(this.state);
19 }
20 render(){
21   return (
22     <div>
23       <form onSubmit={this.handleSubmit}>
24         <label htmlFor="name">Name:</label>
25         <input type="text" id="name" onChange={this.handleChange} />
26         <label htmlFor="name">Age:</label>
27         <input type="text" id="age" onChange={this.handleChange} />
28         <label htmlFor="name">Belt:</label>
29         <input type="text" id="belt" onChange={this.handleChange} />
30         <button>Submit</button>
```

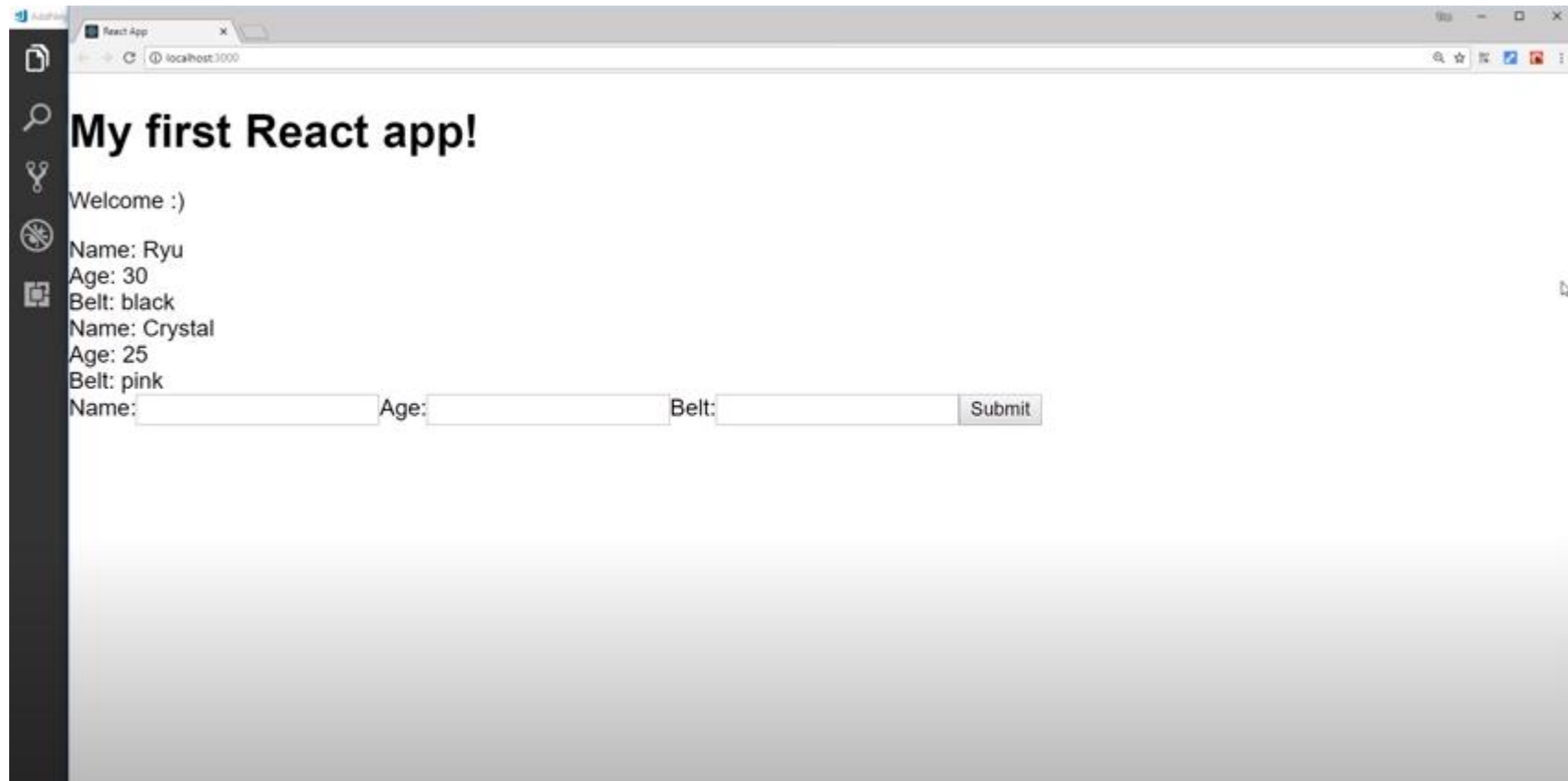
hanldeSubmit func

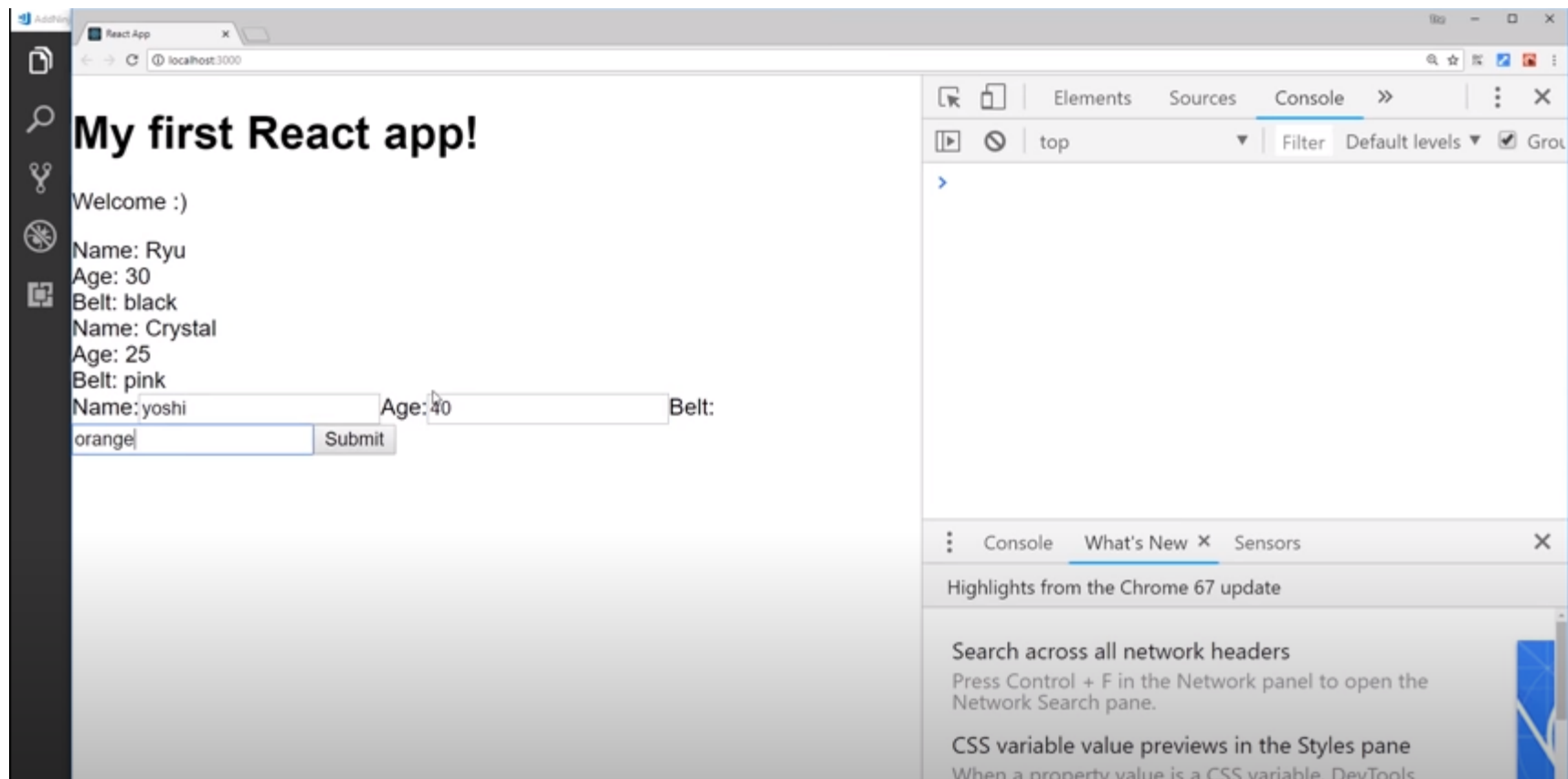


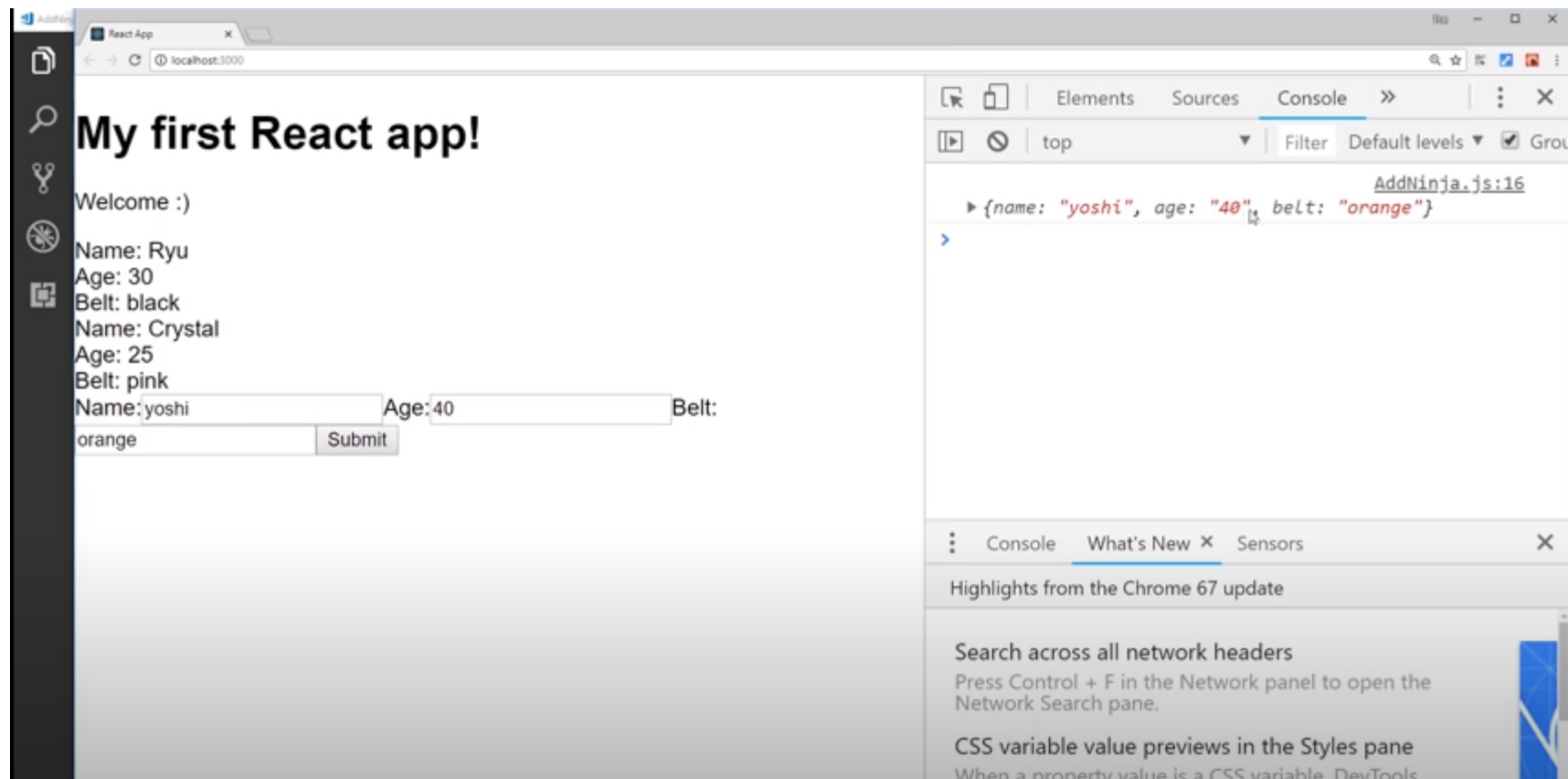


```
1 import React, { Component } from 'react';
2 import Ninjas from './Ninjas';
3 import AddNinja from './AddNinja';
4
5 class App extends Component {
6   state = {
7     ninjas : [
8       { name: 'Ryu', age: 30, belt: 'black', id: 1 },
9       { name: 'Yoshi', age: 20, belt: 'green', id: 2 },
10      { name: 'Crystal', age: 25, belt: 'pink', id: 3 }
11    ]
12  }
13  render() {
14    return (
15      <div className="App">
16        <h1>My first React app!</h1>
17        <p>Welcome :)</p>
18        <Ninjas ninjas={this.state.ninjas} />
19        <AddNinja />
20      </div>
21    );
22  }
```

Adding AddNinja comp in the root comp









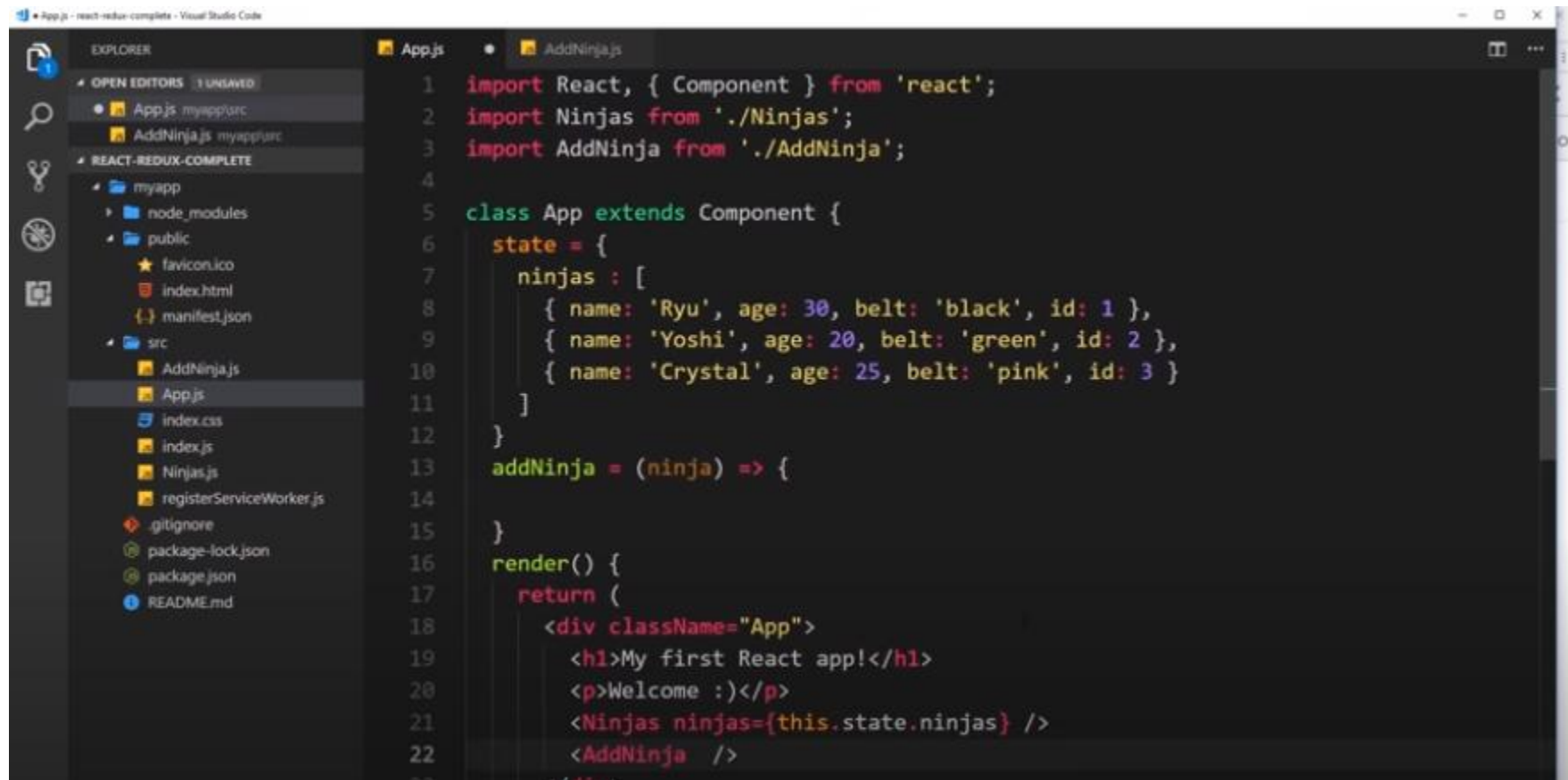
Now what we need:

We need to add the stuff which we got in the last slide from the user to the nijas list which we mentioned in the start.

But how?



# **FUNCTIONS AS PROPS**



App.js - react-redux-complete - Visual Studio Code

EXPLORER

OPEN EDITORS 1 UNSAVED

- App.js myapp/src
- AddNinja.js myapp/src

REACT-REDUX-COMPLETE

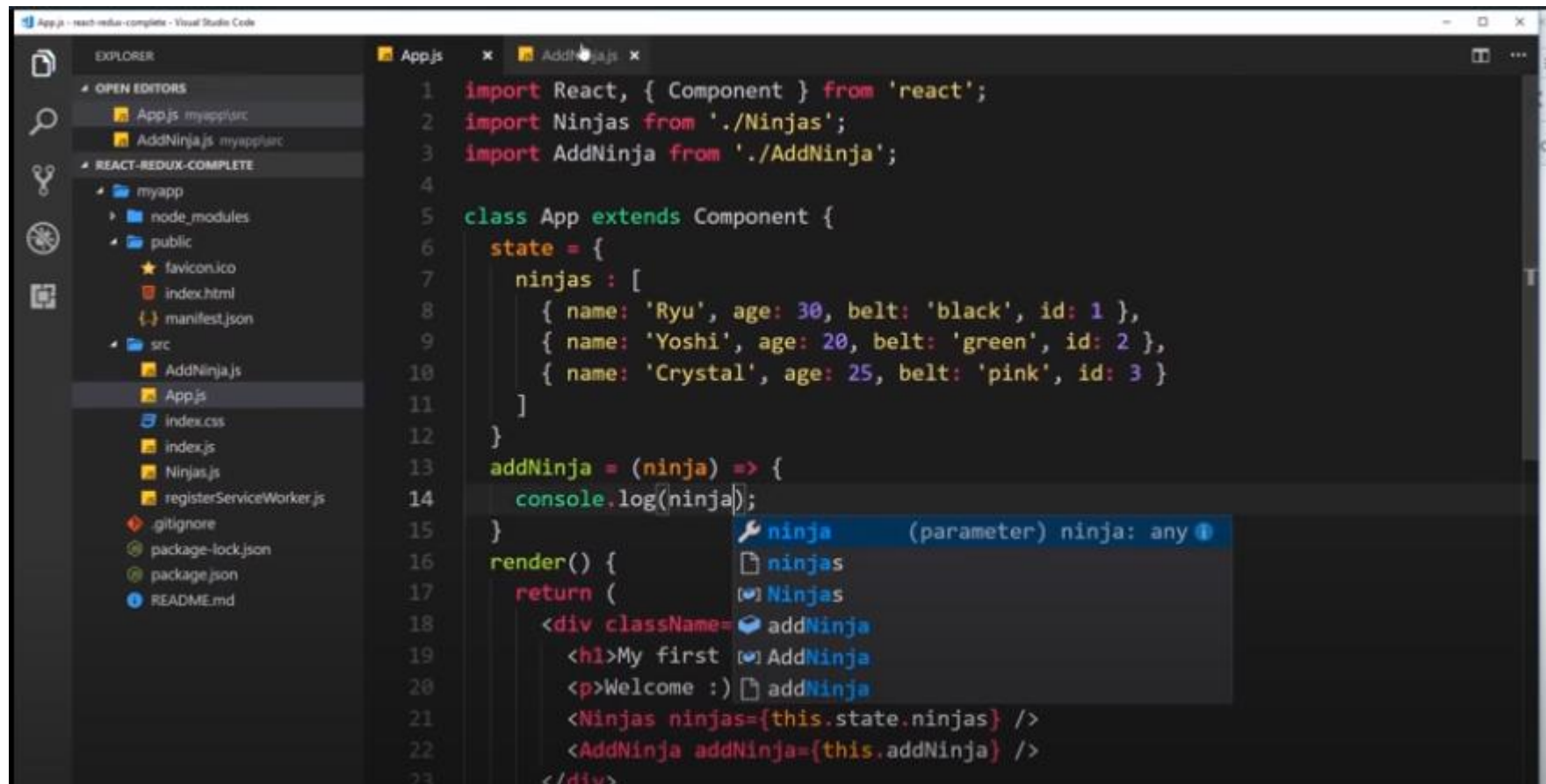
- myapp
  - node\_modules
  - public
    - favicon.ico
    - index.html
    - manifest.json
  - src
    - AddNinja.js
    - App.js
    - index.css
    - index.js
    - Ninjas.js
    - registerServiceWorker.js
    - .gitignore
    - package-lock.json
    - package.json
    - README.md

```
1 import React, { Component } from 'react';
2 import Ninjas from './Ninjas';
3 import AddNinja from './AddNinja';
4
5 class App extends Component {
6   state = {
7     ninjas : [
8       { name: 'Ryu', age: 30, belt: 'black', id: 1 },
9       { name: 'Yoshi', age: 20, belt: 'green', id: 2 },
10      { name: 'Crystal', age: 25, belt: 'pink', id: 3 }
11    ]
12  }
13  addNinja = (ninja) => {
14
15  }
16  render() {
17    return (
18      <div className="App">
19        <h1>My first React app!</h1>
20        <p>Welcome :)</p>
21        <Ninjas ninjas={this.state.ninjas} />
22        <AddNinja addNinja={this.addNinja} />
```



```
3 class AddNinja extends Component {
4   state = {
5     name: null,
6     age: null,
7     belt: null
8   }
9   handleChange = (e) => {
10    this.setState({
11      [e.target.id]: e.target.value
12    })
13  }
14  handleSubmit = (e) => {
15    e.preventDefault();
16    this.props.addNinja(this.state);
17  }
18  render(){
19    return (
20      <div>
21        <form onSubmit={this.handleSubmit}>
22          <label htmlFor="name">Name:</label>
23          <input type="text" id="name" onChange={this.handleChange} />
24          <label htmlFor="name">Age:</label>
```

Calling a func and passing a ninja obj through state



App.js

React App

localhost:3000

# My first React app!

Welcome :)

Name: Ryu  
Age: 30  
Belt: black

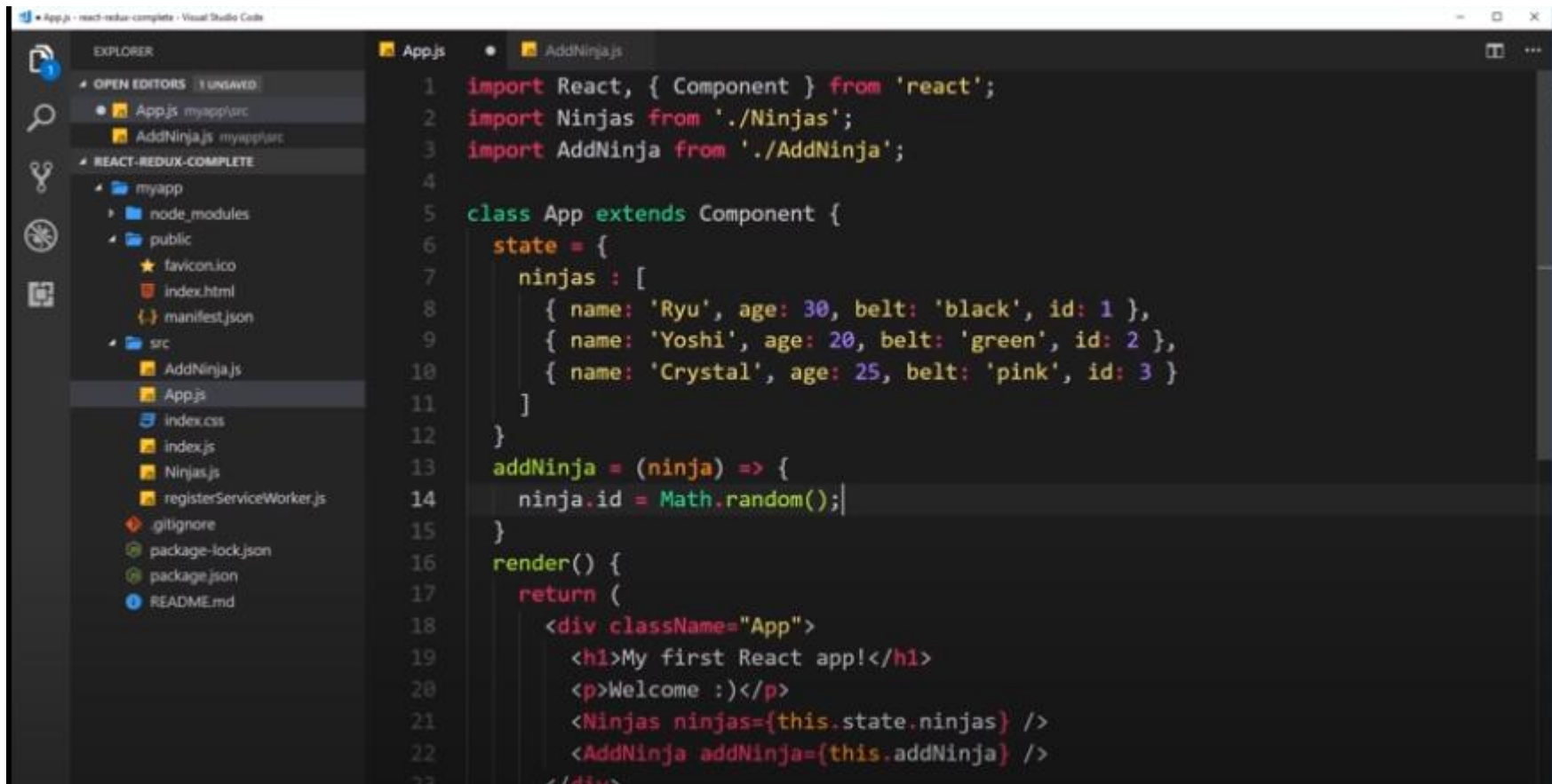
Name: Crystal  
Age: 25  
Belt: pink

Name: mario Age: 40 Belt:  
black

Elements Sources Console

top Filter Default levels Group

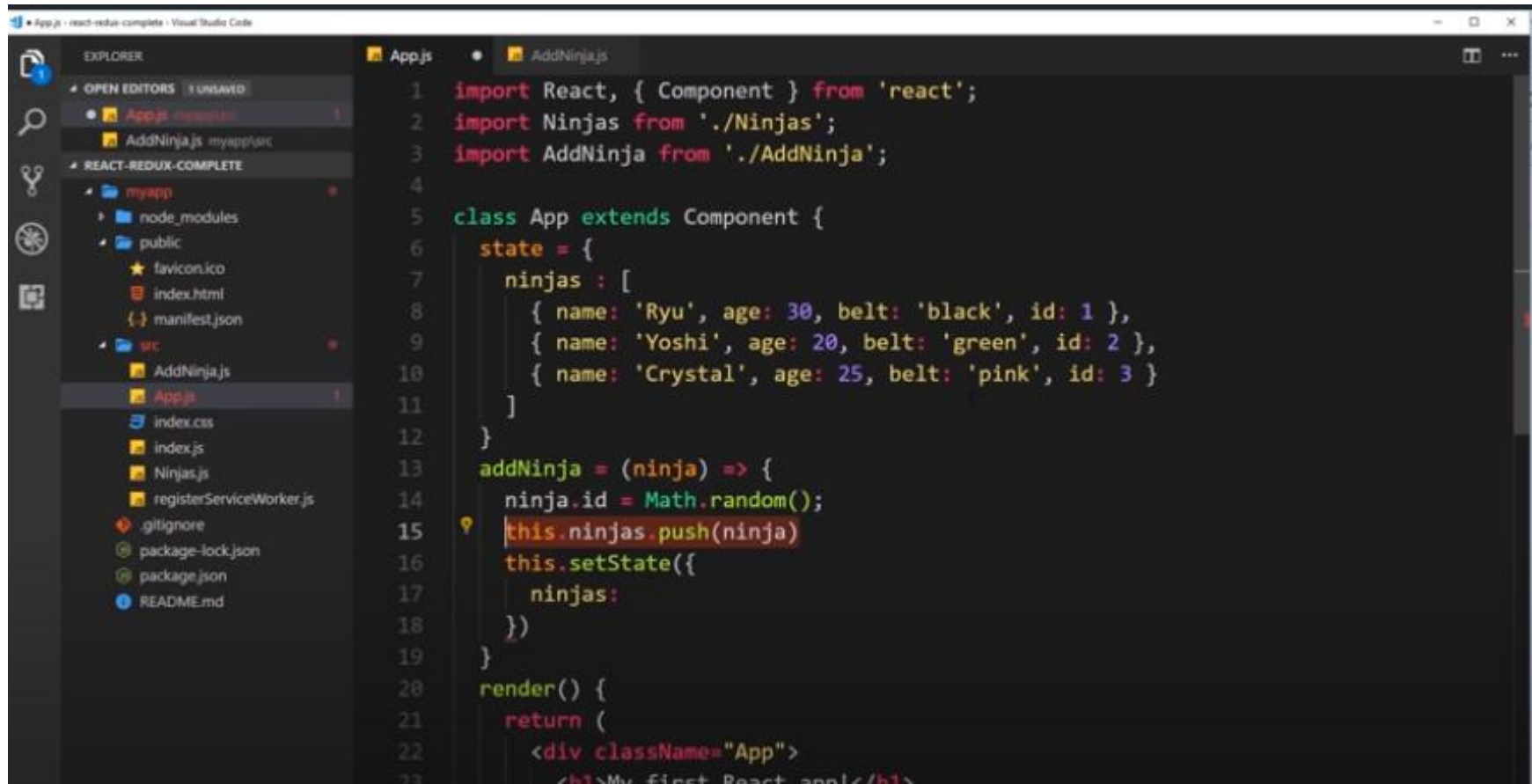
App.js:14  
▶ {name: "mario", age: "40", belt: "black"}  
I



```
1 import React, { Component } from 'react';
2 import Ninjas from './Ninjas';
3 import AddNinja from './AddNinja';
4
5 class App extends Component {
6   state = {
7     ninjas : [
8       { name: 'Ryu', age: 30, belt: 'black', id: 1 },
9       { name: 'Yoshi', age: 20, belt: 'green', id: 2 },
10      { name: 'Crystal', age: 25, belt: 'pink', id: 3 }
11    ]
12  }
13  addNinja = (ninja) => {
14    ninja.id = Math.random();
15  }
16  render() {
17    return (
18      <div className="App">
19        <h1>My first React app!</h1>
20        <p>Welcome :)</p>
21        <Ninjas ninjas={this.state.ninjas} />
22        <AddNinja addNinja={this.addNinja} />
23      </div>
```

Adding id in ninja obj as we are not interested to take it from user

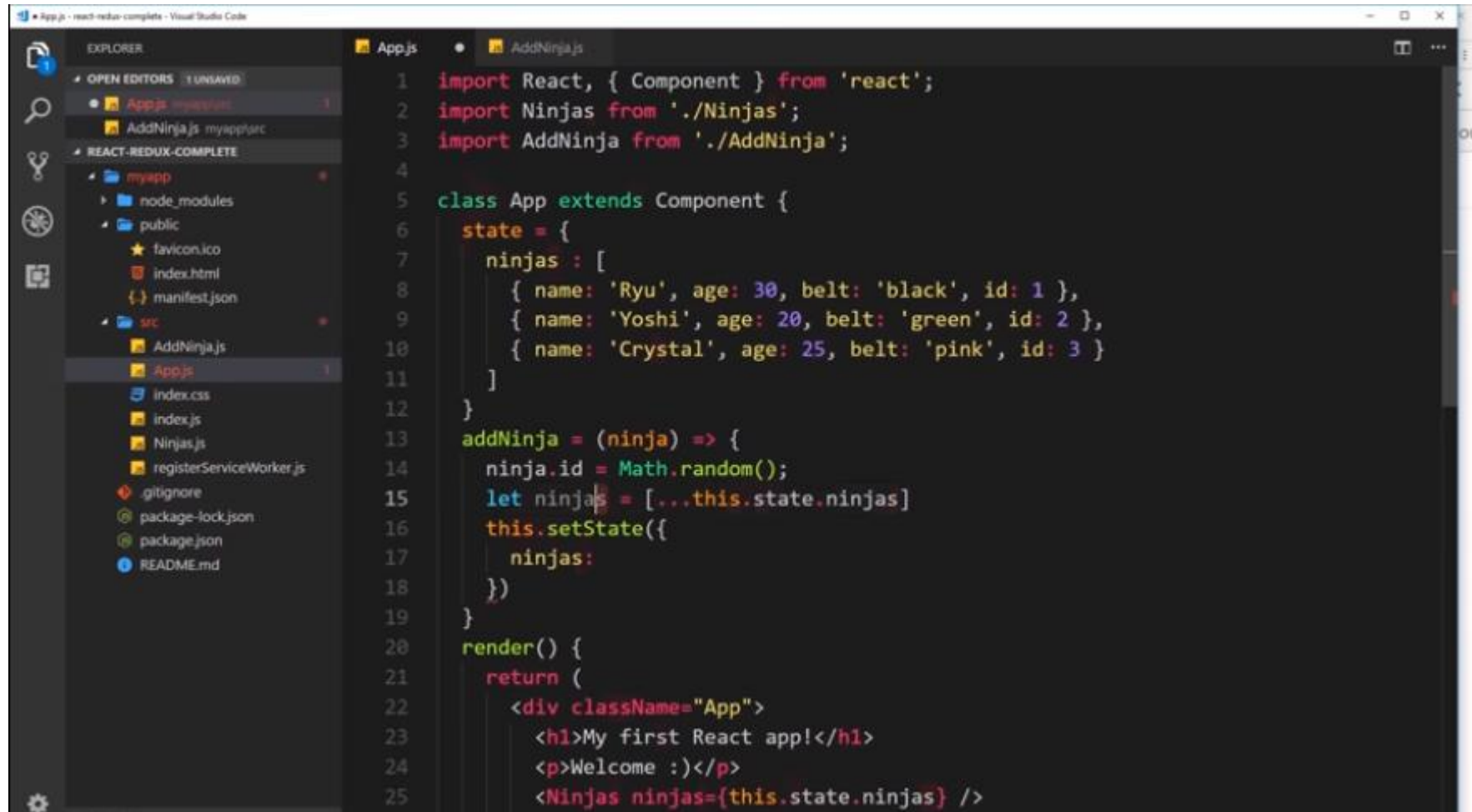
Not do this already updating array what of setState



```
1 import React, { Component } from 'react';
2 import Ninjas from './Ninjas';
3 import AddNinja from './AddNinja';
4
5 class App extends Component {
6   state = {
7     ninjas : [
8       { name: 'Ryu', age: 30, belt: 'black', id: 1 },
9       { name: 'Yoshi', age: 20, belt: 'green', id: 2 },
10      { name: 'Crystal', age: 25, belt: 'pink', id: 3 }
11    ]
12  }
13  addNinja = (ninja) => {
14    ninja.id = Math.random();
15    this.ninjas.push(ninja)
16    this.setState({
17      ninjas:
18    })
19  }
20  render() {
21    return (
22      <div className="App">
23        <h1>My first React app!</h1>
```



Do not alter the state without setState



```
1 import React, { Component } from 'react';
2 import Ninjas from './Ninjas';
3 import AddNinja from './AddNinja';
4
5 class App extends Component {
6   state = {
7     ninjas : [
8       { name: 'Ryu', age: 30, belt: 'black', id: 1 },
9       { name: 'Yoshi', age: 20, belt: 'green', id: 2 },
10      { name: 'Crystal', age: 25, belt: 'pink', id: 3 }
11    ]
12  }
13  addNinja = (ninja) => {
14    ninja.id = Math.random();
15    let ninjas = [...this.state.ninjas]
16    this.setState({
17      ninjas:
18    })
19  }
20  render() {
21    return (
22      <div className="App">
23        <h1>My first React app!</h1>
24        <p>Welcome :)</p>
25        <Ninjas ninjas={this.state.ninjas} />
```

Generate a copy

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<script>
```

```
const numbers = [1, 2, 3, 4, 5, 6];
```

```
const [one, two, ...rest] = numbers;
```

```
document.write("<p>" + one + "</p>");
```

```
document.write("<p>" + two + "</p>");
```

```
document.write("<p>" + rest + "</p>");
```

```
</script>
```

```
</body>
```

```
</html>
```



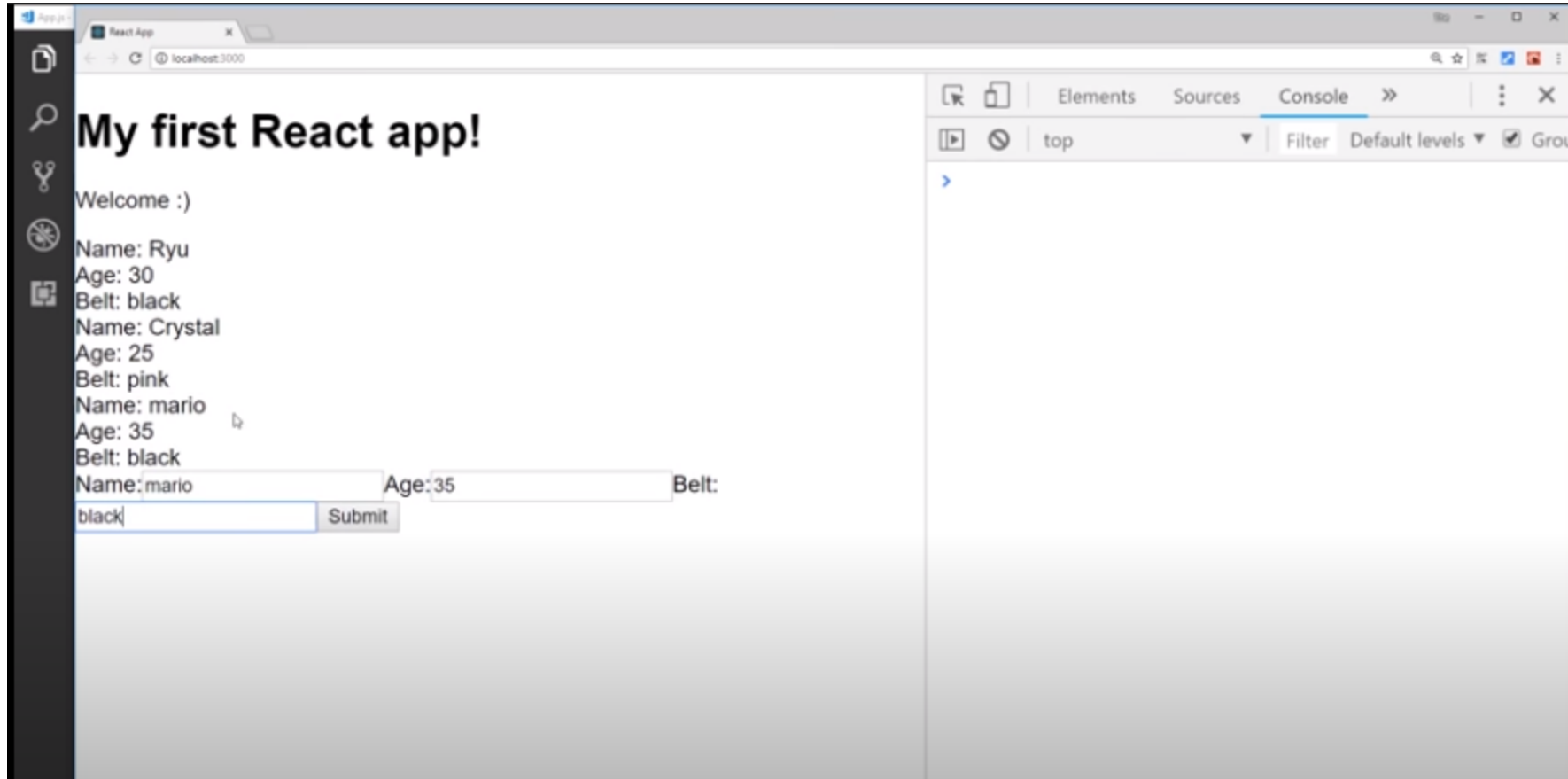
App.js - react-redux-complete - Visual Studio Code

EXPLORER

- OPEN EDITORS (1 UNMAKED)
- App.js myapp/src
- AddNinja.js myapp/src
- REACT-REDUX-COMPLETE
  - myapp
    - node\_modules
    - public
      - ★ favicon.ico
      - index.html
      - manifest.json
    - src
      - AddNinja.js
      - App.js
      - index.css
      - index.js
      - Ninjas.js
      - registerServiceWorker.js
    - .gitignore
    - package-lock.json
    - package.json
    - README.md

App.js

```
1 import React, { Component } from 'react';
2 import Ninjas from './Ninjas';
3 import AddNinja from './AddNinja';
4
5 class App extends Component {
6   state = {
7     ninjas: [
8       { name: 'Ryu', age: 30, belt: 'black', id: 1 },
9       { name: 'Yoshi', age: 20, belt: 'green', id: 2 },
10      { name: 'Crystal', age: 25, belt: 'pink', id: 3 }
11    ]
12  }
13  addNinja = (ninja) => {
14    ninja.id = Math.random();
15    let ninjas = [...this.state.ninjas, ninja];
16    this.setState({
17      ninjas: ninjas
18    })
19  }
20  render() {
21    return (
22      <div className="App">
```





Add delete Ninja functionality in current code