



React and Redux: Lesson 2

JSX, State and rendering data

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JSX Deep Dive

- XML-like syntax to create UI elements
- Compiles down to `React.createElement()` functions
- Needs React in scope
- Capitalize custom components
- Pass JS expressions in props
- Pass strings into props directly
- Booleans attributes default to true
- Spread attributes
- Children
- Comments



Let's get into the code !



One way Data Flow and props



Sample React Component

```
6 import React from 'react';
7
8 function renderListItem(child, i, listItemClassName) {
9   return (
10     <li key={i} className={listItemClassName}>
11       {child}
12     </li>
13   );
14 }
15
16 function List(props) {
17   const {listClassName, listItemClassName, children} = props;
18   const otherProps = Object.assign({}, props);
19
20   /* we don't need these on the <ul> */
21   delete otherProps.listItemClassName;
22   delete otherProps.listClassName;
23   delete otherProps.children;
24
25   return (
26     <ul className={listClassName} {...otherProps}>
27       {children.map((child, i) => {
28         return renderListItem(child, i, listItemClassName);
29       })}
30     </ul>
31   );
32 }
33
34 List.propTypes = {
35   listClassName: React.PropTypes.string,
36   listItemClassName: React.PropTypes.string,
37   children: React.PropTypes.array.isRequired
38 };
39
40 export default List;
41
```

Displaying JSON data

```
1 [
2   {
3     "artist": "Eminem",
4     "real-name": "Marshall Bruce Mathers III",
5     "aliases": ["Ken Kaniiff", "Marshall Mathers", "Slim Shady"],
6     "albums": [
7       {
8         "name": "Infinite",
9         "year": "1996"
10      },
11      {
12        "name": "The Slim Shady LP",
13        "year": "1999"
14      },
15      {
16        "name": "The Marshall Mathers LP",
17        "year": "2000"
18      },
19      {
20        "name": "The Eminem Show",
21        "year": "2002"
22      },
23      {
24        "name": "Encore",
25        "year": "2004"
26      }
27    ]
28  }
29 ]
```

```
1 import React from 'react';
2
3 export default function ArtistCard(props) {
4   return (
5     <div>
6       <h2>{props.artist}</h2>
7       <img src={props.photo} />
8       <br />
9       {props.aliases.map(alias => <span>{alias}</span>)}
10      <br />
11      {props.albums.map(album => <span>{album.name}</span>)}
12    </div>
13  );
14 }
```

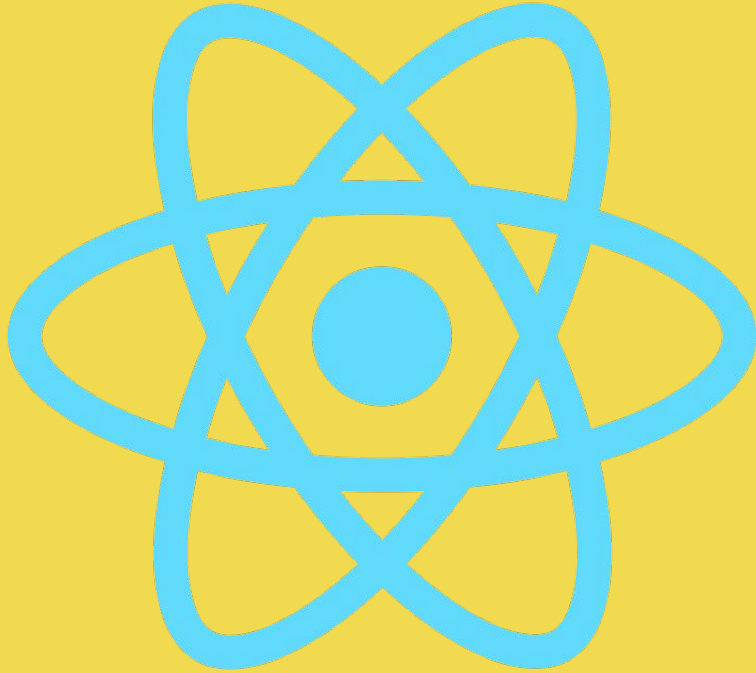
A pair of black-rimmed glasses with clear lenses is positioned in the foreground, resting on a white surface. The glasses have "Felix Gray" and "China Nash C5 49-17-140" inscribed on the temples. In the background, a laptop screen is visible, displaying lines of code in various colors (green, blue, red) on a dark background. The text "Let's get into the code !" is overlaid in a bright cyan color across the middle of the image.

Let's get into the code !



State

ES6 Classes and React



Keys

- Keys are used to uniquely identify elements
- Keys are used by React to identify elements to potentially reduce rerenders
- Keys have to be unique
- Keys often come from IDs from a database
- Keys must always be present when rendering list of similar items

Events

- Clipboard Events
- Composition Events
- Keyboard Events
- Focus Events
- Form Events
- Mouse Events
- Pointer Events
- Selection Events
- Touch Events

Fetching JSON data

```
1 [
2   {
3     "artist": "Eminem",
4     "real-name": "Marshall Bruce Mathers III",
5     "aliases": ["Ken Kaniff", "Marshall Mathers", "Slim Shady"],
6     "albums": [
7       {
8         "name": "Infinite",
9         "year": "1996"
10      },
11      {
12        "name": "The Slim Shady LP",
13        "year": "1999"
14      },
15      {
16        "name": "The Marshall Mathers LP",
17        "year": "2000"
18      },
19      {
20        "name": "The Eminem Show",
21        "year": "2002"
22      },
23      {
24        "name": "Encore",
25        "year": "2004"
26      }
27    ]
28  }
29 ]
```