

## STEELEYE FRONTEND ENGINEER TASK

### ANS 1:

List Component has a WrappedListComponent passed inside the react memo. The memo returns the memoised WrappedListComponent so that it doesn't have to re-render until and unless the value of the props is changed. The WrappedListComponent returns an unordered list on rendering. A SingleListComponent is used in the ul which is rendered for every item in the "items" which is passed as props. The props are passed inside the SingleListComponent which is responsible for creating the list inside the ul. The background-color of list is styled to look red by default but on clicking on the particular list it changes color to green because of the useState hook which manages the state of the index and the conditional operator.

### ANS 2:

Error-

```
✖ Uncaught TypeError: prop_types__WEBPACK_IMPORTED_MODULE_2___default(...).shapeOf is not a function
    at ./src/List2.js (List2.js:60:1)
    at options.factory (react_refresh:6:1)
    at __webpack_require__ (bootstrap:24:1)
    at fn (hot_module_replacement:62:1)
    at ./src/App.js (bundle.js:15:64)
    at options.factory (react_refresh:6:1)
    at __webpack_require__ (bootstrap:24:1)
    at fn (hot_module_replacement:62:1)
    at ./src/index.js (List2.js:71:1)
    at options.factory (react_refresh:6:1)
```

Solution-

```
1 WrappedListComponent.propTypes = {
2   items: PropTypes.arrayOf( //we have to use .arrayOf instead of .array
3     PropTypes.shape({ // .shapeOf is not func, we must use .shape
4       text: PropTypes.string.isRequired,
5     })
6   ),
7   };
```

Error-

```
✖ ▶Warning: Each child in a list should have a unique "key" prop.

Check the render method of `WrappedListComponent`. See https://reactjs.org/link/warning-keys for more information.
    at WrappedSingleListItem (http://localhost:3000/static/js/bundle.js:110:5)
    at WrappedListComponent (http://localhost:3000/static/js/bundle.js:143:5)
    at App
```

- studying
- laundry
- cooking

Solution-

While clicking on any item, all the items were getting select to prevent that I assigned their unique index to isSelected to apply background-color to that particular indexed element

```
1 <SingleListItem
2     onClickHandler={() => handleClick(index)}
3     text={item.text}
4     index={index}
5     isSelected={selectedIndex === index} // isSelected is used in determining the background-color of the list item
6     key={index} // unique key prop
7 />
```

Error-

```
3 ▶ Uncaught TypeError: setSelectedIndex is not a function
    at handleClick (List2.js:42:1)
    at onClickHandler (List2.js:49:1)
    at WrappedSingleListItem (List2.js:15:1)
    at renderWithHooks (react-dom.development.js:16305:1)
    at updateFunctionComponent (react-dom.development.js:19588:1)
    at updateSimpleMemoComponent (react-dom.development.js:19425:1)
    at updateMemoComponent (react-dom.development.js:19284:1)
    at beginWork (react-dom.development.js:21673:1)
    at HTMLUnknownElement.callCallback (react-dom.development.js:4164:1)
    at Object.invokeGuardedCallbackDev (react-dom.development.js:4213:1)
```

Solution-

```
1 const [selectedIndex, setSelectedIndex] = useState(); /* useState return two entities,
2     first is the state and the second is the function that sets the state, therefore the 1st
3     parameter should be selectedIndex and the other one should be setSelectedIndex */
```

Error-

```
⚠ Warning: Cannot update a component ('WrappedListComponent') while rendering a different component ('WrappedSingleListItem'). To locate the bad
'WrappedSingleListItem', follow the stack trace as described in https://reactjs.org/link/setstate-in-render
    at WrappedSingleListItem (http://localhost:3000/main.4d1a88...hot-update.js:32:5)
    at ul
    at WrappedListComponent (http://localhost:3000/main.4d1a88...hot-update.js:65:5)
    at App
```

Solution-

```
1 <li style={{ backgroundColor: isSelected ? "green" : "red", }} onClick={() => onClickHandler(index)} /*function call was incorrect*/ >
2     {text}
3 </li>
```

**ANS 3:**

Optimized code-

```
1 import { useState, useEffect, memo } from "react";
2 import PropTypes from "prop-types";
3
4 const List = ({ items }) => {
5   const [selectedIndex, setSelectedIndex] = useState();
6
7   useEffect(() => {
8     setSelectedIndex(null);
9   }, [items]);
10
11   return (
12     <ul>
13       {items.map((item, index) => (
14         <li
15           onClick={() => setSelectedIndex(index)}
16           style={{ backgroundColor: selectedIndex === index ? 'green' : 'red'}}
17           key={index} >
18             {item.text}
19         </li>
20       ))}
21     </ul>
22   );
23 };
24
25 List.propTypes = {
26   items: PropTypes.arrayOf(
27     PropTypes.shape({
28       text: PropTypes.string.isRequired,
29     })
30   ),
31 };
32
33 List.defaultProps = {
34   items: null,
35 };
36
37 export default memo(List);
```