

1) Explain what the simple List component does.

List component generate a memorize/optimal version of Wrapped List Component
memo is a higher order component will cause React to skip rendering a component if its props have not changed. Wrapped List Component only re-renders when the items that are passed to it through props are updated.

2)What problems / warnings are there with code?

shape Of is not a function instead of shape Of use
shape use State is not correctly define incorrect: const
[setSelectedIndex, selectedIndex] = useState();
correct:const [selectedIndex, setSelectedIndex] =
useState(); warning: Each child in a list should have a
unique "key" prop. So, need to add key property.

3)Please fix, optimize, and/or modify the component as much as you think is necessary.

```
import React, { useState, useEffect, memo } from "react";
import PropTypes from "prop-types";
// Single List Item
const WrappedSingleListItem = ({ index, isSelected, onClickHandler, text }) => {
  return (
    <li
      style={{ backgroundColor: index === isSelected ? "green" : "red" }}
      onClick={() => onClickHandler(index)}
    >
      {text}
    </li>
  );
};
```

```
WrappedSingleListItem.propTypes = {
  index: PropTypes.number,
  isSelected: PropTypes.bool,
```

```
onClickHandler: PropTypes.func.isRequired,
```

```
text: PropTypes.string.isRequired
```

```
};
```

```
const SingleListItem = memo(WrappedSingleListItem);
```

```
const WrappedListComponent = ({ items }) => {
```

```
  const [selectedIndex, setSelectedIndex] = useState( );
```

```
  useEffect(() => {
```

```
    setSelectedIndex(null);
```

```
  }, [items]);
```

```
  const handleClick = (index) => {
```

```
    setSelectedIndex(index);
```

```
  };
```

```
  return (
```

```
    <ul style={{ textAlign: "left" }}>
```

```
      {items?.map((item, index) => (
```

```
        <SingleListItem
```

```
          onClickHandler={() => handleClick(index)}
```

```
          text={item.text}
```

```
          index={index}
```

```
          isSelected={selectedIndex}
```

```
          key={index}
```

```
        />
```

```
      )))
```

```
    </ul>
```

```
  );
```

```
};
```

```
WrappedListComponent.propTypes = {
```

```
  items: PropTypes.array(
```

```
    PropTypes.shape({
```

```
      text: PropTypes.string.isRequired
```

```
    })
```

```
  )
```

```
};
```

```
WrappedListComponent.defaultProps = {
```

```
  items: null
```

```
};
```

```
const List = memo(WrappedListComponent);
```

export default List;