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## Frontend Engineer Assignment

### React Component Code Review

1) Explain what the simple List component does.

Ans: List is generally used to store data in ordered format, here also this List is being used to render data in ordered format. List items are wrapped under `WrappedSingleListItem`. A `handleClick` function which we pass to the `SingleListItem` component by which the background color of that particular item changes. There is also a `memo` method used in the list component. React reuses the memoized content from the same reference. By `memoized`, it states that it doesn't re-render unnecessarily. The `memo` is used to make website speed more efficient and perform better.

2) What problems / warnings are there with code?

Ans:

- 1) In our code, as the parent component, which is a `WrappedListComponent`, has only one state and that is also making direct changes in our child component, which means changing the parent will anyhow change the child, so in such a case, using `memo` is a waste of memory.
- 2) While destructuring the array, we must follow the sequence of occurrence of the value, and when we destructure the array of use state in a given problem, we mismatch the sequence due to which we named the values wrong, or say we altered the names, which caused us to use them incorrectly, which caused us the error.
- 3) In the given code, the default items array was null, and it is not possible to map over null, so we need to initialize it with some value.
- 4) While mapping over the array of items, we should have given the key to each item to identify it uniquely.
- 5) There is a syntactical error in the predefined syntax. Instead of using an array, we should have used `ArrayOf` and instead of using `shapOf`, we should have used the shape only.
- 6) While calling the call back function inside a child, we should have used the arrow function.
- 7) In props check, we set the `isSelected` value to be boolean, but when we pass boolean values as props, the value is converted to a string or number, so make sure to convert that to boolean before using.

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

Ans:

I fixed, optimized and modified the code and uploaded on github along with this pdf. I added `cursor(grab)` while hovering on the items.