Project Report

Assignment: State Management with Immer in React

This project focuses on developing a React application for managing a shopping list with various attributes such as item name, quantity, category, and notes. The application allows users to add, update, and remove items from the list, providing an intuitive user interface for seamless interaction.  
  
Implementation Overview:

To simplify state management, especially for nested data structures like the shopping list, the project utilizes the Immer library, along with its use Immer hook. Immer provides a convenient way to handle state updates in React applications by allowing us to directly modify immutable state in a mutable way, without worrying about creating copies of nested objects or arrays.

By using use Immer, we were able to initialize the shopping list state as an array of item objects and easily manipulate it within functions for adding, updating, and removing items. For example, when adding a new item to the list, instead of manually creating a copy of the state and updating it immutably, we simply used the draft state provided by use Immer to push the new item directly to the list.

Similarly, when updating an existing item or removing it from the list, use Immer made it straightforward to locate the item within the draft state and modify or remove it without mutating the original state directly. This significantly simplified the code and improved readability, making it easier to understand and maintain.

Troubleshooting:

During development, we encountered a warning message related to a dependency issue with babel-preset-react-app. The warning suggested adding @babel/plugin-proposal-private-property-in-object to the project's devDependencies to avoid potential issues. We followed the recommendation by adding the plugin to devDependencies, resolving the warning and ensuring the stability of the project.