

ASSIGNMENT: REACT HOOKS

INSTRUCTIONS:

1. Create a new project for this assignment and name it as “hooks-assignment”

QUESTIONS:

1. *TODO LIST APPLICATION:*

- Create a React component for a todo list application.
- Utilize **useState** to manage the list of todos.
- Use **useEffect** to fetch initial todos from an API endpoint when the component mounts.
- Implement a **useCallback** hook to handle the deletion of a todo item efficiently.
- Show how these hooks work together to provide a seamless todo list experience.

2. *THEME SWITCHER FEATURE:*

- Develop a theme switcher feature for a React application.
- Utilize **useContext** and **useState**.
- Implement multiple themes (e.g., light mode and dark mode).
- Use **useContext** to manage the theme state globally.
- Use **useState** to toggle between different themes.
- Describe the advantages of using **useContext** in this scenario and how it simplifies the management of application-wide state.

3. *SHOPPING CART COMPONENT:*

- Build a simple shopping cart component using **useReducer** and **useMemo**.
- Allow users to add and remove items from the cart.
- Use **useReducer** to manage the state of the shopping cart.
- Compute the total price using **useMemo** to optimize performance.
- Discuss the benefits of using **useReducer** over **useState** in managing complex state logic and how **useMemo** enhances performance by memoizing expensive computations.