

Topic : Redux

Assignment: Simple Counter App Using Redux

Scenario:

You are tasked with building a simple Counter App using Redux in React with TypeScript. The app will allow users to increment, decrement, and reset a counter.

This assignment will help you practice setting up Redux for state management in a React project.

Requirements:

➤ Project Setup:

- Create a new React project with TypeScript and name it CounterAppRedux.
- Install the necessary Redux dependencies:

`npm install @reduxjs/toolkit react-redux`

➤ Component Structure:

○ Create a Counter Component:

- This component will display the current counter value and have buttons for incrementing, decrementing, and resetting the counter.

○ Redux Setup:

- Set up a Redux store with a slice for managing the counter state.
- The slice should have actions for incrementing, decrementing, and resetting the counter.

○ App Component:

- The App component should render the Counter component and connect it to the Redux store.

Tasks:

1. Redux Slice:

- Create a counterSlice that manages a simple integer value (the counter).

- The slice should contain the following actions:

increment: Increases the counter value by 1.

decrement: Decreases the counter value by 1.

reset: Resets the counter value to 0.

2. Counter Component:

- Create a Counter component that displays the current counter value.

- The component should have three buttons:

Increment: When clicked, this button increases the counter value by 1.

Decrement: When clicked, this button decreases the counter value by 1.

Reset: When clicked, this button resets the counter to 0.

3. Store Setup:

- Set up the Redux store and connect it to the React application using the Provider from react-redux.

4. Expected Outcome:

- A simple counter application where users can:
 - Increment the counter.
 - Decrement the counter.
 - Reset the counter to 0.

The counter value should be managed entirely through the Redux store.
