Module – 18 React Applying Redux

Statement Management [Redux, Redux-Toolkit or Recoil]: -

1. ## What is Redux, and why is it used in React applications? Explain the core concepts of actions, reducers, and the store.

   - Redux is a state management library used to manage and share the state of an application across multiple components in a predictable way.

   ➕ **Why is Redux used in React: -**

   1. Centralized State – Keeps application state in a single store.
   2. Predictability – State Updates are consistent and easy to debug.
   3. Easier State Sharing – Simplifies passing data between deeply nested components.

   ➕ **Core Concepts: -**

   1. Actions: -
      - Specify the type of state change (e.g. increment, decrement).
      - Plain JavaScript Objects describing what should happen.
   2. Reducers: -
      - Functions that determine how the state should change based on an action.
      - Take the current state and action, and return a new state.
   3. Store: -
      - The Centralized place where the state lives.
      - Holds the state and allows updates through actions.

2. ## How does Recoil simplify state management in React compared to Redux?
   - Recoil is a state management library for react that simplifies handling state by integrating seamlessly with react modern features like hooks.
   - Recoil state management by eliminating much of the boilerplate code required in Redux, making it easier to set up and use.