**State Management (Redux, Redux-Toolkit or Recoil)**

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

Redux is a javascript library that manages an application’s global state. It’s often used with react, but it can be used with any view lirary. Redux helps developers write consistent, maintainable applications that are easy to test.

**Why use redux?**

* Predictable behavior: redux helps developers understand when and where state changes occur.
* Centralized store: redux improves debugging by keeping all state in one place.
* Time – travel debugging: redux allows developers to see how state has changed over time.
* Simplifies state management: redux eliminates the need for prop drilling and lifting state.

**Core concepts**

* Store

A single object tree that store the application’s state. It’s the single source of truth for the application’s state.

* Action

Javascript objects that describe changes made to the application. Actions are the only way to change the state.

* Reducers

Javascript functions that calculate the new state based on the current state and an action. Reducers are the only way to change the store’s sate.

* How does recoil simplify state management in react compared to redux?

Recoil is a simpler option for state management in react than redux, especially for teams new to react or state management. Recoil has a simple API and easy-to-follow documentation. Redux is better suited for teams with more experience in state management who want more control and flexibility.

**Explanation**

Recoil

* A state management library for react that was released by facebook in 2020
* Built on top of react’s context API
* A good option for teams new to react or state management
* Has a simple API and easy-to-follow documentation

Redux

* An open-source javascript library for managing and centralizing application state
* A popular choice for managing complex application state
* Better suited for teams with more experience in state management
* Offers more control and flexibility
* Has a large community and many third-party tools