

Approach to Solving the Assessment

The project was designed to demonstrate a modular and scalable approach to building a React application with state management and API integration. Below is a summary of the approach taken and assumptions made during development:

1. State Management with Redux:

Redux, along with @reduxjs/toolkit, was used to manage the global state of the application. A postsSlice was created to handle the state of posts, including actions for setting and adding posts. This ensures a clear separation of concerns between the UI and the underlying data logic.

2. Component Design:

The application was structured with a focus on reusability and clarity. The PostsTable component was designed as the central feature, allowing users to view and manage posts interactively. The folder structure was organized to group related functionality, ensuring scalability as the application grows.

3. API Integration:

Axios was used for making HTTP requests to the JSONPlaceholder API to fetch and add posts. The useEffect hook was employed to fetch data when the component loads, and asynchronous Redux actions were used to update the store in response to API interactions.

4. Styling:

Material-UI components were utilized for a polished and professional UI, with additional custom styles defined using the @mui/system utility and SCSS for component-specific styles.

5. Error Handling:

An ErrorBoundary was implemented to gracefully handle unexpected errors in the component tree, ensuring a better user experience during runtime failures.

6. Assumptions Made:

- The JSONPlaceholder API provides accurate and stable endpoints for demonstration purposes.
- Each post contains the fields userId, id, title, and completed, and these fields remain consistent in the data.
- The app's primary focus is on demonstrating the functionality of fetching, displaying, adding posts, and error handling using Axios and Redux.

By combining React, Redux, Axios, and Material-UI, this approach ensures an simple user interface, efficient state management, and reliable data interaction.