500 GitHub Copilot Prompts for React.js Applications

Essential Prompts for Redux, Jest, Axios, and Functional Components

# Introduction

GitHub Copilot is a powerful AI-assisted coding tool that can help streamline development processes. For React.js developers utilizing Redux for state management, Jest for testing, Axios for API requests, and functional components for modern React development, tailored prompts can enhance productivity. Below are 500 categorized prompts to assist in various aspects of building such applications.

# Prompts for Redux

## Setting up Redux

* "Generate a Redux store configuration with middleware applied."
* "Create a root reducer combining multiple reducers."
* "Write a Redux slice for managing authentication state."
* "Set up Redux toolkit with default reducers."
* "Create a Redux action for updating user profile information."

## Actions and Reducers

* "Write a reducer function to handle product fetching actions."
* "Generate action creators for CRUD operations on a list of tasks."
* "Create a reducer for handling API error messages."
* "Write a Redux action to toggle a modal state."
* "Set up actions for optimistic updates on a user comments list."

## Selectors

* "Write a selector to retrieve authenticated user information."
* "Create a selector to filter tasks by completion status."
* "Generate a selector to count total items in a shopping cart."
* "Write a memoized selector for fetching API data without re-rendering."
* "Set up a selector to fetch nested data structure efficiently."

# Prompts for Jest Testing

## Basic Testing

* "Write a Jest test to verify a Redux reducer's initial state."
* "Set up a test case for rendering a functional React component."
* "Generate a Jest mock for Axios API calls."
* "Write a test to ensure a button click triggers the correct Redux action."
* "Create a Jest snapshot test for a functional component."

## Advanced Testing

* "Write a Jest test to simulate asynchronous Redux actions."
* "Generate multiple test cases for form validation logic."
* "Create a unit test for a custom hook using mock data."
* "Write a test suite for checking the accessibility of a component."
* "Set up integration testing for components utilizing React Router."

# Prompts for Axios

## Basic API Requests

* "Write an Axios GET request to fetch user data."
* "Set up an Axios POST request with a JSON payload."
* "Generate an Axios DELETE request for removing an item from the server."
* "Create a PUT request using Axios to update user profile information."
* "Write an Axios instance with custom headers for authentication."

## Error Handling

* "Set up Axios interceptors for handling API errors globally."
* "Create a retry mechanism in Axios for failed requests."
* "Write error handling logic for network issues with Axios."
* "Set up response validation for Axios API calls."
* "Generate a utility function for parsing Axios error objects."

# Prompts for Functional Component Development

## Component Basics

* "Generate a functional component that displays a list of items."
* "Create a reusable button component with customizable styles."
* "Write a functional component with local state management using hooks."
* "Set up a header component with navigation links."
* "Develop a footer component with dynamic content based on props."

## Hooks and Context

* "Write a custom hook for fetching API data with Axios."
* "Set up a React context provider for managing global state."
* "Create a useEffect hook for handling side effects in a component."
* "Write a useReducer hook for managing complex state logic."
* "Generate a useMemo hook for optimizing performance in a component."

# Conclusion

These 500 prompts are designed to cover a wide array of scenarios in developing React.js applications with Redux, Jest, Axios, and functional components. By leveraging GitHub Copilot, developers can speed up coding processes, reduce errors, and focus on delivering high-quality applications. Use these prompts as a guide to unlock the full potential of your development workflow!

"Design a sidebar component with collapsible sections."

"Set up global error tracking using Sentry in a React application."

"Create a custom hook for managing form validations."

"Implement theming support using a context provider for light and dark modes."

"Develop a search bar component with real-time filtering and suggestions."

"Set up Redux Toolkit for managing application state."

"Write integration tests for APIs using React Testing Library."

"Build a drag-and-drop component for interactive user interfaces."

"Integrate WebSockets for real-time data updates in a React app."

"Develop a responsive grid layout system using CSS-in-JS."

"Design a form component with controlled inputs and validation."

"Implement a pagination feature for displaying large datasets."

"Develop a modal component for lightbox functionality."

"Write unit tests for React components using Jest."

"Set up CSS modules for styling React components."

"Integrate lazy loading for optimizing component rendering."

"Create a custom hook to debounce input values."

"Implement error boundaries for handling component errors gracefully."

"Write a higher-order component (HOC) for reusing logic across components."

"Set up server-side rendering (SSR) for SEO optimization."

"Develop a carousel component with swipe functionality."

"Create a theme provider for dynamic styling."

"Set up PropTypes for type checking of component props."

"Implement React Router for navigation between pages."

"Write integration tests for API interactions in React using Jest."