Explore the common component architecture patterns of react js

React.js is a popular JavaScript library for building user interfaces, and it encourages the use of reusable components to create a modular and maintainable codebase. There are several common component architecture patterns in React that developers often follow:

1. **Functional Components:** Functional components are the simplest type of component in React. They are stateless and are primarily used for rendering UI elements.
2. **Class Components:** Class components are the older way of creating React components. They can hold state and have lifecycle methods. However, with the advent of functional components and hooks, class components are used less frequently.
3. **Container and Presentational Components:** This pattern involves separating your components into two categories: containers and presentational components. Containers manage the data and application logic, while presentational components focus on rendering UI. This helps keep your codebase clean and makes it easier to test and maintain.
4. **Higher-Order Components (HOC):** HOCs are functions that take a component and return a new component with enhanced functionality. An HOC is a function that takes a component as input and returns a new component as output. HOCs can be used to add new functionality to existing components without modifying the original components.
5. **Render prop pattern:** The render prop pattern is a way to pass a function to a component as a prop. The component can then call the function to render its own UI.