

- what are closure, callback function, and higher-order function in js?

1. **Closure:** A closure is a JavaScript feature that allows a function to remember and access its lexical scope even when that function is executed outside that scope. It means a function has access to its own scope (local variables) and the scope in which it was created (outer function's variables or global scope) even after the outer function has finished executing.
2. **Callback Function:** A callback function is a function passed as an argument to another function, which is then invoked inside the outer function to complete some kind of action. Callbacks are commonly used in asynchronous operations to ensure that certain code doesn't execute until a specific task has been completed.
3. **Higher-Order Function:** A higher-order function is a function that either takes a function as an argument, returns a function, or both. These functions enable functional programming paradigms in JavaScript, allowing for more flexible and dynamic code by treating functions as first-class citizens.

- what is higher-order components in react.js?

Higher-order components (HOCs) in React are functions that accept a component as an argument and return a new enhanced component. They enable code reuse, logic sharing, and help in abstracting out common functionalities from components.