**Explain React Components**

React components are the building blocks of any React application. They are independent, reusable pieces of UI that return HTML via JSX.

Each component has its own logic and controls its own rendering based on props and state.

**Identify the Differences Between Components and JavaScript Functions**

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| --- | --- | --- |
| Feature | React Component | JavaScript Function |
| Purpose | Used to create UI | Performs computation or logic |
| Lifecycle Methods | Has lifecycle | No lifecycle methods |
| React Scope | Works in React ecosystem | Works in general JavaScript context |
| Hooks Support | Hooks like useState, useEffect | No concept of hooks |
| JSX | Returns JSX | Return primitive values or objects |

**Identify the Types of Components**

There are two main types of components in React:

Class Components

Function Components

**Explain Class Component**

A Class Component is an older React component style defined using ES6 classes. It must extend React.Component and has access to state and lifecycle methods such as componentDidMount, render(), etc.

**Explain Function Component**

A Function Component is a simpler way to write React components using JavaScript functions. Modern React (16.8+) uses hooks to allow function components to use state and lifecycle features.

**Define Component Constructor**

In class components, the constructor() is a special method used for:

Initializing state

Binding event handlers

Calling super(props) to access this.props

**Define render() Function**

The render() function is a required method in class components. It returns the JSX that defines what should be rendered on the UI.





