

# React JS

## INTERVIEW

### QUESTIONS AND ANSWERS



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### 1. What is ReactJS?

**Answer:** ReactJS is a JavaScript library used to build reusable components for the view layer in MVC architecture, leveraging a virtual DOM for efficient rendering.

### 2. Explain the MVC architecture?

**Answer:** MVC (Model-View-Controller) is a design pattern that separates an application into three logical components: Model, View, and Controller, to isolate business logic from the presentation layer.

### 3. Explain the building blocks of React?

**Answer:** The main building blocks of React are Components, JSX, Props and State, Context, and Virtual DOM.

### 4. What is virtual DOM in React?

**Answer:** The virtual DOM is a lightweight copy of the actual DOM that React uses to efficiently update the UI by minimizing direct manipulation of the real DOM.

### 5. What is JSX?

**Answer:** JSX is a syntax extension of JavaScript that allows you to write HTML elements in React components, which are then rendered to the DOM.





## 6. What are components and their types in React?

**Answer:** Components are the core building blocks of React applications, and they can be either Functional Components (simple JavaScript functions) or Class Components (complex components with lifecycle methods).

## 7. How do browsers read JSX?

**Answer:** Browsers use a transpiler like Babel to convert JSX into pure JavaScript, which they can then execute.

## 8. What is a key in React?

**Answer:** A key is a special string attribute used to uniquely identify elements in a list, helping React efficiently update and re-render components.

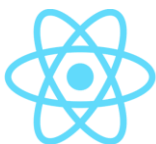
## 9. What is the difference between React and Angular?

**Answer:** React is a JavaScript library focusing on the view layer with a virtual DOM and one-way data binding, while Angular is a full-fledged framework with a real DOM and two-way data binding.

## 10. What is state in React?

**Answer:** State is an object that holds information about a component's current situation and can change over time, influencing how the component behaves and renders.





## 11. Explain props in React?

**Answer:** Props are objects that store information passed from one component to another, allowing components to communicate and share data.

## 12. What is higher-order component in React?

**Answer:** A higher-order component (HOC) is a function that takes a component and returns a new component, often used to reuse logic across multiple components.

## 13. What is one-way data binding in React?

**Answer:** One-way data binding in React means that data flows in a single direction, from parent components to child components, making the application easier to debug and less error-prone.

## 14. What is conditional rendering in React?

**Answer:** Conditional rendering involves displaying different components or elements based on certain conditions, allowing for dynamic user interfaces.

## 15. What is react router?

**Answer:** React Router is a standard library for handling navigation and routing in React applications, keeping the UI in sync with the URL.





## 16. What are the lifecycle methods of components?

**Answer:** Lifecycle methods in React components include Initialization, Mounting, Updating, and Unmounting, each with specific methods like ``componentDidMount`` and ``componentWillUnmount``.

## 17. What is this.setState function in React?

**Answer:** The ``setState`` function is used to update a component's state, triggering a re-render of the component with the new state.

## 18. What are hooks in React?

**Answer:** Hooks are functions introduced in React 16.8 that allow developers to use state and other React features in functional components without needing to write a class.

## 19. Explain the useState hook in React?

**Answer:** The ``useState`` hook allows functional components to manage state by providing a state variable and a function to update it.

## 20. Explain the useEffect hook in React?

**Answer:** The ``useEffect`` hook performs side effects in functional components, such as data fetching or subscribing to events, acting as a replacement for lifecycle methods like ``componentDidUpdate``.





## 21. What is React Fragments?

**Answer:** React Fragments allow you to group multiple elements without adding extra nodes to the DOM, avoiding unnecessary wrappers like `<div>`.

## 22. What is prop drilling and its disadvantages?

**Answer:** Prop drilling occurs when props are passed through multiple levels of a component tree, leading to increased complexity and difficulty in managing the flow of data.

## 23. What is custom hooks in React?

**Answer:** Custom hooks are JavaScript functions that start with "use" and allow developers to reuse logic across components by encapsulating stateful behavior.

## 24. What is react-redux?

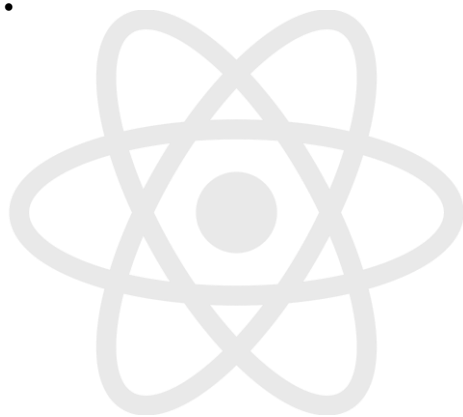
**Answer:** React-redux is a state management library that allows React components to access the Redux store, providing a centralized state management solution.

## 25. What is context API?

**Answer:** The Context API in React allows global variables or state to be passed through the component tree without manually passing props at every level, simplifying state management in deeply nested components.



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