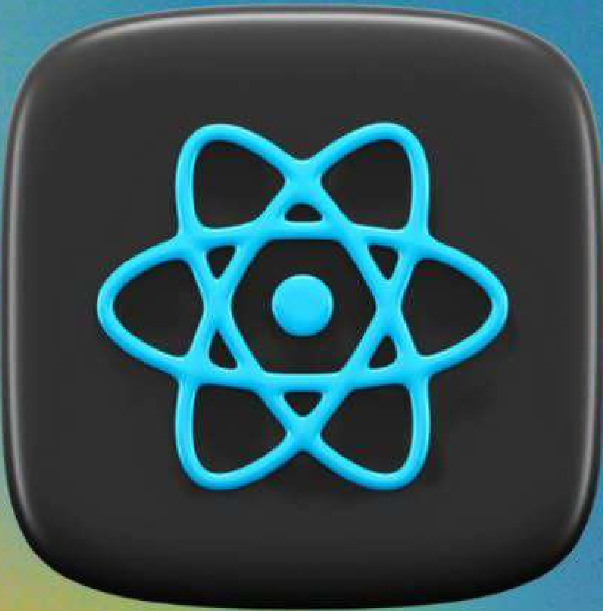
TOP 25 REACT

INTERVIEW Questions



1. What is ReactJS?

ReactJS is a JavaScript library used to build reusable components for the view layer in MVC architecture. It is highly efficient and uses a virtual DOM to render components. It works on the client side and is written in JSX.

2. Explain the MVC architecture?

The Model-View-Controller (MVC) framework is an architectural/design pattern that separates an application into three main logical components Model, View, and Controller. Each architectural component is built to handle specific development aspects of an application. It isolates the business, logic, and presentation layer from each other.

3. Explain the building blocks of React?

The five main building blocks of React are:

- Components: These are reusable blocks of code that return HTML.
- JSX: It stands for JavaScript and XML and allows you to write HTML in React.
- Props and State: props are like function parameters and State is similar to variables.

- Context: This allows data to be passed through components as props in a hierarchy.
- Virtual DOM: It is a lightweight copy of the actual DOM which makes DOM manipulation easier.

5. What is virtual DOM in React?

React uses Virtual DOM which is like a lightweight copy of the actual DOM(a virtual representation of the DOM). So for every object that exists in the original DOM, there is an object for that in React Virtual DOM. It is the same, but it does not have the power to directly change the layout of the document. Manipulating DOM is slow, but manipulating Virtual DOM is fast as nothing gets drawn on the screen. So each time there is a change in the state of our application, the virtual DOM gets updated first instead of the real DOM.

6. What is JSX?

JSX is basically a syntax extension of regular JavaScript and is used to create React elements. These elements are then rendered to the React DOM. All the React components are written in JSX. To embed any JavaScript expression in a piece of code written in JSX we will have to wrap that expression in curly braces {}.

7. What are components in React?

Components are the building blocks of a React application. They are reusable pieces of UI that can be nested, managed, and handled independently. Components can be either class-based or functional.

8. What is the difference between state and props?

- State: The state is an object managed within the component (local state). It is mutable and can change over time.
- Props: Props (short for properties) are read-only attributes passed from a parent component to a child component. They are immutable and used to pass data and event handlers.

9. What are hooks in React?

Hooks are functions that let you use state and other React features in functional components. Examples include useState, useEffect, useContext, useReducer, etc.

10. Explain the useState hook.

Answer: The useState hook is used to add state to functional components. It returns an array with two elements: the current state value and a function to update it.

11. What is the useEffect hook?

The useEffect hook lets you perform side effects in functional components. It serves the same purpose as componentDidMount, componentDidUpdate, and componentWillUnmount in class components.

12. How do you pass data between components?

Data can be passed between components using props. Parent components pass data to child components via attributes, and child components can access this data via the props object.

13. What is context in React?

Context provides a way to pass data through the component tree without having to pass props down manually at every level. It is used to share global data like themes or user information.

14. What is Redux? How does it work with React?

Redux is a state management library for JavaScript applications. It works with React by providing a global state that can be accessed by any component. Redux follows a unidirectional data flow and uses actions, reducers, and a store to manage state.

15. What is the significance of keys in React?

Keys help React identify which items have changed, are added, or are removed. They are important for rendering lists efficiently and must be unique among siblings.

16. What are render props?

Render props is a technique for sharing code between React components using a prop whose value is a function. This allows you to dynamically determine what to render.

17. What is react router?

React Router is a standard library for routing in React. It enables the navigation among views of various components in a React Application, allows changing the browser URL, and keeps the UI in sync with the URL.

18. What is the use of ref in React?

Refs are a function provided by React to access the DOM element and the React element that you might have created on your own. They are used in cases where we want to change the value of a child component, without making use of props and all. They have wide functionality as we can use callbacks with them.

19. What is react-redux?

React-redux is a state management tool which makes it easier to pass these states from one component to another irrespective of their position in the component tree and hence prevents the complexity of the application. As the number of components in our application increases it becomes difficult to pass state as props to multiple components. To overcome this situation we use react-redux.

20. What are benefits of using react-redux?

They are several benefits of using react-redux such as:

- It provides centralized state management i.e. a single store for whole application
- It optimizes performance as it prevents re-rendering of component
- Makes the process of debugging easier
- Since it offers persistent state management therefore storing data for long times become easier

21 . Explain the core components of react-redux?

There are four fundamental concepts of redux in react which decide how the data will flow through components

- Redux Store: It is an object that holds the application state

- Acrtion Creators: These are unctions that return actions (objects)
- Actions: Actions are simple objects which conventionally have two properties- type and payload
- Reducers: Reducers are pure functions that update the state of the application in response to actions

22. What is context API?

Context API is used to pass global variables anywhere in the code. It helps when there is a need for sharing state between a lot of nested components. It is light in weight and easier to use, to create a context just need to call React.createContext(). It eliminates the need to install other dependencies or third-party libraries like redux for state management. It has two properties Provider and Consumer.

23. Explain provider and consumer in Context API?

- A provider is used to provide context to the whole application whereas a consumer consume the context provided by nearest provider. In other words The Provider acts as a parent it passes the state to its children whereas the Consumer uses the state that has been passed.

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24. How to optimize a React code?

We can improve our react code by following these practices:

- Using binding functions in constructors
- Eliminating the use of inline attributes as they slow the process of loading
- Avoiding extra tags by using React fragments
- Lazy loading

25. What is React-Material UI?

React Material UI is a framework leveraging React library, offering prebuilt components for creating React applications. Developed by Google in 2014, it's compatible with JavaScript frameworks like Angular.js and Vue.js. Renowned for its quality designs and easy customization, it's favored by developers for rapid development.

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