

## ● Basic Understanding

- What is JavaScript?
- Can you explain the difference between `var`, `let`, and `const`?
- What are data types in JavaScript?
- How do you declare a function in JavaScript?
- What are the differences between `==` and `===`?
- Explain the concept of hoisting in JavaScript.
- What is the DOM?
- How does event bubbling work in the DOM?
- What are closures in JavaScript?
- Can you describe the global execution context in JavaScript?

## ● Intermediate Concepts

- How do you handle exceptions in JavaScript?
- What are arrow functions?
- Explain the concept of prototypes in JavaScript.
- What is event delegation in JavaScript?
- How do you create and use a promise?
- What are template literals in JavaScript?
- How do you perform type conversion in JavaScript?
- Describe the process of event looping in JavaScript.
- What is the difference between `null` and `undefined`?
- How do you work with asynchronous code in JavaScript?

## ● Working with Arrays and Objects

- How do you add or remove elements from an array?
- Can you explain how `map()`, `filter()`, and `reduce()` methods work?
- What is the difference between an object and an array in JavaScript?
- How can you deep clone an object in JavaScript?
- Explain the use of the `this` keyword.
- How do you check if a property exists in an object?
- What are the methods to iterate over an object's properties?
- How can you merge two arrays in JavaScript?
- What are the ES6 features for handling arrays and objects?
- How do you prevent modifications to an object in JavaScript?

## ● DOM Manipulation and Events

- How do you select a DOM element using JavaScript?
- What is the difference between `innerText` and `innerHTML`?
- How do you add an event listener to a DOM element?

- Explain how to remove a DOM element.
- How do you change the style of a DOM element using JavaScript?
- What are web storage APIs?
- How do you handle form submission in JavaScript?
- What is the difference between event capturing and event bubbling?
- How do you navigate the DOM tree?
- Explain the use of data attributes in HTML and JavaScript.

## ● **Advanced Topics**

- What is a Web Worker and when would you use it?
- How does JavaScript handle modules?
- What are service workers and how are they used?
- Can you explain the concept of shadow DOM?
- What is the importance of the `document.readyState` property?
- How do you implement debouncing and throttling in JavaScript?
- What are JavaScript generators and how do they work?
- How do you handle cross-origin requests in JavaScript?
- What is the event loop and how does it work?
- How can you ensure your JavaScript code runs efficiently?

## ● **Frameworks and Libraries**

- What are JavaScript frameworks and libraries, and how do they differ?
- Can you name a few popular JavaScript frameworks?
- How do you decide when to use a library or a framework?
- What is jQuery and what are its advantages?
- How does React differ from Angular in terms of data binding?
- What is a virtual DOM and how does it work?
- Explain the concept of components in front-end frameworks.
- What is state management in front-end frameworks?
- How do frameworks handle routing in single-page applications?
- What are some challenges you might face when integrating different libraries?

## ● **Testing and Performance**

- How do you debug JavaScript code?
- What are some tools you can use for testing JavaScript code?
- What is unit testing in JavaScript?
- How do you ensure your JavaScript code is performant?
- What practices do you follow to write clean and maintainable JavaScript code?
- How can you detect memory leaks in JavaScript applications?
- What is the importance of code splitting in front-end development?
- How do you handle dependencies in JavaScript projects?

- What are polyfills and how do you use them?
- How do you optimize your JavaScript code for better performance?

- **Security**

- What are common security threats in JavaScript applications?
- How do you prevent cross-site scripting (XSS) attacks?
- What is cross-site request forgery (CSRF) and how do you prevent it?
- How do you ensure data validation in JavaScript?
- What are content security policies and how do they enhance security?

- **Miscellaneous**

- How do you handle date and time in JavaScript?
- How do you work with JSON in JavaScript?
- What are web sockets and how do you use them in JavaScript?
- How can you make your JavaScript code compatible with older browsers?
- What are environment variables and how can you use them in JavaScript?

- **Upcoming Features and Best Practices**

- What are some upcoming features in JavaScript that you're excited about?
- How do you stay updated with the latest JavaScript developments?
- What are some JavaScript best practices for beginners?
- How important is accessibility in web development and how does JavaScript contribute to it?
- What are progressive web apps and how do you build them with JavaScript?

- **Personal and Behavioral**

- Can you describe a project where you used JavaScript to solve a problem?
- How do you approach debugging a complex issue in JavaScript?
- What resources do you use to learn new JavaScript frameworks or libraries?
- How do you prioritize tasks when working on multiple JavaScript projects?
- Can you describe a time when you improved the performance of a JavaScript application?

- **Industry Knowledge**

- What are the current trends in JavaScript development?
- How do you think JavaScript will evolve in the next few years?
- What role does JavaScript play in server-side development?
- How has JavaScript influenced web development practices?
- What do you think are the biggest challenges facing JavaScript developers today?

- **Collaboration and Version Control**

- How do you use version control systems with JavaScript projects?
- Can you explain the importance of code reviews in JavaScript development?
- How do you collaborate with designers and backend developers in a project?
- What is continuous integration and deployment (CI/CD) in the context of JavaScript development?
- How do you document your JavaScript code and APIs for better team collaboration?
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