

JavaScript

JavaScript Basics

1. What is JavaScript?

JavaScript is a scripting language used to create dynamic web applications and automate browser actions in testing.

2. Difference between var, let, and const?

var is function-scoped, let and const are block-scoped. const cannot be reassigned.

3. What are data types in JavaScript?

Primitive: string, number, boolean, null, undefined, symbol, bigint.

Non-primitive: object, array, function.

4. What is undefined vs null?

undefined means a variable is declared but not assigned.

null is an deliberate empty value.

5. What is typeof operator?

It returns the data type of a variable.

Functions & Scope

6. What is a function in JavaScript?

A reusable block of code used to perform tasks.

7. What is arrow function?

A shorter syntax for writing functions using =>.

8. What is scope?

Scope defines where variables are accessible (global, function, block).

9. What is closure?

A closure is when a function remembers variables from its outer scope.

10. What is hoisting?

JavaScript moves variable and function declarations to the top of their scope during execution.

Objects & Arrays

11. What is an object?

A collection of key-value pairs used to store structured data.

12. How do you create an array?

Using [] or new Array().

13. Difference between map and forEach?

map() returns a new array; forEach() does not.

14. What is push() and pop()?

push() adds an element; pop() removes the last element.

15. What is JSON?

A lightweight format used to exchange data in API testing.

Async JavaScript

16. What is asynchronous JavaScript?

Code that runs without blocking execution (e.g., API calls).

17. What is a Promise?

An object representing success or failure of an async operation.

18. What are async/await?

Syntax to handle promises in a synchronous-looking way.

19. What is callback function?

A function passed into another function to run later.

20. What is fetch()?

A method used to make HTTP requests.

DOM & Browser

21. What is DOM?

Document Object Model represents HTML elements as objects.

22. How do you select an element?

Using querySelector() or getElementById().

23. What is event handling?

Responding to user actions like clicks or typing.

24. What is event bubbling?

Events propagate from child to parent elements.

25. What is localStorage?

Browser storage to save data locally.

ES6 Features

26. What are template literals?

Strings written using backticks with \${} interpolation.

27. What is destructuring?

Extracting values from arrays/objects into variables.

28. What is spread operator?

... expands arrays/objects.

29. What are modules?

Reusable JS files using import/export.

30. What is default parameter?

Function parameters with default values.

Error Handling**31. What is try-catch?**

Used to handle runtime errors.

32. What is throw?

Manually triggers an error.

Testing & Automation Focus**33. Why is JavaScript important in test automation?**

Used in tools like Playwright, Cypress, and k6.

34. What is event loop?

Handles async tasks in JavaScript execution.

35. What is synchronous vs asynchronous code?

Sync runs step-by-step; async runs in background.

36. What is setTimeout()?

Executes code after a delay.

37. What is setInterval()?

Repeats execution at intervals.

38. What is JSON.parse() and JSON.stringify()?

Convert JSON string ↔ object.

39. What is strict mode?

Enforces safer coding rules.

40. What is NaN?

Represents invalid numbers.

Advanced Basics (Interview Favorite)

41. What is == vs ===?

== compares value; === compares value and type.

42. What is truthy and falsy?

Falsy: false, 0, "", null, undefined, NaN.

43. What is prototype?

Mechanism for inheritance in JS.

44. What is this keyword?

Refers to the current object context.

45. What is call(), apply(), bind()?

Methods to control function context.

46. What is IIFE?

Immediately Invoked Function Expression.

47. What is shallow vs deep copy?

Shallow copies reference; deep copies duplicate.

48. What is debounce?

Limits how often a function runs.

49. What is throttle?

Controls execution rate.

50. What is garbage collection?

Automatic memory cleanup in JavaScript.
