

Basic-Level Questions

What is Node.js and why is it popular for server-side development?

(Expected Answer: Node.js is a JavaScript runtime built on Chrome's V8 engine. It is event-driven, non-blocking, and lightweight, making it ideal for building scalable network applications.)

What is the difference between require and import in Node.js?

(Expected Answer: require is part of CommonJS, used in older Node.js versions, while import is part of ES Modules, introduced in newer JavaScript versions. import supports static and dynamic imports, whereas require is synchronous.)

Intermediate-Level Questions

Explain how the event loop works in Node.js.

(Expected Answer: The event loop is responsible for handling asynchronous operations. It processes events and executes callbacks from the event queue. Node.js uses the event loop to handle non-blocking I/O operations.)

What are streams in Node.js, and how are they different from buffers?

(Expected Answer: Streams are used to handle reading and writing data piece-by-piece, improving performance for large files. Buffers hold a fixed-size chunk of memory and store data temporarily while working with streams or other I/O.)

Advanced-Level Questions

What are worker threads in Node.js, and when would you use them?

(Expected Answer: Worker threads allow you to run JavaScript code in parallel threads. They are used for CPU-intensive operations to offload processing from the main thread, ensuring it remains non-blocking.)