



Node.js Important Questions & Answers

A comprehensive guide to common Node.js interview questions.

Sohrab Ali Ansari

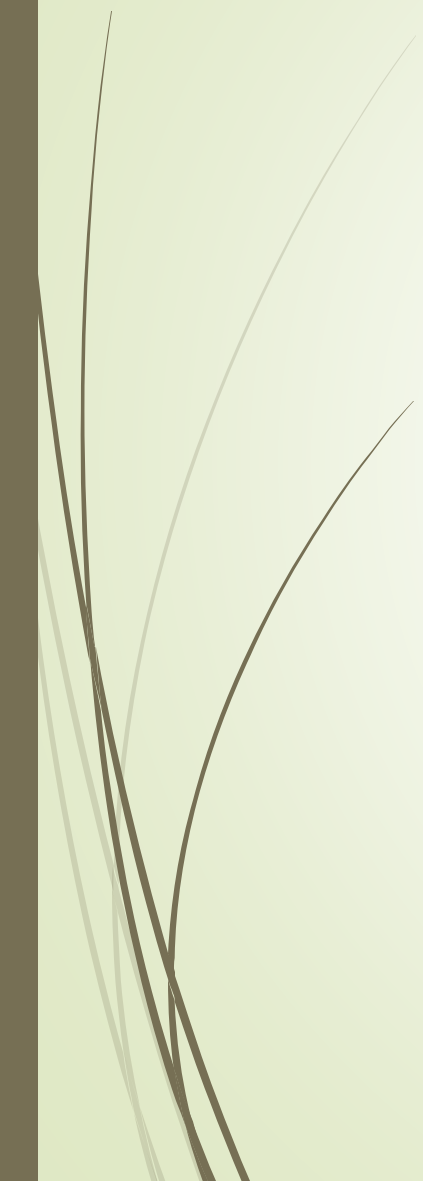


What is Node.js?

- Node.js is a JavaScript runtime environment that allows you to execute JavaScript outside the browser. It is commonly used for building scalable and high-performance backend applications.



What is the difference between Node.js and JavaScript?

- JavaScript is a client-side language, while Node.js is a runtime environment that allows JavaScript to run on the server side.
- 



Is Node.js single-threaded?

- Yes, Node.js is single-threaded but uses an event-driven, non-blocking architecture to handle multiple requests asynchronously.
- 



What kind of API function is supported by Node.js?

- ▶ Node.js supports both synchronous (blocking) and asynchronous (non-blocking) API functions.



What is a module in Node.js?

- A module is a reusable block of code that can be imported into other files using 'require()'.




What is npm and its advantages?

- npm (Node Package Manager) is the default package manager for Node.js, used to install and manage dependencies.
- 



What is middleware in Node.js?

- Middleware functions execute between request and response cycles, performing tasks like logging, authentication, and request processing.

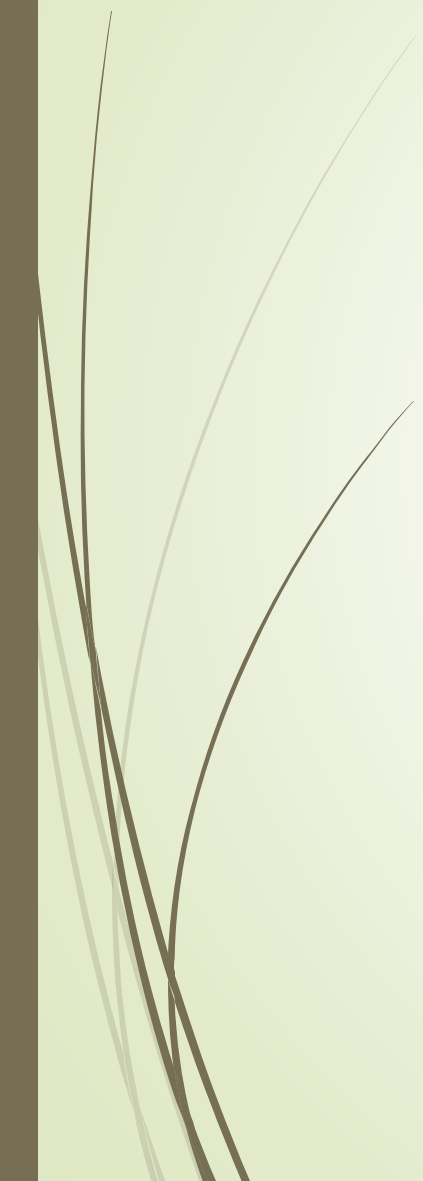


How does Node.js handle concurrency despite being single-threaded?

- Node.js handles concurrency using asynchronous, non-blocking I/O operations via the event loop.



What is the event loop in Node.js?

- The event loop is a mechanism that allows Node.js to handle asynchronous operations in a single thread efficiently.
- 

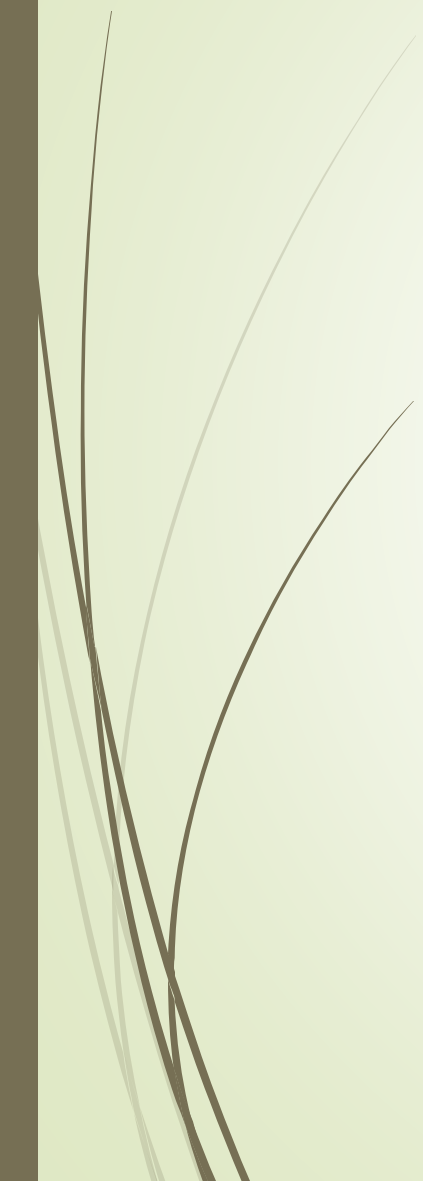



What are the disadvantages of Node.js?

- Some disadvantages include single-threaded limitations for CPU-intensive tasks, frequent API changes, and a preference for NoSQL databases.



What is REPL in Node.js?

- REPL (Read-Eval-Print Loop) is an interactive shell for executing Node.js commands in real-time.
- 



How to import a module in Node.js?

- You can import a module using 'require()' function, e.g., 'const os = require("os");'.

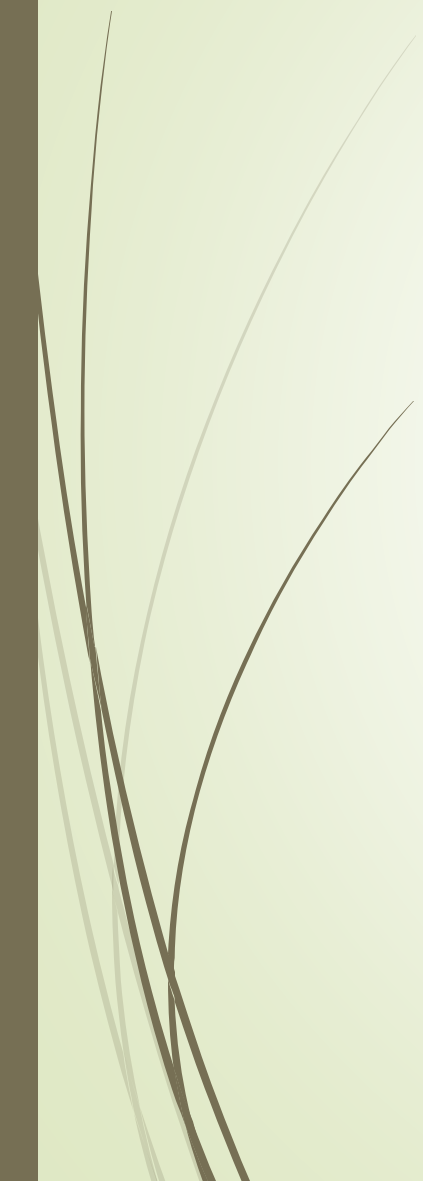



What is the difference between Node.js and AJAX?

- ▶ Node.js is a server-side runtime, while AJAX is a client-side technique for fetching data asynchronously.
- 



What is 'package.json' in Node.js?

- A metadata file that stores project dependencies, configurations, and script commands for a Node.js project.
- 




What is the difference between `process.nextTick()` and `setImmediate()`?

- ▶ `'process.nextTick()'` executes immediately after the current operation, while `'setImmediate()'` executes in the next event loop cycle.

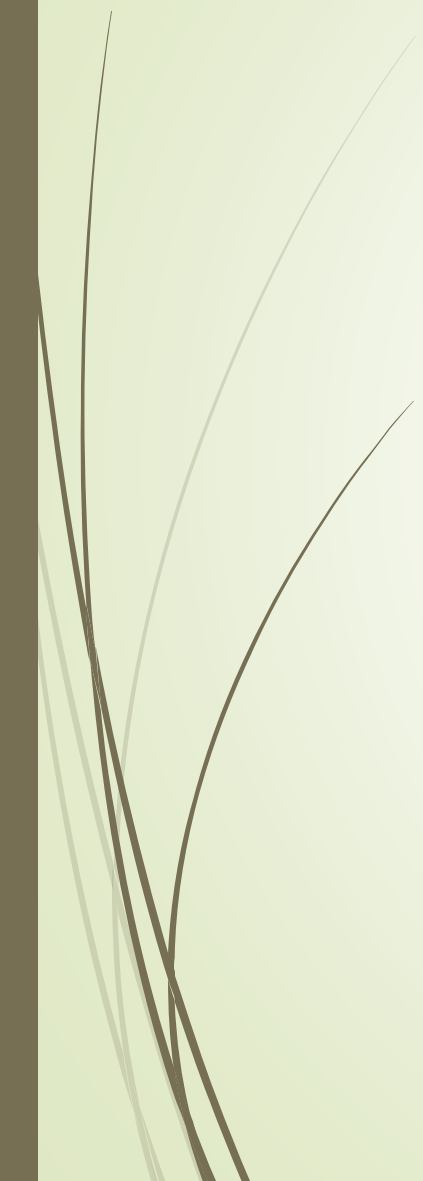



What is a callback function in Node.js?

- A callback function is a function passed as an argument to another function, executed once the operation completes.




What is an event emitter in Node.js?

- The 'events' module allows you to create and handle custom events in Node.js using the 'EventEmitter' class.
- 



What are streams in Node.js?

- Streams in Node.js are objects that allow reading or writing data continuously, such as file reading or network operations.



How do you handle errors in Node.js?

- Errors in Node.js can be handled using try-catch blocks, error-first callbacks, or event emitters.
- 