Node.js Interview Topics: Basics, Features, Setup, Modules

Node.js Basics

Q: What is Node.js?

A: Node.js is an open-source, cross-platform JavaScript runtime environment that runs JavaScript code outside of a web browser.

Q: Is Node.js single-threaded?

A: Yes, Node.js uses a single-threaded event loop model to handle concurrent clients.

Q: What language is Node.js written in?

A: Node.js is written in C, C++, and JavaScript.

Q: What is the V8 engine?

A: V8 is Google's open-source high-performance JavaScript engine used in Chrome and Node.js to execute JavaScript code.

Q: What is the main use of Node.js?

A: Node.js is mainly used for building fast, scalable network applications, such as real-time chat applications, REST APIs, and more.

Main Features of Node.js

Q: What are the main features of Node.js?

A: Asynchronous and Event Driven, Very Fast, Single Programming Language, Highly Scalable, and Open Source.

Q: How does Node.js handle concurrent requests?

A: Node.js uses an event loop and callbacks to handle many requests asynchronously.

Q: What makes Node.js fast?

A: Node.js uses the V8 engine and non-blocking I/O operations to execute code quickly.

Q: What is non-blocking I/O?

A: Non-blocking I/O allows other code to run without waiting for I/O operations like file read or DB queries to complete.

Q: What is event-driven programming?

A: In Node.js, functions are executed based on events. Event-driven programming uses event listeners to respond to events.

Project Setup & Modules

Q: How do you initialize a Node.js project?

A: Use `npm init` to create a `package.json` file and initialize a project.

Q: What is `package.json`?

A: `package.json` is a metadata file that contains project configuration, scripts, dependencies, and more.

Q: What is a module in Node.js?

A: A module is a reusable block of code whose existence does not impact other code.

Q: How to create a custom module?

A: Create a file exporting variables or functions using `module.exports` and import it using `require()`.

Q: What is `npm`?

A: `npm` is the Node.js package manager used to install, share, and manage project dependencies.

Top Built-in Modules

Q: What is the `fs` module?

A: `fs` is used to perform file operations such as reading, writing, and deleting files.

Q: What is the `http` module?

A: `http` is used to create HTTP server and client applications.

Q: What is the `path` module?

A: `path` provides utilities for working with file and directory paths.

Q: What is the `os` module?

A: `os` provides information about the operating system, such as CPU, memory, and platform details.

Q: What is the `events` module?

A: `events` enables working with events and event-driven programming by using the `EventEmitter` class.