

How does Node.js differ from traditional server-side platforms like PHP or Java?

Write a Node.js program that can read a text file, count the occurrences of each word, and display the word count in the console.

Explain the concept of non-blocking I/O in Node.js.

Write a program that reads the contents of a file asynchronously using Node.js and prints the content to the console.

How does Node.js handle concurrency?

What is the significance of callback functions in Node.js? How do they work?

Create an HTTP request to handle an external API, fetch some data, and display it in the console.

What is package.json in Node.js and what is its purpose?

How to create a secure login system using Node.js and a suitable authentication library to handle user authentication and authorization.

What are streams in Node.js? How do they work and what are their advantages?

How can you handle errors in Node.js? Explain the error-first callback pattern.

How to use the MongoDB driver in Node.js to perform basic database operations like inserting, updating, querying, and deleting documents in a MongoDB database.

What is middleware in the context of Express.js? How does it work?

Create an Express.js application that implements basic CRUD operations (Create, Read, Update, Delete) for a resource (e.g., books, users, products).

How does Node.js support handling of HTTP requests and responses?

Write node.js program to handle errors and log them appropriately in a Node.js application. Use error handling middleware, custom error classes, and logging libraries like Winston or Bunyan.

Create a real-time chat application using Node.js and Socket.io. Allow multiple users to communicate with each other in real-time.

Write node.js program to handle form submissions in a Node.js application using the Express.js framework. Capture the form data and display it in the console or store it in a database.

What is the role of the "npm" command in Node.js? How can you use it to manage dependencies?

Create a secure login system using Node.js and a suitable authentication library to handle user authentication and authorization.

Explain the concept of the single-threaded nature of Node.js. How does it handle multiple requests simultaneously?

Write a JavaScript code to display the alert message “Eligible for voting” when both of the given validations are true:

- (i) The age should be number and should be > 18
- (ii) The nationality should be “Indian”

Topics:

Approximate marking scheme-

Node.js: (20 marks Descriptive questions and 7.5 Marks multichoice)	27.5 marks
JavaScript: (18 Marks Descriptive questions and 4 Marks multichoice)	22 marks
HTML/CSS: (9 Marks Descriptive questions and 1.5 Marks multichoice)	10.5 marks
Security/XML: (3 Marks Descriptive questions and 7 Marks multichoice)	10 marks