

BACKEND DEVELOPMENT QUESTION BANK

Q1 What is Node.js? Why is it single-threaded?

Q2 How Node.js works internally? (Event Loop explanation)

Q3 What is the Event Loop? Explain its phases.

Q4 Difference between Node.js and JavaScript in the browser

Q5 What are blocking vs non-blocking operations?

Q6 What is asynchronous programming in Node.js?

Q7 What is a V8 engine?

Q8 Difference between `setTimeout`, `setImmediate`, and `process.nextTick()` ?

Q9 What are callbacks? Callback hell?

Q10 What are Promises?

Q11 Difference between Promise and `async/await` ?

Q12 How does `async/await` work internally?

Q13 What are streams in Node.js? Types of streams?

Q14 Difference between streams and buffers ?

Q15 Why are streams important in Node.js?

Q16 What is middleware in Express?

Q17 Types of middleware?

Q18 Difference between `req.params`, `req.query`, and `req.body`?

Q19 What is REST API?

Q20 How do you secure APIs in Node.js?

Q21 How to read/write a file in Node.js?

Q22 Difference between synchronous and asynchronous FS methods?

Q23 What is CORS?

Q24 What is JWT? What is an access token and refresh token and why do we need these ?

Q25 What are worker threads in node.js ?

Q26 How Node.js handles multiple requests with a single thread?

Q27 What is mvc and mcs pattern and how are controllers different from service ?

Q28 What is indexing horizontal scaling and vertical scaling replication sharding partition and normalization specialization generalization ?

Q29 explains some common attack csrf xss ddos and sql injection how to resolve these attacks ?

Q30 What is a webhook ?

Q31 some common status code in the backend ?

Q32 What is rest api ?

Q33 What is migration in a sql database ? and what is orm and they help in sql database ?

Q34 What is sql vs no sql ?

Q35 What is acid property ?

Q36 How to optimize your backend and apis and make it more scalable, maintainable and testable ?

Q37 What is the socket ?

Q38 What is room and broadcast namespace ?

Q39 What is the adapter in the socket ?

Q40 What is socket vs websocket ?

Q41 What is the socket handle connection fallback?

Q42 explain the socket io handshake process ?

Q43 How to handle large-scale socket io applications ?

Q44 What is the primary key and foreign key ?

Q45 What is clustering in node.js ?