

# 100 MERN Stack Interview & Practice Questions

1. What is MERN Stack?
2. Explain the role of each technology in the MERN stack.
3. What are the advantages of using MERN over other stacks?
4. What is MongoDB, and why is it used in MERN?
5. How does MongoDB store data?
6. What is the difference between SQL and NoSQL databases?
7. Explain CRUD operations in MongoDB.
8. What is Mongoose, and why do we use it with MongoDB?
9. How do you define a schema in Mongoose?
10. What are middleware functions in Mongoose?
11. What is Express.js, and why is it used in MERN?
12. How do you create a basic Express.js server?
13. What is middleware in Express.js?
14. What are the different types of middleware in Express.js?
15. How do you handle routes in Express.js?
16. How do you connect MongoDB with Express.js?
17. What is CORS, and why is it important?
18. How do you handle errors in Express.js?
19. What is the difference between synchronous and asynchronous programming?
20. What is React, and why is it used in MERN?
21. What is JSX in React?
22. What are components in React?
23. What is the difference between functional and class components?
24. What are React hooks?
25. Explain the useState hook with an example.
26. Explain the useEffect hook with an example.
27. What is React Router, and how does it work?
28. How do you handle forms in React?

29. What is Redux, and why is it used?
30. What are actions and reducers in Redux?
31. What is the purpose of the useReducer hook?
32. What is the Context API in React?
33. What is Node.js, and why is it used in MERN?
34. What is the event loop in Node.js?
35. What are streams in Node.js?
36. What are modules in Node.js?
37. What is npm, and how is it used?
38. What is package.json in Node.js?
39. How do you use environment variables in Node.js?
40. How do you deploy a MERN application?
41. What is authentication, and how do you implement it in MERN?
42. What is JWT (JSON Web Token)?
43. How do you handle user sessions in MERN?
44. What is bcrypt, and how is it used for password hashing?
45. How do you implement social login in a MERN app?
46. What is REST API?
47. What is GraphQL, and how does it compare with REST?
48. How do you test APIs in MERN?
49. What is Postman, and how is it used for API testing?
50. What is the difference between GET, POST, PUT, and DELETE?
51. How do you handle file uploads in a MERN app?
52. What is Multer, and how does it work?
53. What is WebSockets, and how can they be used in MERN?
54. How do you integrate payment gateways in a MERN app?
55. What is Docker, and how can it be used with MERN?
56. What is CI/CD, and how does it apply to MERN?
57. How do you optimize performance in a MERN application?
58. What are some security best practices for MERN apps?

59. How do you prevent SQL Injection in MongoDB?
60. What is rate limiting in Express.js?
61. What is memoization in React?
62. How do you implement lazy loading in React?
63. What are microservices, and how do they relate to MERN?
64. How do you scale a MERN application?
65. How do you handle state management in large React applications?
66. What is React Query?
67. What is the purpose of React's key prop?
68. How does React handle reconciliation?
69. How do you integrate third-party APIs in MERN?
70. What is Helmet in Express.js?
71. How do you schedule tasks in Node.js?
72. What is the purpose of the Express session?
73. How do you configure MongoDB indexes for better performance?
74. What is the difference between local and global npm packages?
75. How do you handle image uploads in MERN?
76. What is Service Worker in PWA?
77. How do you debug a MERN application?
78. What are some popular MERN hosting platforms?
79. How does server-side rendering (SSR) work in React?
80. What is Next.js, and how does it compare with React?
81. What is an ORM, and does MongoDB need one?
82. How do you set up CI/CD for a MERN application?
83. What are Docker containers and how do they help deployment?
84. How does TypeScript work with MERN?
85. What is Nodemon, and why is it useful?
86. How do you implement WebRTC in MERN?
87. What is Redux Toolkit?
88. What is the role of the Virtual DOM in React?

89. What is an API Gateway?
90. How do you implement GraphQL with MERN?
91. What is HOC (Higher Order Component) in React?
92. How do you handle pagination in MongoDB?
93. What is load balancing?
94. What is an event emitter in Node.js?
95. How does React Fiber improve performance?
96. What is the difference between client-side and server-side rendering?
97. How do you monitor and log errors in a MERN app?
98. What is a Progressive Web App (PWA)?
99. How do you handle database migrations in MongoDB?
100. How do you optimize SEO in a MERN application?