Mongo DB Interview Questions

1. What is MongoDB?
2. What are NoSQL databases, and how does MongoDB fit into this category?
3. What is BSON?
4. Explain the key features of MongoDB.
5. What is the default port number for MongoDB?
6. How does MongoDB handle data modeling compare to traditional relational databases?
7. What is a collection in MongoDB, and how is it different from a table in a relational database?
8. What is a document in MongoDB?
9. What is a primary key in MongoDB, and how is it different from a primary key in SQL databases?
10. Explain the basic CRUD operations in MongoDB.
11. How do you insert a document in MongoDB?
12. How do you update a document in MongoDB?
13. How do you delete a document in MongoDB?
14. How do you retrieve data from MongoDB?
15. What is the find method in MongoDB, and how is it used for querying documents?
16. Explain the aggregation framework in MongoDB.
17. What is the $match operator in the aggregation pipeline?
18. How do you perform a case-insensitive search in MongoDB?
19. How do you sort query results in MongoDB?
20. What is an index in MongoDB, and why is it important?
21. List some of the data types available in MongoDB.
22. Explain the ObjectId data type.
23. What is a Date data type in MongoDB, and how is it stored?
24. What is a subdocument in MongoDB, and how is it different from an embedded document?
25. Why are indexes important in MongoDB?
26. What types of indexes are available in MongoDB?
27. How do you create an index in MongoDB?
28. How do you drop an index in MongoDB?
29. Explain the concept of aggregation in MongoDB.
30. What is the $group stage in the aggregation pipeline used for?
31. What is the $project stage in the aggregation pipeline used for?
32. How do you use the $unwind stage in aggregation?
33. What is the difference between $push and $addToSet in aggregation?
34. What is MongoDB replication, and why is it used?
35. What is a replica set in MongoDB?
36. What is sharding in MongoDB, and when is it necessary?
37. Explain the primary-secondary replica set architecture in MongoDB.
38. How does sharding improve the scalability of MongoDB?
39. What is authentication in MongoDB?
40. How do you enable authentication in MongoDB?

41. Explain role-based access control in MongoDB.
42. What is SSL, and how is it used to secure MongoDB connections?
43. Does MongoDB support multi-document transactions?
44. What is a distributed transaction in MongoDB?
45. How do you start and commit a transaction in MongoDB?
46. How do you back up a MongoDB database?
47. How do you restore a MongoDB database from a backup?
48. Name some commonly used MongoDB GUI tools.
49. What is MongoDB Atlas, and how is it different from a self-hosted MongoDB instance?
50. What are some popular programming languages for developing applications with MongoDB?
51. What are some best practices for schema design in MongoDB?
52. How can you optimize MongoDB query performance?
53. What is the working set in MongoDB, and why is it important?
54. How do you handle slow queries in MongoDB?
55. How can you horizontally scale MongoDB using sharding?
56. What is automatic chunk splitting in MongoDB sharding?
57. What is the balancer in MongoDB, and how does it work?
58. How does MongoDB handle duplicate key errors?
59. What is a write concern in MongoDB, and why is it important?
60. How do you handle network partition errors in MongoDB?
61. What is the $lookup stage in MongoDB aggregation, and how is it used for performing joins?
62. Explain the $redact stage in the MongoDB aggregation pipeline and its use cases.
63. How do you create a text index in MongoDB, and what is its purpose?
64. What is the $graphLookup stage in MongoDB aggregation, and how is it used for hierarchical data?
65. What is geospatial indexing in MongoDB, and how is it used?
66. How do you perform geospatial queries in MongoDB?
67. What is the difference between 2dsphere and 2d geospatial indexes in MongoDB?
68. Explain the $near operator and its use in geospatial queries.
69. What is WiredTiger, and why is it the default storage engine in MongoDB?
70. How does WiredTiger handle data compression, and how does it benefit MongoDB?
71. What is the GridFS specification in MongoDB, and when is it used for storing large files?
72. What are change streams in MongoDB, and how are they used for real-time data tracking?
73. How do you set up a change stream in MongoDB?
74. Explain the use of the watch method to listen for changes in a MongoDB collection.
75. What is the difference between change streams and the oplog in MongoDB?
76. How do you handle a "Primary stepped down" error in a MongoDB replica set?
77. What is the purpose of the oplog in MongoDB, and how can it be used for error recovery?
78. How does MongoDB handle network errors or node failures in a replica set?
79. What tools are available for importing data into MongoDB?
80. How can you export data from MongoDB to different formats, such as JSON or CSV?

81. What is the purpose of the mongo import and mongo export utilities?
82. How do you check the version of MongoDB currently installed on your system?
83. What are the release notes, and why are they important when upgrading MongoDB?
84. How do you upgrade a MongoDB instance to a newer version while preserving data integrity?
85. What are the advantages of using the $lookup stage with a local field and foreign field in the aggregation pipeline?
86. How can you improve the performance of the aggregation pipeline with the $out stage?
87. What is the $merge stage, and how can it be used for output in the aggregation pipeline?
88. How can you connect a Node.js application to a MongoDB database using the official MongoDB Node.js driver?
89. What is Mongoose, and how does it simplify working with MongoDB in Node.js applications?
90. How do you configure connection pooling in a MongoDB application to handle multiple client connections efficiently?
91. How can you enable and configure the MongoDB server logs?
92. What is the MongoDB profiler, and how does it help in identifying performance issues?
93. What are some third-party tools used for monitoring and managing MongoDB deployments?
94. Explain the automatic failover process in a MongoDB replica set.
95. How do you configure an arbiter in a MongoDB replica set, and what is its purpose?
96. What are the considerations for ensuring high availability in a multi-data center or geo-distributed MongoDB deployment?
97. What is MongoDB Atlas Data Lake, and how does it help with data compliance and security?
98. How can you enable encryption at rest and in transit in a MongoDB deployment?
99. Explain the role of the MongoDB audit log in compliance and security measures.
100.   What are the architectural considerations when deploying MongoDB at a massive scale, handling petabytes of data?