Your grade: 100%

Your latest: **100%** • Your highest: **100%** • To pass you need at least 70%. We keep your highest score.

Next item

1. Which factor drives the data model in a NoSQL database? 1 / 1 point

- ○ The schema
- ◉ The queries you intend to make
- ○ The complexity of the joins
- ○ Relationships among entities

Correct
Correct! In NoSQL, it's not the data that drives your data model or schema. It's the way your application accesses the data and the queries you are going to make.

2. What is one way that a distributed NoSQL database usually shards data? 1 / 1 point

- ○ By grouping all keys numerically
- ○ By grouping all records that have the same data on the same server
- ○ By distributing all records that share the same key across multiple servers
- ◉ By grouping all records that have the same key on the same server

Correct
Correct! To store large chunks of data, distributed systems either group all keys lexically or group all records that have the same key on the same server.

3. In the ACID model what does it mean for the data to be "durable"? 1 / 1 point

- ○ Transactions cannot compromise the integrity of other transactions by interacting with them while they are still in progress.
- ○ On the completion of a transaction, the structural integrity of the data in the database is not compromised.
- ○ All operations in a transaction succeed, or every operation is rolled back.
- ◉ If a transaction fails, it will not impact the already changed data.

Correct
Correct! Durable implies that if the data related to a completed transaction will persist even in the case of network or power outages. If a transaction fails, it will not impact the already changed data.

4. What are the four main types of NoSQL databases? 1 / 1 point

- ○ Key-Value, Distributed, Row, Graph
- ○ Key-Value, Document, Table, Graph
- ◉ Key-Value, Document, Column, Graph
- ○ Key-Value, Relational, Column, Graph

Correct
Correct! Several efforts have been made to categorize NoSQL databases and, in the marketplace, there is a general consensus that they fit into four types: Key-Value, Document, Column, and Graph.

5. Which of the following was the biggest driving factor for developing NoSQL databases? 1 / 1 point

- [x] Their ability to scale easily
- [ ] The need to offload the administration and maintenance from the end user
- [ ] The need to query big data
- [ ] The need for simpler application development

Correct
Correct! Applications in the late nineties and early aughts went from predominately serving thousands of internal employees at companies to needing to serve millions of users on the public internet.

6. What can the '$match' aggregation stage be used for? **1 / 1 point**

- [ ] Query a document by a property.
- [ ] Join two or more documents using a property.
- [x] Filter a document by a property.
- [ ] Take the outcome from a previous stage and store it in a target collection.

Correct
Correct! The '$match' stage is used to filter documents.

7. Select the statement that describes how MongoDB manages rapidly changing schemas. **1 / 1 point**

- [ ] MongoDB uses a fixed schema.
- [x] MongoDB utilizes an evolving schema.
- [ ] MongoDB uses both a fixed schema and an updatable schema.
- [ ] MongoDB requires multiple processes for managing rapidly changing schema.

Correct
Correct! MongoDB utilizes an evolving schema.

8. In MongoDB, what is a group of similar stored documents called? **1 / 1 point**

- [x] A collection
- [ ] An index
- [ ] An aggregation
- [ ] A cluster

Correct
Correct! MongoDB documents of a similar type are grouped into a collection.

9. Select the true statement regarding MongoDB indexes. **1 / 1 point**

- [ ] Indexes are stored in a table.
- [ ] Indexes ignore and do not contain information about a document's disk location.
- [ ] Indexes are stored in random order.
- [x] Indexes include the database fields.

Correct
Correct! Indexes store the fields being indexed.

10. Which is an advantage of sharding? **1 / 1 point**

- It prevents you from accidentally deleting your database.
- (selected) It increases throughput by directing queries to relevant partitions.
- It creates redundancy.
- It provides fault tolerance.

Correct
Correct! When you partition your data across shards, you increase your throughput by directing your queries only to relevant shards.

11. What would you most likely use blobs for in Cassandra Query Language (CQL)? 1 / 1 point

- (selected) Storing multimedia objects
- Representing encoded strings
- Storing key-value pairs
- Storing a high range of integers

Correct
Correct! Blobs are typically used to store images, audio, or other multimedia objects.

12. How does the syntax of Cassandra Query Language (CQL) support lightweight transactions? 1 / 1 point

- Using an IF clause within READ and DELETE statements
- Using a WHERE clause within INSERT and UPDATE statements
- (selected) Using an IF clause within INSERT and UPDATE statements
- Using a WHERE clause within READ and DELETE statements

Correct
Correct! Lightweight Transactions are supported by introducing IF in INSERT and UPDATE statements.

13. Which features set Cassandra Apache apart from other NoSQL databases? 1 / 1 point

- Primary/secondary architecture and data consistency
- (selected) Simple peer-to-peer architecture and fast write throughput
- Simple peer-to-peer architecture and support for Complex transactions
- Primary/secondary architecture and fast write throughput

Correct
Correct! Cassandra has a simple peer-to-peer architecture and extremely fast write throughput.

14. When would you be more likely to select MongoDB instead of Apache Cassandra? 1 / 1 point

- When the application is write-intensive
- When use cases require fast data storage and easy data retrieval by key
- When there is no need for joins or aggregations
- (selected) When the need for consistency outweighs the need for high availability and scalability

Correct
Correct! MongoDB caters to read-specific use cases and is very much focused on the consistency of the data, whereas Cassandra focuses on “always available” services.

15. What does “decentralized” mean? 1 / 1 point

- ○ Stored data in Cassandra is separated into pieces that run on different servers.
- ○ Each computer in the Cassandra cluster can act as a server for the others, allowing shared access without needing a central server.
- ○ Clusters can be run on multiple machines, while to the users and applications, everything appears as a unified whole.
- ◉ Each node in a Cassandra cluster is identical to the other nodes.

Correct
Correct! All nodes in a Cassandra cluster are identical, there are no primary or secondary nodes.