Your grade: 80%

Your latest: 80% • Your highest: 80% • To pass you need at least 70%. We keep your highest score.

Next item

1. Which situation is best for a combined NoSQL and relational database solution? 1 / 1 point

- Full data consistency and complicated joins
- Need flexible schema
- Data is largely unstructured
- (selected) Fast scaling and transaction support

Correct
Correct! If you have too much data and need performance and need to scale fast, but at the same time, you also need transaction support and complex joins on your data, then you might think of a combined solution.

2. Which of the following is a characteristic of a NoSQL database? 1 / 1 point

- Tables are related using foreign keys.
- Similar data is stored in the same location.
- Data is stored on a single node.
- (selected) System capacity is easily scaled.

Correct
Correct! You can easily scale to increase system capacity just by adding new servers to the cluster.

3. In the ACID model what does it mean for the data to be “durable”? 0 / 1 point

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

Incorrect
Incorrect. Review the ACID versus BASE Operations video.

4. Which trait is the most common to all of the four types of NoSQL databases? 1 / 1 point

- They are partitioned.
- They are indexed.
- (selected) They are non-relational.
- They use Key-Value pairs for queries.

Correct
Correct! The most common trait amongst NoSQL databases is that they are non-relational in architecture.

5. Which of the following statements best describes NoSQL? 1 / 1 point

- NoSQL is a family of open source relational databases.
- NoSQL is a family of open source relational databases that do not include SQL.
- NoSQL is a family of open source non-relational databases that share exactly the same technologies.
- (selected) NoSQL is a family of open-source non-relational databases that differ greatly in style and technology.

Correct
Correct! The term NoSQL refers to a family of databases that vary widely in style and technology but which all share a common trait in that they are non-relational in nature. Contrary to what it sounds like, ‘NoSQL’ actually stands for ‘Not Only SQL,’ not ‘NO SQL.’

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

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

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

Correct
Correct! MongoDB utilizes an evolving schema.

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

- A cluster
- An index
- A collection
- An aggregation

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

9. Which everyday example is similar to indexing in MongoDB? 0 / 1 point

- A taxonomy
- A blueprint
- A table of contents
- A recipe

Incorrect
Incorrect. Review the Indexes video.

10. How does sharding work to improve performance in MongoDB? 1 / 1 point

- Indexing
- Horizontal scaling
- Replication
- Vertical scaling

Correct
Correct! Implementing sharding, which is the partitioning of your biggest collections, can improve read and write performance.

11. What are the three main data type categories in Cassandra Query Language (CQL)? 1 / 1 point

- Blobs, User-defined, and ASCII
- Blobs, Built-in, and Collections
- ASCII, User-Defined, and Built-in
- User-Defined, Built-in, and Collections

Correct
Correct! In CQL, there are many data types, but they can be grouped into three main categories: built-in data types, collection data types, and user-defined data types.

12. How does the syntax of Cassandra Query Language (CQL) support lightweight transactions? 0 / 1 point

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

Incorrect
Incorrect. Review the CRUD Operations Part 1 video.

13. Select three key features used by relational databases but not by Cassandra. 1 / 1 point

- Join support, aggregation support, transaction support
- Distributed, scalable, fault-tolerant
- Consistency, distributed, scalable
- Join support, aggregation support, scalable

Correct
Correct! Cassandra, by design, does not incorporate three major features of relational databases and thus should not be seen as a drop-in replacement for a relational database: It does not support joins, it has limited aggregation support, and it has limited support for transactions.

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

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

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 do you need to start data distribution in Cassandra? 1 / 1 point

- Tokens
- A key value hash
- Data sets
- Queries

Correct
Correct! For data to end up in a distributed architecture, you must start with the queries that have been planned to be performed.