Week-10

Internal Assessment

**1. What is MongoDB?**

MongoDB is a free and open-source cross-platform document-oriented database. Classified as a NoSQL database, MongoDB avoids the traditional table-based relational database structure in favor of JSON-like documents with dynamic schemas, making the integration of data in certain types of applications easier and faster.

**2. What are some of the advantages of MongoDB?**

Some advantages of MongoDB are as follows:

\*MongoDB supports field, range-based, string pattern matching type queries. for searching the data in the database

\*MongoDB support primary and secondary index on any fields

\*MongoDB basically uses JavaScript objects in place of procedures

\*MongoDB uses a dynamic database schema

\*MongoDB is very easy to scale up or down

\*MongoDB has inbuilt support for data partitioning (Sharding).

**3. What is a Collection in MongoDB?**

A collection in MongoDB is a group of documents. If a document is the MongoDB analog of a row in a relational database, then a collection can be thought of as the analog to a table.

Documents within a single collection can have any number of different “shapes.”, i.e. collections have dynamic schemas.

**4.What are some features of MongoDB?**

Indexing: It supports generic secondary indexes and provides unique, compound, geospatial, and full-text indexing capabilities as well.

Aggregation: It provides an aggregation framework based on the concept of data processing pipelines.

Special collection and index types: It supports time-to-live (TTL) collections for data that should expire at a certain time

File storage: It supports an easy-to-use protocol for storing large files and file metadata.

Sharding: Sharding is the process of splitting data up across machines.

**5.What do you mean by Transactions?**

A transaction is a logical unit of processing in a database that includes one or more database operations, which can be read or write operations. Transactions provide a useful feature in MongoDB to ensure consistency.

MongoDB provides two APIs to use transactions.

Core API: It is a similar syntax to relational databases (e.g., start\_transaction and commit\_transaction)

Call-back API: This is the recommended approach to using transactions. It starts a transaction, executes the specified operations, and commits (or aborts on the error). It also automatically incorporates error handling logic for "TransientTransactionError" and"UnknownTransactionCommitResult”.

Development Assessment

**1. Amongst which of the following is / are true about MongoDB**?

(A)MongoDB is a cross-platform database

(B)Document oriented database

(C)High performance database

(D)All of the mentioned above

**2. The data model available within MongoDB allows us to represent \_\_\_.**

(A)Hierarchical relationships

(B)Able to handle complex structures

(C)Both A. and B.

(D)None of the mentioned above

**3. MongoDB is one of the leading NoSQL databases?**

(A)True

(B)False

**4. A record in MongoDB is a \_\_\_.**

(A)Document

(B)Table

(C)Application

(D)None of the mentioned above

**5. MongoDB stores documents in \_\_\_.**

(A)Store

(B)Collections

(C)Indexes

(D)None of the mentioned above

**6. The Collections screen \_\_\_ the existing collections**.

(A)Lists

(B)Package

(C)Network

(D)None of the mentioned above

**7. The Collections screen displays \_\_\_ for each collection in the selected database**.

(a)Collection name

(B)Number of documents in the collection

(C)Both A. and B.

(D)None of the mentioned above

**8. A document is a set of \_\_\_.**

(A)Key-value pairs

(B)Application pairs

(C)Activity pair set

(D)None of the mentioned above

**9. Aggregation's operations process data records and return computed results.**

**(A)True**

(B)False

**10. Amongst which of the following is / are true about the authentication \_\_\_.**

(A)It is a process of verifying the identity of a client

(B)It is a process of verifying network

(C)It is a process of verifying the database

(D)None of the mentioned above

**11. Amongst which of the following is / are the client and user authentication mechanisms in MongoDB.**

(A)SCRAM-SHA-1

(B)MongoDB Challenge and Response (MONGODB-CR)

(C)Both A. and B.

(D)None of the mentioned above

**12. Keyfile and X.509 are the internal authentication mechanisms in MongoDB**.

(A)True

(B)False

**13. The document structure is more in line with how developers construct their \_\_\_.**

(A)Network and security

(B)Classes and objects

(C)Tables and relations

(D)None of the mentioned above

**14. Cursor is a pointer to the result set of a \_\_\_.**

(A)Query

(B)Table

(C)Dataset

(D)None of the mentioned above

**15. Field is a name-value pair in a \_\_\_.**

(A)Attribute

(B)Table

(C)Document

(D)None of the mentioned above

**16. MongoDB supports searching by \_\_\_.**

(A)Field

(B)Range queries

(C)Regular expression searches

(D)All of the mentioned above

**17. Indexes can be created to improve the performance of searches within \_\_\_.**

(A)MongoDB

(B)NoSQL

(C)Both A. and B.

(D)None of the mentioned above

**18. MongoDB can provide high availability with replica sets?**

(A)True

(B)False

**19. The data in MongoDB has a flexible schema?**

(A)True

(B)False

**20. NoSQL is not a \_\_\_.**

(A)Relational database

(B)Network database

(C)Communication set

(D)None of the mentioned above